Planning for Integrated Transport in Indonesia: Some Lessons from the UK's Experience

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ABSTRACT

Traffic congestion has been a major problem in many cities in Indonesia, thus requiring a better transport policy. Many developed countries, including the United Kingdom, has been implementing the integrated transport policy to replace traditional transport policy that focus on only building roads to anticipate traffic demand. This paper provides a highlight on the implementation of integrated transport policy in the United Kingdom. Some key issues that can be learnt by the Indonesian government from their experience are discussed. This includes the integration within and between all types of transport, integration with land use planning, integration with environment policy and integration with policies for education, health and wealth creations. In the implementation, the policy requires continuity and stability in organization and politics, coordination in local transport plans, more devolution on power and revenue funding from the government in addition to capital funding.

Key words: traffic congestion, integrated transport policy

Introduction

"Simply building more and more roads is not the answer to traffic growth. 'Predict and provide' didn't work." (DETR, 1998)

Congestion has been and is now increasingly becoming a major problem in the cities in Indonesia, especially in its capital, Jakarta and its surrounding towns. Building new roads without the integration with development in other areas of transport and urban planning would not be able to anticipate the impact of increasing urbanization in the capital, thus the threat that there would be a gridlock of traffic in Jakarta could happen sooner than expected. Considering extreme weather such as heavy rains that worsen the traffic conditions due to flooding, this definitely require an integrated transport policy, which integrate between all types of transport (e.g. bus, train, motorcycle, car), with the environment, with land use planning and with education, health and economic policies. Many developed countries have implemented an integrated transport policy to manage their transport demand and supply. In this paper, some key lessons that can be learnt from one of those countries, which is the United Kingdom, are highlighted. The history of

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integrated transport policy started after the failure of 1989 Conservatives Government' White Paper 'Roads for Prosperity', which planned to run a huge road building programmes that later triggered huge backlash and forced the government into a dramatic reduction in the size of the programmes. After the release of 1996 Transport Green Paper 'Transport - The Way Forward', the Labour was able to build a consensus that it would not be possible to relieve congestion by road building. There was a need to balance between public transport and private car, combined with managing the demand for travel. Later, the green paper's content was adopted on 1998 Transport White Paper, 'A New Deal for Transport – Better for Everyone' (DfT, 1998), followed by Transport Act 2000 (the UK Parliament, 2000) that provided legislative provisions of the white paper. The next white paper, 'Future of Transport (DfT, 2004a) emphasized on building coherent transport networks with the road network, the rail network, bus services, walking and cycling, ports and airports; in order to meet the increasing demand for travel. In the white paper, the government has promised to provide sustained investment over the long term, to improve transport management, and planning ahead emphasizing on road pricing and local/regional transport involvement.

The Content of Integrated Transport Policy : Some key Issues

There is evidence (CfIT, 2001) that European countries experience better provision in public transport, better integration between transport and land use planning, and reduced reliance on the car. This section will discuss some key issues about the UK government efforts to join the success story of integrated transport in other countries.

Integration within and between different types of transport

Britain is an upwardly mobile society (Grayling, 2004). People need to travel further and faster, taking advantage of good transport networks. They travel mostly by car, with 85% share in 2002 (DfT, 2004c). Car users have reached 678 billion passenger kilometers in 2004 or 75% increase from 1980 (see Figure 1). Other modes increase slightly from 1980 with around 110 billion passenger kilometers. The increase of average disposable income has made transport by any mode become affordable, with a greater improvement in car use than that of public transport (see Figure 2). There is a challenge to ensure that people have other options, including good quality public transport and the opportunity to walk or cycle

The government's investment in transport programmes, in total £16.8bn, is reserved nearly 70% for public transport projects (see Figure 3), which involve a mix of heavy rail investment in terms of upgrading and service enhancement, extensions to existing LRT networks, and one new system, and two new guided bus networks (CfIT, 2002). It is a good balance that public transport investment is about twice that of highways, although the majority of the proposed investment is going to heavy rail.

Across different modes of transport, the Government expects a better trade-offs (DfT, 2004a), in order to provide flexibility and enhance effectiveness of the policy. Even though 2/3 of public transport journeys are made by bus, public spending on buses is less than half the spending on railways, which require heavy investment for infrastructure. With flexibility to transfer funding between rail and other modes of transport, this unbalance condition will not raise a big problem.
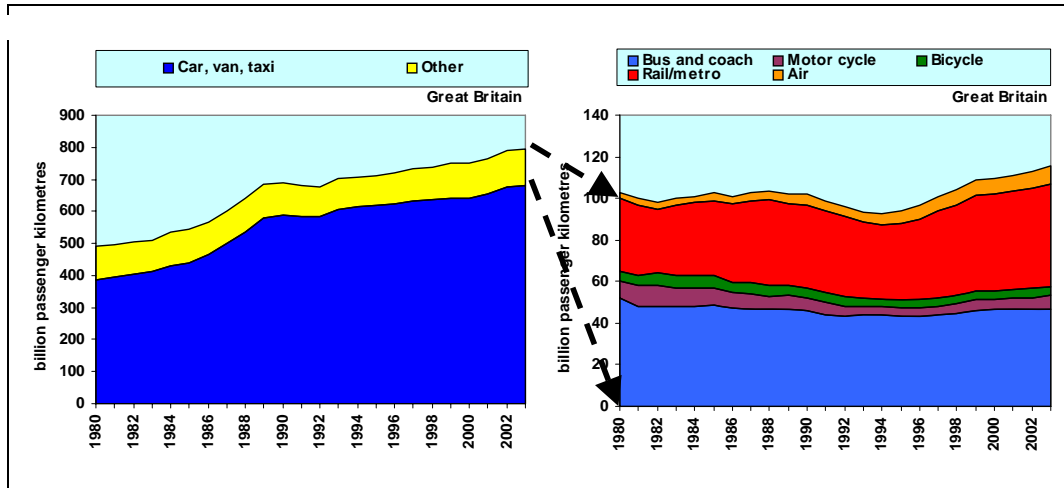
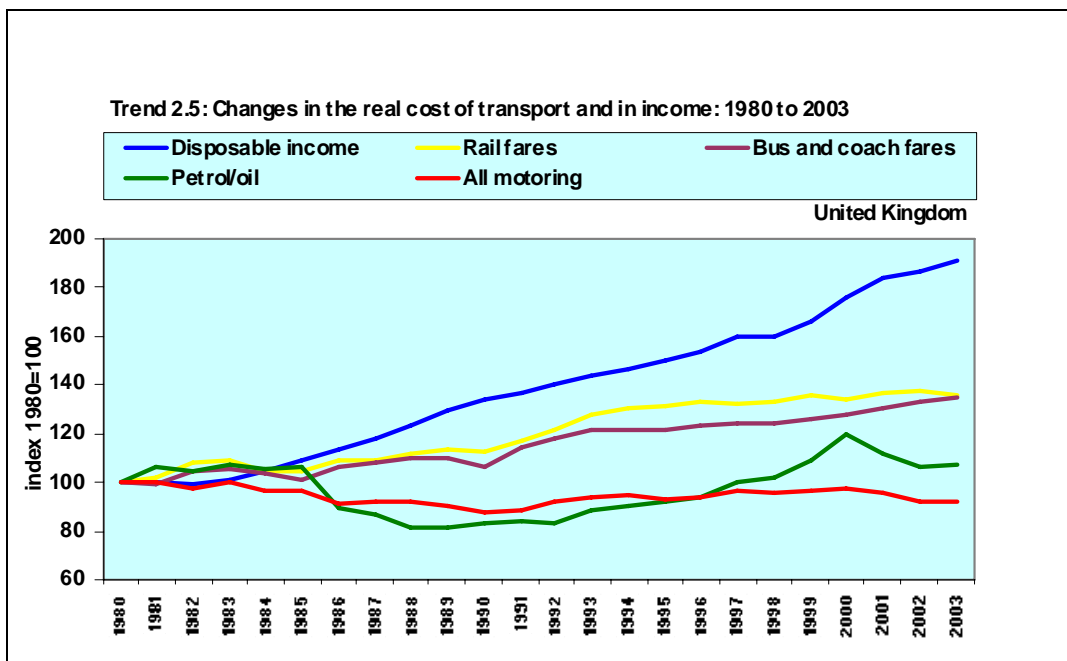Figure 1. Personal travel mode choice (DfT, 2004c).

Figure 2. Changes in the real cost of transport (DfT, 2004c).

	Total Cost (£m)	Invesment Profile (£m)		
		Up to 2010	2011 - 2020	After 2020
Highways	5058	1544	2540	974
%	31.4%	31%	50%	19%
Public Transport	11695	3620	7485	590
	69.6%	31%	64%	5%

Figure 3. Investment for Transport Programmes (CfIT, 2002)

Another issue is in the provision of public transport, which UK can learn from other European countries (CfIT, 2001), including bus and rail integration with integrated timetabling and ticketing, widespread use of flexible public transport (door-to-door transport, shared taxis) as an integral part of a full public transport network, high quality information about transport networks, and integration of cycling with public transport.

Buses

UK has lost its bus patronage following the decline of total number of bus journeys from 4.8 billion journeys in 1984 to 3.7 billion in 1993/94. After a period of little change, the annual number of journeys made has risen to 4.0 billion journeys in 2003/04 (see Figure 4). If the modest target to increase bus use by 10% is likely to met, then that is only because of the increase in London, which accounts for about a third of all bus journeys. Outside London, bus use seems to decline.

Affordable bus fare is an absolute need. Fare subsidies are costly but recently buses in Britain are subsidized far less than in other European countries. The fares are three times more expensive than those of Netherlands. The Future of Transport (DfT, 2004a) has brought the issue of subsidy, giving consideration to modify the Bus Service Operators' Grant (BSOG) into better forms.

Continuity of subsidies is also a key issue. Even the improvements made to London's bus service are now under threat because the increasing subsidy requirement is considered unsustainable. Yet the case for a higher level of subsidy to buses is strong, especially in urban areas. According to the principle of hypothecation, the money from congestion charging can be used to finance bus subsidies.
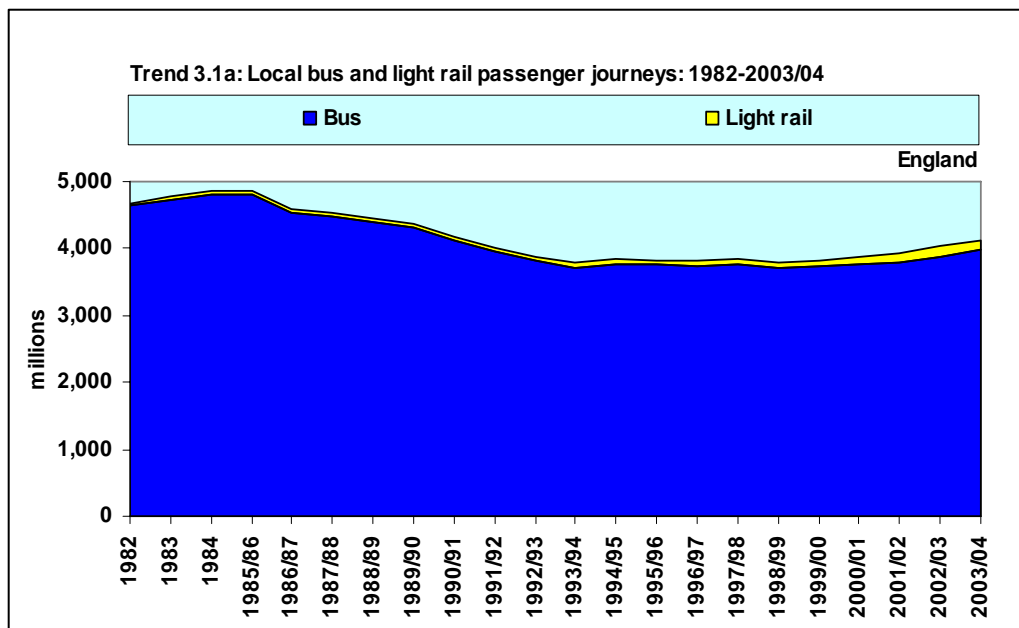

Figure 4. Local bus and light rail passenger journeys (DfT, 2004c)

Increasing the quality of bus services is likely to offer the most cost-effective and flexible solutions to encourage modal shift to public transport, compared with light rail which may work best for routes with the highest traffic and passenger flows, but financial problems often halt the programme, such as LRT programme in Bristol (Bristol City Council, 2004).

Railways

Railway is second largest public transport mode after bus, with around 1000 millions passenger journeys both in national railway and in London (see Figure 5). Investment in 2002/03 is over 3 times higher in real terms than in 1995/96 (see Figure 6). The largest portion of future investment for public transport will

mostly go to finance railway infrastructure. The government efforts to increase railway service level are unquestionable. But, the performance problems and escalating costs on the railways has also led to the abandonment of various rail development schemes.

There are also changes in decision making structure for railway. SRA will be wound up, and the Secretary of State will be responsible

for its strategic responsibilities and financial obligations. Network Rail (NR), a not-for-profit company, gets primary role to get reliable networks (DfT, 2004a). As a not-for-profit company with stakeholder members instead of shareholders, NR should be more accountable. As an addition, in order to create a single strategic regulatory body of the industry, a merger of SRA and NR may be required.
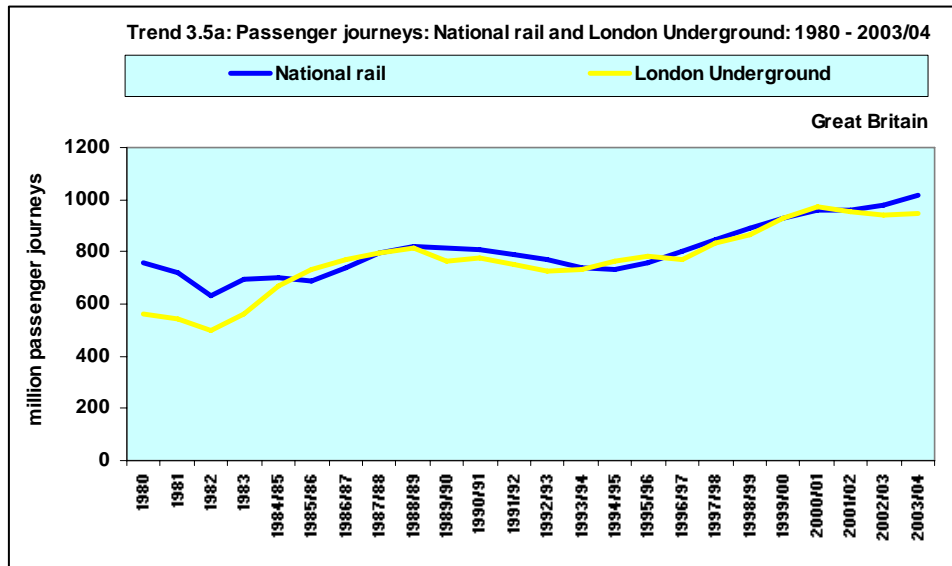

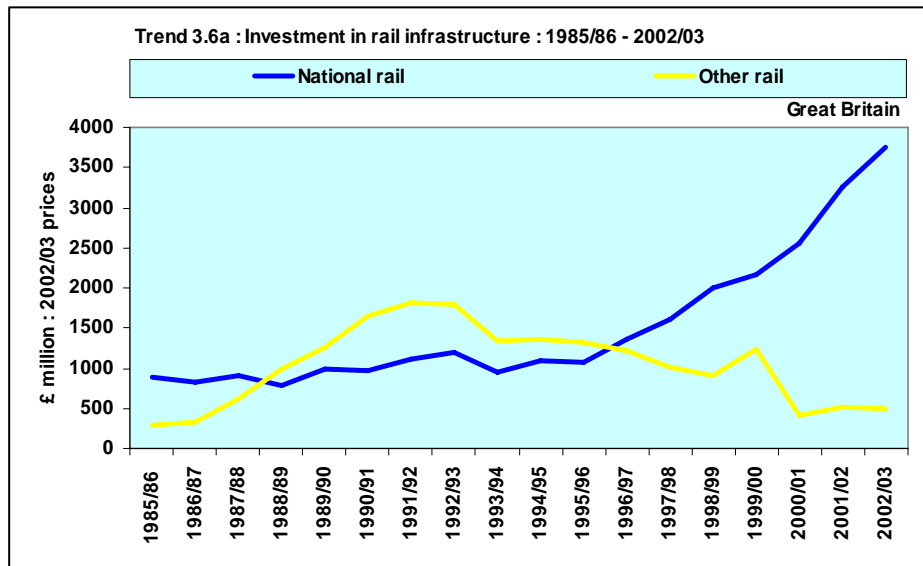Figure 5. Rail passenger journeys (DfT, 2004c)

Figure 6.Investment in rail infrastructure (DfT, 2004c)

The Government targets to improve punctuality and reliability of rail services at least 85% improvement by 2006, with further improvements by 2008 (DfT, 2004a). Punctuality and reliability are measured through the Public Performance Measure (PPM) developed by the Strategic Rail Authority (SRA). The all operators PPM was just under 90 per cent in 1997/98, before being severely affected by the Hatfield crash (DfT, 2004c). Again the safety is also a concern. The latest train accident at Ufton Nervet, Berkshire is not considered as the fault of railway industry, because it was caused by a car blocking the line. But, to recover customer perceived safety of using railway need more efforts. It is the duty of government and the railway industry to prioritize spending on measures which will guarantee the lowest number of fatalities, such as installing more safety equipments across the line.

Walking and Cycling

Walking is a low-cost, healthy and socially inclusive way of travelling. However, both walking and cycling for travel purposes have been in long-term decline as car ownership and use have increased. In UK, the average number of stages walked fell from 473 to 296 a year between 1989/91 and 2002/03 (DfT, 2004c).

Distance walked has fallen from 237 to 191 miles a year. The number of cycle stages declined steadily between from 21 to 15 per person per year. There has been a smaller decrease in the average distance cycled of 17 per cent, from 41 to 34 miles a year. Average trip length has increased from 2.0 to 2.3 miles.

Public acceptance to walking and cycling is considerably low. Thirty percent of people would make them consider walking or cycling if they were having more time available and 23% if they do not have car available (DfT, 2004c). And a more sad figure is 28% of people said that nothing would encourage them to walk or cycle. Concerns about safety issues require: better street lighting, less traffic and more CCTV cameras, as well as infrastructure improvements, such as more cycle lanes and better maintained pavements.

Conducive environments for walking and cycling have been created in a number of European countries, such as the Netherlands, Germany, Austria and Denmark. They typically incorporate low traffic speeds, pedestrianised areas and design features to emphasize a change in priority favouring pedestrians and cyclists. In those countries, lower speed limits and streets designed to give priority to pedestrian and cyclists have become the norm in towns and cities (CfIT, 2001). Encouraging walking is not aimed to force the public to walk more, but aims to make it safer, easier and more convenient for them to choose to do so. Pedestrian access to bus and rail stations can often be poorly thought out, so that it becomes unattractive, inconvenient, and sometimes unsafe. There are needs to make easy, convenient and safe networks of walking routes to key attractors, including urban centres, schools and major employers. Clean and well-maintained pavements are a high priority. Behavioural change towards a society that values the utility of walking will be a very positive result.

Road safety

Britain has one of the best road safety records in the world and the Government is committed to reducing the numbers of people killed and seriously injured on our roads by 40 per cent by 2010 (DfT, 2004a). The Road Safety Bill (the UK Parliament, 2004) was introduced to the House of Commons on 30 November 2004 and contains measures designed to help achieve safety improvements on Britain's roads, following the THINK! (Think!, 2004) road safety campaign that has been previously launched by DfT in 2000 to increase people awareness. Speeding is an unnecessary contributor to many road casualties and deaths. It contributes nearly 30% of the 36,000 serious injuries and 3,400 deaths that occur on Britain's roads each year. Promoting safe and considerate driving on roads is a significant part of the work. Installing safety cameras is the way out. Cameras can significantly reduce the number of people killed or seriously injured at dangerous sites. The positioning of cameras must ensure that they are sited at sites where there is a demonstrable risk and danger to road users.

Another contributor is drink driving In 2002 drink driving accounted for 560 road deaths representing a sixth of the total (Think!, 2004). Introduction of roadside evidential breath testing will enable police to capture evidence of the Blood Alcohol Content (BAC) level at the roadside and use it in evidence in court. Advertisement of drink drive campaign would also increase people awareness of the danger of any amount of alcohol consumed by a driver.

Integration with land use planning

The Planning Policy Guidance (PPG) 13 directs all planning authorities that plans should provide the means to: examine the relationships between transport and land use planning at the different levels (regional to local), promote their integration and coordination, and promote strategies to reduce the need to travel (ODPM, 2002).

To assist in the co-ordination of transport and land use planning, local planning and highway authorities should have regard to the Regional Transport Strategy (RTS) which forms part of the Regional Planning Guidance (RPG). RTSs provide the long-term strategic framework which informs development plans, local transport plans and transport operators in developing their plans and programmes. In preparing the RTS, the Regional Planning Body (RPB) should identify transport needs and integrated strategies for meeting them.

The creation of DfT and ODPM may be the reason why land-use planning was not discussed in the Future of Transport (DfT, 2004a), since land-use planning has become the responsibility of ODPM, not DfT. This situation often creates lack of interdisciplinary team working between DfT and ODPM (Stead, 2003); usually one department takes the lead on policy development and the other takes a secondary responsive role.

In other European countries, it was clear that they had much better provision, including: planning, building transport infrastructure to follow new development (CfIT, 2001). Balance use of street space for people and vehicles has shifted the street from 'movement space' to 'exchange space', as well as the introduction of 20 mph zones. The focus is on personal interaction in quality urban space rather than on mobility in car dominated streets. Fundamental to their success is the strong coordination that has developed at the regional level, allowing the various modes to be planned together so that they complement each other and contribute to a comprehensive user focused system. Strategic planning for land use and transport in UK is now more problematic where there is no coordination at the county level. Since travel patterns and public transport routes often extend beyond unitary boundaries, to make strategic decisions sometimes requires a joint working arrangement, which has no statutory backing (Stead, 2004). It seems that unitary authorities may have led to less integrated thinking and less coordination of decision making, particularly at strategic level.

Economic issues also create a major barrier in the integration of transport and land-use policies, since development decisions are heavily influenced by economic arguments. The importance of the issue should not be underestimated. Local authorities are often too fearful of losing out on new development, particularly in the case of major prestige developments.

Integration with the environment

At the European level, the EU White Paper (European Commission, 2001) highlights the need to integrate environmental considerations into transport policy and other community policies. In UK, the Future of Transport (DfT, 2004a) has also considered this issue.

Being a large component of all modern economies, transport produces various undesirable side-effects, many of which are harmful to the environment. Most of transport's environmental impacts are the result of its use of energy in the form of fossil fuels. These impacts are also a major concern in the Future of Transport (DfT, 2004a), as transport contributes to a quarter of total UK emissions of CO^2, the main driver of climate change.

The majority of emissions from transport sources are from road transport, with the percentage share increasing from 81 per cent in 1980 to 90 per cent in 2002 (see Figure 7). The short-term effects of air pollution may bring forward the deaths of between 12,000 and 24,000 vulnerable people.
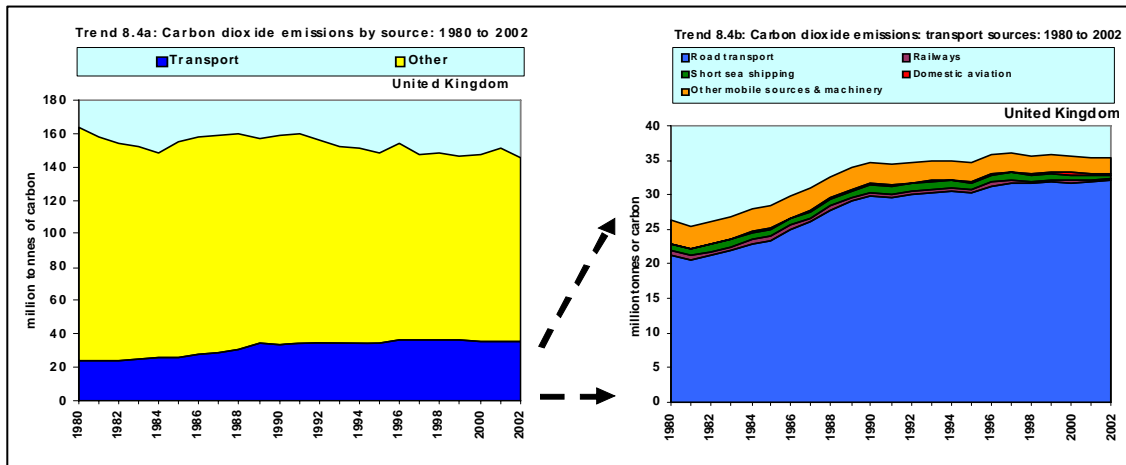
Figure 7. Carbon dioxide emissions (DfT, 2004c)

In 2001, the number of people that understood that emissions from transport are a major contributor of climate change had increased to 65%. However, the proportion of people take action to reduce the impacts on their local and global environment has only increased to 39%. It is a bit sad to know that many people concern but only half of them take action. More concerns and actions from every single individual is required, everybody has to do their bit. By using a more sustainable mode of transport can be considered as an individual contribution to reduce the environmental impacts.

Integration with policies for education, health and wealth creations

In this form of integrated transport policy, the aim is to create a more inclusive society. The issue of social exclusion has become a major concern until recently. Social exclusion happens when people or places suffer from a series of problems such as unemployment, discrimination, poor skills, low incomes, poor housing, high crime, ill health and family breakdown. When such problems combine they can create a vicious cycle (Social Exclusion Unit, 2004).

One dimension of social exclusion is mobility, which is defined as "the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or in part to insufficient built around the assumption of high mobility" (Kenyon et al, 2002). Problem with transport provision and the location of services contributes to social

exclusion as it restricts access to activities that enhance people's life chances, such as work, learning, health care, food shopping, and other key activities (Social Exclusion Unit, 2003). The key idea is accessibility for people to get to key services at reasonable cost, in reasonable time and with reasonable ease. So, accessibility, affordability and availability are the major issues. In relation with access to healthcare, around 20% of people find it difficult to travel to hospital, but people without access to a car find it even harder (Social Exclusion Unit, 2003). Poor transport can also prevent people from taking up employment, and restrict their choice of jobs.

Both DfT and ODPM have a unit to deal with this social exclusion issue. The Mobility and Inclusion Unit (DfT, 2004b) deals solely with transport-related exclusion and the Social Exclusion unit (ODPM) deals with all aspects of social exclusion.

DFT has promoted initiatives to reduce social exclusion by providing cheaper bus fares for elderly and disabled people, expanding rural transport schemes, enhancing the role of community transport in providing a more flexible, demand responsive public transport service, reducing crime & the fear of crime wherever it occurs in the transport system (DfT, 2000).

The social exclusion has become a major concern now, a good progress by the government to keep up promoting inclusion. One of the main policy changes was the introduction of a framework for Accessibility Planning in LTPS to address local accessibility problems by developing appropriate local solutions (Social Exclusion Unit, 2003). An

integrated transport policy should focus on accessibility: providing access to education and employment, goods and services, friends and family, participation in social and cultural life

Issues in Relations to The Implementation of The Integrated Transport Policy

In this section, some key issues in relation to the ways an integrated transport policy is implemented in the UK are discussed.

Continuity and stability in organization and politics

From the organization side there were continuous structural changes in the departments during the implementation of integrated transport policy, following political changes in UK. In June 1997, departments responsible for planning and transport were brought together by the formation of the Department of the Environment, Transport and the Regions (DETR), in order to make better integration. In June 2001, after the general election, DETR was restructured and renamed as the Department of Transport, Local Government and the Regions (DTLR). The responsibility for environmental protection was moved to the new Department of the Environment, Food and Rural Affairs (DEFRA). In May 2002, following the resignation of Stephen Byers, the Secretary of State, DTLR were divided into two new departments – the Department for Transport (DfT) and the Office of the Deputy Prime Minister (ODPM). DFT was responsible solely for transport-related policy, and ODPM was responsible for other former policy areas of DTLR: regional and local government, housing, planning and regeneration, along with the social exclusion unit and neighbourhood renewal.

Lack of continuity has not been conducive due to political consistency. Integrated transport is not even a part of vocabulary in The Future of Transport. The political goal appears to be keeping transport out of the headlines rather than promoting a vision for the part that transport can play in a good society (Grayling, 2004). Politicians at all levels are more interested in policies that will have an effect sooner than later, which means that decisions are usually based around short-term considerations (Stead, 2003). At local level,

political decision-making is often beset by parochial attitudes, which work against strategic and integrated decision-making. The majority who rule the politics will decide the policy to be implemented, not the content of the policy itself.

Coordination in local transport plans (LTPs)

The change from transport policies and programme (TPP) to local transport plan (LTP) is a good decision by the government in order to ensure sustainable funding. The LTP system, built around 5-year integrated transport strategies, was contrived to give local authorities the opportunity to produce comprehensive transport strategies and to give local authorities greater power on spending and more certainty over future funding levels. In practice, coordination is a key of success for implementation of LTPs strategy. The decisions of each council should be interlinked, since local authority structures sometimes fragment transport decisions. Some councils are simply too small to tackle transport problems, for example because they only cover a fraction of a conurbation or travel-to-work area. A joint LTP can be a solution. As for example: the Bristol City Council in cooperation with the Bath and North East Somerset Council, the North Somerset Council and the South Gloucestershire Council, has commenced to work jointly for the preparation of a Joint Local Transport Plan for the period 2006-2011 that covers the whole of the Greater Bristol area (Greater Bristol Transport Plan, 2004).

More devolution

More devolution on power is also required. One of the reasons for London' success, which has given Ken Livingstone an award of the 2004 World Technology in Environment category (The World Technology Network, 2004), is the executive power of the Greater London Authority (GLA) over strategic planning, major roads, bus and light rail services, and London Underground. In other regions, the sub-regional passenger transport authorities in metropolitan areas have no control over the road network or local transport plans. Councils have limited powers to improve bus services in a deregulated framework, as well as provision of rail services at a more local level (Joseph, 2004). They do not feel inclined to go for any more radical

traffic restraint if the Government is not going to support them.

Revenue funding, not just capital funding

Local authority funding for transport is limited and there are no national standards for provision (Joseph, 2004). The Department for Transport gives out capital funding for transport using the LTP annual progress reports, but revenue funding is given by the Office of the Deputy Prime Minister as part of general local authority grants and indicative spending. The revenue funding is often most needed by councils, especially for bus subsidies or travel plans that are actually more cost-effective than large capital schemes.

Conclusion

The paper presented some key issues in the implementation of integrated transport policy in the UK that can be learnt by the Indonesian government. The UK's experience shows that a huge road building program is not the answer

for anticipating traffic demand. In the opposite this may generate more traffic demand.

However the Indonesian government should emphasize on building coherent transport networks with the road network, the rail network, bus services, walking and cycling, ports and airports; in order to meet the increasing demand for travel. Integration of transport policy with land use planning is also a key point that the government must be aware of as the traffic problem in Jakarta is largely caused by urbanization. Concerns on environment must also be a main consideration by the government considering the amount of emission produced by transport and its potential impact to human health and its contribution to the climate change.

Acknowledgement

References

Bristol City Council (2004). *Bristol Local Transport Plan: Annual Progress Report 2004* [online]. Bristol City Council, Bristol. Available from: http://www.bristol-city.gov.uk/Fuguri/frame.html?D+DTT02101+BG+F+BMM00104+DTT00102 [Accessed 28 December 2004].

CfIT (2001). *European Best Practice in Delivering Integrated Transport: Key Findings* [online]. CfIT, London. Available from: http://www.cfit.gov.uk/research/ebp/key/pdf/key.pdf [Accessed 20 December 2004].

CfIT (2002). *A Review of the Multimodal Studies: 10 Year Transport Plan Monitoring Strategies* [online].CfIT, London. Available from:http://www.cfit.gov.uk/research/10year/mms/pdf/mms.pdf [Accessed 23 December 2004].

DETR (1998). *A New Deal for Transport – Better for Everyone*. The Integrated Transport White Paper.

DfT (1998). *A New Deal for Transport: Better for Everyone* [online]. Transport White Paper.

TSO, London. Available from: http://www.dft.gov.uk/stellent/groups/dft_about/documents/page/dft_about_021588.hcsp [Accessed 8 November 2004].

DfT (2000). *Social Exclusion and the Provision of Public Transport* [online]. Available from: http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/page/dft_mobility_506795.hcsp [Accessed 20 December 2004].

DfT (2004a). *The Future of Transport* [online]. Transport White Paper. TSO, London. Available from: http://www.dft.gov.uk/stellent/groups/dft_about/documents/divisionhomepage/031259.hcsp [Accessed 7 November 2004].

DfT (2004b). *Mobility and Inclusion Unit Update* [online]. DfT, London. Available from: http://www.dft.gov.uk/stellent/groups/dft_about/documents/page/dft_mobility_redirects_page.hcsp [Accessed 21 December 2004].

DfT (2004c). *Transport Trend 2004* [online]. DfT, London. Available from: .

http://www.dft.gov.uk/stellent/groups/dft_contro l/documents/contentservertemplate/dft_index.hc st?n=9381&l=3 [Accessed: 23 December 2004]

European Commission (2001). *European Transport Policy for 2010: Time to Decide* [online]. EU, Brussels. Available from: http://europa.eu.int/comm/energy_transport/libra ry/lb_texte_complet_en.pdf [Accessed 28 December 2004].

Grayling (2004). Whatever happened to integrated transport. *The Political Quarterly*, 75 (1), 26-33.

Greater Bristol Transport Plan (2004). *Joint Local Transport Plan 2005* [online]. Available from: http://www.greaterbristoltransportplan.org [Accessed 20 December 2004].

Joseph, S. (2004). New localism and transport: a local perspective. *World Transport Policy & Practice*, 10 (2), 25-32.

Kenyon, S., Lyons, G., Rafferty, J. (2002). Transport and social exclusion: investigation the possibility of promoting inclusion through virtual mobility. *Journal of Transport Geograph*, 10, 207-219.

ODPM (2002). *Planning Policy Guidance 13* [online]. TSO, London. Available from: http://www.odpm.gov.uk/stellent/groups/odpm_ planning/documents/pdf/odpm_plan_pdf_60689 6.pdf [Accessed: 23 December 2004]

Social Exclusion Unit (2003). *Making the Connections: Final Report on Transport and Social Exclusion* [online]. Social Exclusion Unit,

London. Available from: http://www.socialexclusionunit.gov.uk/page.asp ?id=7 [Accessed 21 December 2004].

Social Exclusion Unit (2004). *Breaking the Cycle: Taking Stock of Progress and Priorities for the Future* [online]. Social Exclusion Unit, London. Available from: http://www.socialexclusionunit.gov.uk/downloa ddoc.asp?id=262 [Accessed: 23 December 2004]

Stead, D. (2003). Transport and land-use planning policy: really joined up? *International Social Science Journal*, 55 (176), 333-347.

The UK Parliament (2000). *Transport Act 2000* [online]. Queen's Printer of Acts of Parliament. Available from: http://www.hmso.gov.uk/acts/acts2000/2000003 8.htm [Accessed: 10 November 2004].

The UK Parliament (2004). *Road Safety Bill* [online]. House of Commons, London. Available from: http://www.publications.parliament.uk/pa/cm20 0405/cmbills/010/2005010.htm [Accessed 27 December 2004].

The World Technology Network (2004). *The World Technology Winners and Finalists* [online]. Available from: http://www.wtn.net/new/awards/2004/winners.h tml [Accessed 27 December 2004].

Think! (2004). *The Think Road Safety Website* [online]. Available from: http://www.thinkroadsafety.gov.uk [Accessed 21 December 2004].