

**Summary:**

# Road pricing, public transport and equity

Road pricing and toll financing in Norway are two mutually exclusive measures, each regulated in its own law. According to the laws, the purpose of road pricing is to improve the economic efficiency of the transport system by reducing congestion, while the purpose of toll financing is to help finance road infrastructure. Through amendments, however, toll financing may now also be used to finance public transport infrastructure, and charges may be differentiated by time of day. Thus the two measures both may serve the two objectives of economic efficiency and financing. Both measures will have important equity impacts, so planning will also have to take equity objectives into account.

This report focuses on two issues: the implications of road pricing and toll financing for public transport demand and public transport policy; and the equity impacts of road pricing and toll financing. Small literature surveys on each of the issues, concentrating on empirical evidence and model studies, have been conducted.

In London, Singapore and (currently) Stockholm, public transport was improved ahead of the introduction of road pricing. For the impact of such a combined policy, English speaking readers are referred to the websites listed in Chapter 3 and to the list of references. In particular, the interaction between public transport demand and road pricing has been analysed by Small (2004), while Dillén (2004) and other Swedish studies provide results from model simulations.

With respect to equity, we stress the need to take equity implications seriously, in all their different forms and aspects. Decision-makers must make up their mind about the equity objectives. Do they merely want to counteract identified adverse equity impacts of the charging system by a system of discounts, exemptions and other modifications when designing the system, or do they intend to use a part of the revenue to that purpose? Do they want to go further than merely compensating loser groups, and actually reduce inequality between groups? Which is the most important aspect of equity, income or accessibility? What are the relevant dimensions: inequality between income groups, gender inequality, geographical dispersion of benefits, or perhaps benefits to firms versus benefits to households?

Studies of equity impacts are still mainly model simulations. Swedish studies that take account of differences in values of time across groups (Eliasson and Lundberg 2003, Eliasson and Mattsson 2005) find that value of time differences are not that important for the equity impacts. Two other factors, i.e. the use of the revenue and the composition of those who drive in the charging zone before implementation, are the most important factors. In a model with no differentiation of the value of time, the Norwegian study of equity impacts in the EU Fifth Framework project AFFORD (Fridstrøm et al 2000) finds that if the revenue is used to cut back distortionary income taxation, the efficiency gain to the whole economy is the main part of the net benefit from road pricing, but the inequality across income groups increases. If the revenue is paid back with the same

amount to everyone (flat redistribution) inequality is reduced but the main part of net benefits fails to materialise. Thus road pricing involves a sharp conflict between efficiency and equity objectives.