Incentives and instruments for sustainable urban logistics – Swedish examples

Purpose

As part of the FREVUE project, the Swedish Transport Agency (STA) has produced an overview of incentives and instruments for sustainable urban logistics. This work will feed into the FREVUE report D3.5 on Policies, Procurement and Governance that will be published in 2017. Unlike the rest of the FREVUE project, the work produced by STA does not specifically focus on electric vehicles.

This factsheet provides an overview of the work produced by STA to determine which incentives and policy instruments, as well combinations thereof, can be applied to influence freight movement particularly in response to environmental objectives. Whilst the focus of the report is Sweden and Stockholm in particular, many of the findings will be applicable in other parts of Europe.

Using various incentives and policy instruments, public authorities can positively influence goods transportation in cities. The right measures can minimise negative impacts of city logistics on the environment while at the same time supporting economic and social development. Packages of measures have been divided into the following four categories which target economic, legal, societal, or informative themes.

Economic measures

The economic measures within the transport sector largely involve internalising the costs incurred by the external effects of the transport sector. Examples include:

- Congestion charge
- Road pricing
- Eurovignette
- Road user charge
- Infrastructure fees
- Vehicle tax
- Fuel duty

Legal measures

Legal measures are so-called 'command and control' means in which a restriction (command) is introduced and must then be monitored (control). Examples include:

- Local traffic regulations
- Noise limitation
- Coordinated procurement
- Procurement with requirements
- Coordinated goods deliveries
- Intensified monitoring

Societal measures

Societal measures mostly involve infrastructure, partly in the form of urban planning and partly in the form of infrastructure investments. Examples include:

- Urban design
- Property boxes and service boxes
- Lorry parking lots
- ITS services

Informative measures

A goods network may be set up within the municipality or region to which players in the business community such as shippers, logistics operators, and landlords can be invited to discuss relevant issues and reach a general consensus about what needs to be done. Examples include:

- Information, e.g. influence behaviour and increase knowledge
- Research and development

Example A. Low emission zones

Stockholm, Gothenburg, Malmö, Lund, Helsingborg, Mölndal, Uppsala and Umeå are the Swedish cities that enforce low emissions zones in their inner city areas. The application of low emissions zones in Sweden has resulted in a reduction of environmentally harmful emissions, thus producing an improved urban environment. However, the low emissions zones have not resulted in gains in efficiency or benefits for distributors of goods. An overview of low emissions zones in Europe is available online at http://www.lowemissionzones.eu/.

Economic, legal, societal and informative measures can have a positive, negative or neutral effect on the following objectives:

Environment	Accessibility	Road safety	Noise	Transport costs
Impact on the environment	Ease of reaching the destination	Risk of traffic related incidents	Sound level produced by vehicles	Cost incurred by the transporter

Example B. Procurement with requirements

Even without engaging the services of a logistics partner, municipalities can also impose requirements concerning how a delivery shall be carried out when procuring goods, services and transports. During this process, the municipality may demand that deliveries are made using environmental friendly vehicles and impose requirements in respect of delivery times for different operations.

Combining different measures

A single measure seldom produces an optimal impact by itself. Instead, a combination of several different policy instruments and incentives is required to achieve the desired effect. Packages of measures offer a good basis but must be adapted to what is appropriate and possible in each individual situation.

Example C. Urban design

The urban design of an area determines the ability of a distribution vehicle to deliver goods to their final destination. Municipalities have a number of tools at their disposal for this purpose: local plans, land use plans, planning permission agreements and building permit assessments. In addition to environmental benefits, urban design measures can also positively affect accessibility, road safety, noise and transport costs.

Effectiveness of package of measures to target environmental objectives

Principal measures with direct positive impact on the environmental objective	Measures that can address conflicts caused by principal environmental measures, e.g. increased transport costs
- Vehicle tax - Fuel duties - Road user charge - Low emission zones - Procurement with requirements	- Congestion charge - Dedicated lanes - Night / off peak deliveries - Speed limits - Loading areas - Coordinated procurement - ITS services

The following have been identified as countering the environmental objectives

- Time limitation, daytime: Can lead to an increase in the number of vehicles
- Vehicle weight and size limitation: Can require additional vehicles
- Carrying capacity class: Can force vehicles on other roads and/or require more runs
- One-way streets: Can results in longer routes

Process

The following is a general process to be applied when responding to/ improving freight movement:

- Identify how to work with freight transport industry within the authority or municipality
- Appoint a person in charge who has a clear task and assigned resources/budget
- Work in conjunction with other stakeholders in the region
- Identify needs and problems, both local and regional
- Implement measures
- Evaluate implemented measures

Further information

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