



Regulate, stimulate, innovate or co-create in an urban context: government bodies' quadrilemma

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Abstract. This paper examines the needs of governing bodies to have better insights in the impacts of new policies on the behaviour of different stakeholders and on their own operations and strategies. These strategies are often not purely profit-, revenue or cost-driven. Therefore, it is important to have a well-structured evaluation framework [1]. This paper provides insights into the structure of actual decision making and compares current policy initiatives with actual preferences of governing bodies and shop owners. Furthermore, the impacts of different policy measures are simulated using a socio-economic costs-benefits model and are compared to the targeted outcome of governing bodies. Hereby, the general impact on various stakeholders is discussed but special attention is given to the achievement of governmental aims. This research is based on an extensive literature review, multiple expert interviews and a clustering analysis based on the different policies mentioned in 8 different mid-sized mobility/logistics plans. Moreover, specific cases are evaluated using a costs-benefits model [2]. Major results are that there is a mismatch between objectives and policy measures. Many policies and initiatives are still focussed on regulation and enforcement while governing bodies indicate to prefer to focus on voluntary co-creation initiatives and policies. Major barriers for this evolution are slow decision making, bureaucratic organisation and limited attention for relatively low freight volumes compared to passengers transport.

1 Objective

A city without freight transport is no liveable city, while a city with freight transport bothers citizens, shop owners and policy makers. Finding a delicate balance between these two extremes is the challenge of many regulations, policies, measures and initiatives.

Little research has been performed to assess the impact of the strategies and, respective, policy measures of governing bodies on urban logistics. There are already some studies examining the cost structure of receivers and transport operators but there are only limited insights in the costs/investments and benefits/returns of governmental policies from an economic perspective for governing bodies.

The objective of this research is twofold: firstly, it examines the current set-up and objective of policies in 8 mid-sized cities. Moreover, different preferences of governing bodies and shop owners are compared with actual policies. Secondly, different governmental initiatives and policies are evaluated from a micro- and socio-economic perspective. The final aim of this research is to develop a framework in which policies can be structured, evaluated and checked with the individual strategies of governments. Furthermore, the impact of different types of policy initiatives should be examined to estimate different effects on other stakeholders.

2 Research strategy

This research exists of two main parts. Firstly, the current situation was examined by an extensive literature review and multiple in-depth interviews with policy makers on different levels and in various functions. Moreover, a structured evaluation of the mobility/logistics policy plans of 8 different mid-sized cities was performed. Different policy initiatives were examined and categorised. The result is a framework in which different initiatives are clustered.

Secondly, future strategies were developed and presented. Hereby, costs and benefits of different initiatives were compared to estimate the impact on the society but with special attention for the return and investment for governing bodies. Hereby, more insights are given in the role governments can play to stimulate, regulate, co-create or innovate.

In the following parts of this extended abstract, the overall outcomes and frameworks are given. Specific costs-benefits calculations can be consulted in the full paper. A major research constraint is that the model which was used to calculate the costs-benefits has been developed to measure the impact of policies and behaviour changes on Ho.Re.Ca logistics [3]. Consequently, further research should be done on how impacts vary in other sectors.

3 Results

The different research steps reveal that there is a substantial mismatch between the preferences of governing bodies and, the orientation and consequences of their policies. However, some change can be observed towards more stakeholders' engagement. Besides, this research also shows that a well-structured approach is needed to valuate costs as well as benefits properly.

3.1. Current situation

The examination of the mobility/logistics plans of cities demonstrates that many cities have strong ambition to change the way they make decisions and work together with other stakeholders. Figure 1 presents one of the major outcomes. This figure structures some observed and frequently used policy measures and the main decisive variables. Originating from this figure, we can conclude that the preferences of cities and shop owners (blue bubbles) are far removed from the actual orientation of policy measures (orange bubbles).

In most cases, the new strategy of cities is twofold: firstly, they would like to team up with the other stakeholders to become partners. Secondly, they still want to be in charge and have some degree of enforcement. Remarkable is the fact that they all foresee a budget to enhance urban logistics in their cities. Furthermore, differences between

cities can be observed which means that different strategies are followed per specific city.

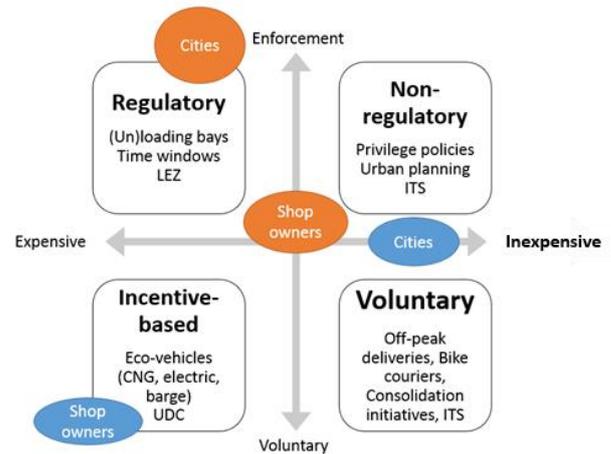


Figure 1. Policy measures framework

Source: Own composition based on clustering analysis

The behaviour and preferences of shop owners are also remarkable. Nowadays, policy measures are often taken as exogenous factors by shop owners to which they only align if they are enforced. However, the shop owners indicated that they have not been invited to co-create better solutions. Originating from this trend, they also argued that their main preference is not only to be inspected but also like to be stimulated to rethink their business and operations.

A main aspect which came forward regularly in the field interviews was the mismatch in communication. Figure 2 shows that, in strict sense, there is no formal or even informal consultation between shop owners and governing bodies on a regular basis. Despite the fact that there are sector organisations and federations, shop owners often perceive that they do not focus on operational issues and major sector needs.

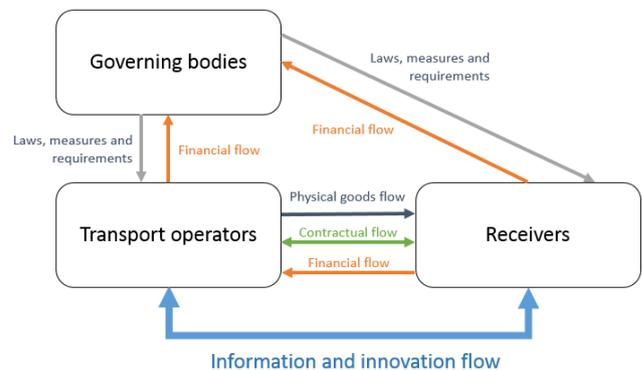


Figure 2. Communication: current situation

Source: Own composition based on expert interviews and literature

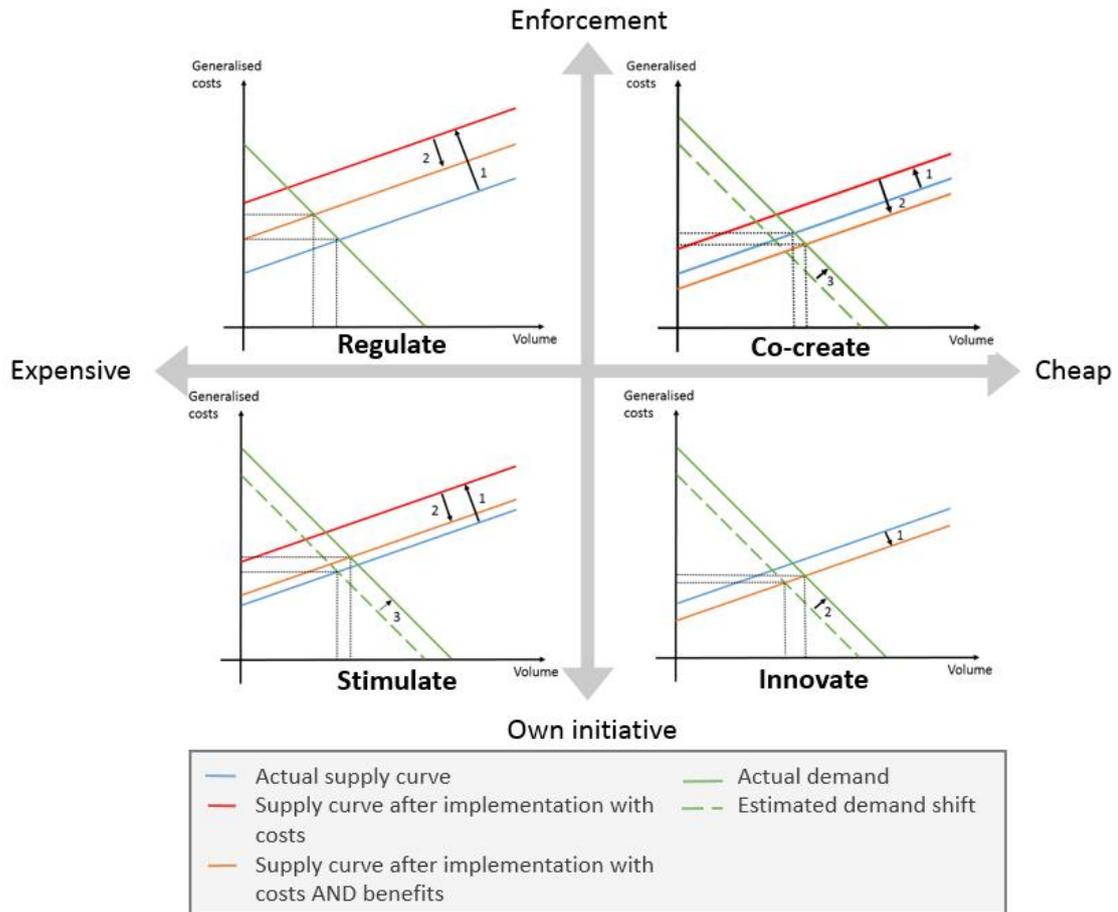


Figure 4. Quadrilemma

Source: Own composition based on costs-benefits analyses

Figure 3 shows the situation to which the urban logistics scene should move as a final goal. In this situation not only governments and shop owners win but also other stakeholders can use the released information to enhance their activities. A good example is the collection of data which can evolve from static data towards more dynamic –real-time-data which is very specific for given areas.

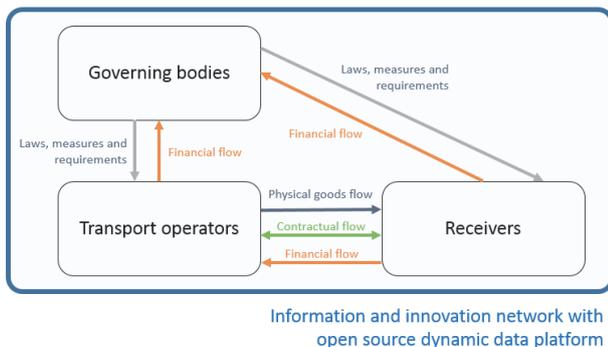


Figure 3. Communication: alternative situation

Source: Own composition based on expert interviews and literature

Besides communication issues also other barriers came forward such as politics, short term decision making, conservative and closed behaviour of sectors as well as transport companies, etc.

General remark is that the more volume a sector generates, the more inputs are appreciated by governing bodies.

Despite the elements mentioned in this section, the authors observed that it is often very difficult for governing bodies to orientate and align their measures with their own strategies. Therefore, a well-structured cost-benefit analysis is necessary per initiative to make sure the outcomes match with the actual preferences.

3.2 Future strategies

In this section, a costs-benefits analysis is performed for governing bodies as well as the whole society. Figure 4 gives a simplified representation of the generalised outcomes of the simulations of different initiatives. Originating from the figures some remarkable evolutions can be observed:

- **Regulate:** initiatives which focus on regulation are often closely linked with high investment costs, such as Automatic Number Plate Recognition (ANPR) cameras in the case of a LEZ. The perceived benefits by other stakeholders are relatively low resulting in a higher market price. For governments the investment is often much higher than the return they achieve by f.e.

reduced external costs or increasing attractiveness of the city. Moreover, further regulation often implies that the confidence of shop owners will be tempered which does not result in growth (a shift of the demand curve). In this case, a welfare loss is often observed.

- **Stimulate:** measures which are categorised as stimulating such as a subsidy to change to CNG vehicles are observed to be very expensive for governments. However, the perceived benefits for governing bodies and other stakeholders are higher. In the short term, these initiatives are still perceived to be generators of welfare losses. In the long term, the demand will shift away from the demand curve because shop owners have more confidence that solutions are applied and that everyone is stimulated to improve efficiency. Consequently, some initiatives become more feasible.
- **Co-create:** co-creating initiatives are similar to stimulating measures but require less capital investments of governing bodies. Important in this case is that other stakeholders change their behaviour as well. A good example is the implementation of local waste sorting streets. On the one hand, there is a high investment cost but on the other hand there are also major savings for governing bodies as well as users.
- **Innovate:** innovating is the most difficult mission of many stakeholders. In this case, there are no substantial investments needed by governing bodies to improve the efficiency of the transport in their city. Innovative initiatives are scarce and often linked with private companies. However, cities play an important role to pick up innovations from other cities and to initiate a well-structured and transparent playfield to grow innovations.

4 Conclusions

We can conclude that many governments are in a transition period towards more stakeholders' engagement but this evolution will still take some time. Confidence and mutual recognition between

different stakeholders are very important to enact more efficiency and growth. The overall aim should be to match the predetermined target with the according outcome.

For governing bodies, it is appropriate to concentrate on co-creating initiatives. Hereby, governments stay in charge to some extent, and synergies between different stakeholders are used to improve efficiency more substantial than when regulating or stimulating. Moreover, the co-creating atmosphere is also a good environment to initiate innovation by other parties. Focussing on innovation by governing bodies is rather expensive. Therefore, it is better to leave this role to the private sector by activating as many as possible goods ideas together with capable experts.

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References

1. G. Blauwens, P De Baere, E. Van de Voorde: *Transport Economics*. 6th Edition, Antwerp: De Boeck, (2016)
2. T. Verlinden, E. Van de Voorde, W. Dewulf: Ho.Re.Ca. logistics and European Medieval Structured Cities: A search for cost generators. *Working paper University of Antwerp – Faculty of Applied Economics*, Antwerp, pp.1-22, (2016)
3. T. Verlinden, E. Van de Voorde, W. Dewulf: Ho.Re.Ca. logistics and medieval structured cities – A market and demand analysis. In: U. Clausen, M. ten Hompel, R. de Souza (eds.): *Commercial Transport. Proceedings of the 2nd Interdisciplinary Conference on Production, Logistics and Traffic 2015*, Heidelberg: Springer, pp. 369-384, (2016)