

courtesy translation – only the Italian text is authentic

Sixth Annual Report to the Parliament

Chamber of Deputies
25 June 2019

ART

PART ONE — THE AUTHORITY, THE CITIZENS, THE USERS

Introduction

The activities carried out by the Authority in the six years since its establishment in 2013 covered all transport modes and all areas falling within its remit, ranging from access to infrastructure to regulation of services and protection of passenger rights.

In the same period, the number of users of infrastructures and transport services has increased. More generally, demand for mobility services has grown, including for sharing mobility, and is more oriented to energy efficiency and environmental sustainability. These developments in Italy are illustrated by some data reported below (Box 1).

Box 1. Developments in passenger transport

Based on ISTAT data, with regard to **regular travelling to school and work**, journeys increased from approx. 35 million in 2015 to above 36.3 million in 2017, with a growth of +3.6 %. In 2017, private cars were used for 57% of the journeys (20.7 million), while only 21% of the trips (7.6 million) were made by using local urban and suburban public transport services by road and rail. A significant increase was recorded in walking and cycling (+8.6% in the period 2015-2017, with 6.9 million of journeys in 2017). On the other hand, an increase of approx. 1% was observed in the period 2013-2017 in the number of passenger embarkations and disembarkations in the **international maritime and national cabotage transport**, which accounted for 73.9 million in 2017.

Data collected by the Authority show a slight growth in **rail transport** in 2017, notably in the segment of services subject to public service obligations (29.8 billion passenger km), that increased by 3% in the period 2014-2017. Much more dramatic was the increase in commercial services in the same period, accounting for +18% (21.1 billion passenger km in 2017). As to high-speed services, the number of passengers in 2017 was 18.4 billion (+40% compared to 2014). In contrast, in the same period, international passenger traffic fell by 7% (0.6 billion passenger km in 2017), most likely in favour of air transport.

As regards the **use of motorway infrastructures**, AISCAT data show that, over the five-year period 2013-2017, the number of average daily light vehicles rose from 28,598 to 30,751 (+7.5%), while the number of heavy vehicles increased from 8,329 to 9,114 (+9.4%).

Concerning **the transit of passengers in Italian airports**, based on ENAC data, they were 174.6 million in 2017 (increasing by 22% compared to 2013), of which 62 million passengers for domestic journeys (+9% compared to 2013). The positive trend was confirmed in 2018, too, with 184.8 million passengers (accounting for a 5.8% increase compared to 2017 and +29% compared to 2013), of which 64 million passengers for domestic journeys (+3.4% compared to 2017 and +13% compared to 2013).

Data from the National Observatory on Sharing Mobility, over the period 2015-2017, show that the **number of sharing mobility services** provided in Italy (carpooling, car-bike- and scooter-sharing) grew by a 17% annual average, ranging from just over 260 to 357. In 2017, 28% of the Italian population, i.e. approx. 18.1 million, could use at least one of the sharing mobility services. Over the same period, the number of zero-emission vehicles grew 3.5 times, ranging from 620 vehicles in 2015 to 2,200 vehicles in 2017.

With regard to **intermodal journeys**, the 2018 ISFORT Report indicates that the relevant share still remains marginal (4-5% in 2017), although it has doubled in the last ten years. However, since the types of multimodal combinations considered involve, for the most part, the use of public means of transport, with a large majority of passengers switching from public transport to car, it should be considered that this figure does not adequately account for the potential demand for multimodal services which, in its turn, is strongly affected by the availability of flexible door-to-door services.

Sources: as above. For more information please refer to part 3 of the Report (“Economic data”).

Alongside the developments mentioned above are those concerning potential and unexpressed demand, that today can be enhanced and oriented by applying digital technologies and forecasting systems typical of *behavioural economics*¹.

Can these developments, that illustrate the behaviour of citizens and users, be related to the Authority's regulatory and monitoring activities? If so, how is this relationship measurable? Indeed, by acting on the ways in which transport services are organised and provided, and on the factors that determine prices, quality levels and their dynamics, the measures adopted by the regulator can have an impact on both business behaviour and service accessibility by the users.

A detailed analysis of the above questions goes beyond the purpose of this Report, that aims at providing a first comprehensive reading of the relation between the Authority's activities and the enhancement of citizens' and users' welfare². This applies both when the latter are directly addressed by the regulatory measures, and when they benefit therefrom owing to changes in the behaviour of the regulated undertakings or institutions involved, as a result of the Authority's decisions.

Thus, the sections below go over the purposes of economic regulation and illustrate some constraints to the ability to influence the welfare of citizens and users; there follows a brief description of the tools applied by the Authority and of the effects of its activities; finally, a few considerations are presented on the perspective application of behavioural economics to the economic regulation of transport. These preliminary considerations anticipate the detailed review of the activities carried out by the Authority in the reference period, the description of relevant economic data and the listing of decisions and measures adopted by the Authority.

1. Purpose and outlook of economic regulation

The debate over the aims of the economic regulation of the sector deals with the question whether it extends to the protection of citizens and users or is limited to promoting competitive and efficient markets. In this respect the experience gained in the first six years of the Authority's activity enables to present evidence of the impact of the effects of the regulatory measures and of the monitoring activities concerning both aspects. Just think to the regulatory measures that impact on the services subject to public service obligations and on the cost-effectiveness and efficiency of operations. These measures are addressed to undertakings or other concession-granting authorities and infrastructure managers. For the benefit of these entities, the regulator is called upon to ensure competitive conditions in the relevant liberalised markets and, in any case, proportional measures. At the same time, charges and prices that reflect efficient costs of the operators are, as such, beneficial to the users.

Thus, in determining whether the return on the capital invested by public or private undertakings in activities that are relevant to infrastructure management or service provision is adequate, the regulator assesses and considers its potential impact, including in terms of benefits to citizens and users. Even clearer is the effect of the measures aimed at ensuring minimum standards of service quality: they operate in the contractual relationship between the awarding entity and the managing body, and provide for the application of penalties in case of inefficiencies, and of bonuses in case of higher-than-expected performance. At the same time, they determine the level of user satisfaction.

Even in markets which, like transport, remain overall strongly concentrated, new balances are emerging between supply and demand for services. In economic regulation the issue of information asymmetries between regulated undertakings and regulatory body is well-known, e.g. in relation to technological choices. Events comparable to information asymmetries may also arise between the regulator and the

¹ An analysis of potential demand is currently being developed by the Authority, in particular with reference to the determination of local public service areas referred to in Decision No 48/2017 of 30 March 2017.

² Reference to the issue of the citizens' and users' welfare is made here for purely descriptive purposes and does not refer to the reflections started in economic science by Arthur Cecil Pigou (*The economics of welfare*, Palgrave-Macmillan, 1932).

undertakings, on the one hand, and the transport users, on the other. This is the case of the unexpressed and potential demand for services, which could provide useful guidance on the rationale and structure of mobility preferences. A catalyst of this process is the ever increasing ability of citizens and users to exercise their rights and influence the supply of transport services by using digital technologies: their growing empowerment challenges the regulator to integrate these technologies into the relevant factors of the measures that it adopts, if not into their purpose, too.

Given that the above information asymmetries have an impact on the ability of regulation to add value also to the benefit of citizens and users, the tools and effects of economic regulation are recalled here below before presenting a few considerations on the methodologies developed in the context of behavioural economics, in particular on their application to the unexpressed demand for mobility.

2. Tools and effects

As anticipated above, the economic regulator deploys a panoply of instruments in carrying out its activities. These are based on the powers conferred upon it and are capable of producing benefits for users, that take on many forms and levels of integration, and can be appreciated at different times. Immediately apparent are those used to ensure protection of the rights provided for by law, while the measures requiring changes in the behaviour of undertakings, such as those concerning equitable and non-discriminatory access to infrastructures, that are further discussed below, may take longer and may be produced in a mediated or indirect fashion.

While these instruments constitute the basic *toolkit* of economic regulation, the wide range of functions assigned to the Transport Regulation Authority qualify its role and expertise. These functions include measures that impact on competition in the market, as in the case of the definition of access conditions to infrastructures, or for the market, as in the case of the definition of tender calls aimed at ensuring a level playing field to all participants, and extend to the identification of the standards of service quality and the protection of passengers' rights. The examples below provide a short and non-exhaustive overview of the tools available to the Transport Regulation Authority. They are presented by referring to the perception of their effects by the users ranking from lowest to highest³.

According to the proposed scheme, the effects of economic regulation on the welfare of citizens and users might appear less obvious and not be quickly perceived in the case of Authority's measures aimed at ensuring the most efficient use of public resources. In this respect, with regard to public passenger rail services, the Authority has identified efficiency targets and indicators to ensure that public contributions for non-profitable services be provided on the basis of efficient operating costs⁴. Containment of service production costs ensuing from efficiency may result in lower prices, more services or a different mix, to the benefit of the users. Indeed, transparency of costs and of their coverage through revenues from ticket sales and public contributions, respectively, increases user awareness of the actual costs underlying the provision of services.

Equitable and non-discriminatory access to infrastructures, as defined by the regulator in the fulfilment of its role as a guarantor, may influence the supply of related services that add value to the use of mobility services by citizens and users. Thus, when carrying out its regulatory functions concerning bus terminals, that are essential in the increasingly important context of intermodality in transport, the Authority's measures primarily address infrastructure managers, that are required to ensure that road-haulage undertakings access infrastructures on an equal and non-discriminatory basis. Yet, among the obligations of infrastructure managers are those that affect the conditions under which services are provided to users, such as the availability of timetable information, the possibility to access connections with services rendered by other modes and use integrated tickets, the physical accessibility of bus terminals, that are

³ The description disregards the impact of regulation, as technically relevant to the regulator.

⁴ Cf. Part Two, paragraph 3.2.1.

covered also by *ad hoc* regulatory activities concerning service quality and protection of rights, as further discussed below.

The perception of the effects arising from regulation increases when looking at one of the Authority's main regulatory tools, i.e. defining principles and criteria to be applied by infrastructure managers in setting tariffs, charges and tolls (e.g. access charges to railway infrastructure, airport charges, port charges, etc.). These are transferred and produce effects onto users upon purchasing travel tickets (e.g. train or flight tickets) or paying for the use of infrastructure (e.g. motorway toll). In defining these criteria, the regulator shall ensure that tariffs, charges and tolls are appropriate in relation to the underlying costs: this complex activity entails careful analysis of the regulatory accounting of regulated entities and, where proficient, comparison of the performance of each undertaking with that of any other operating in the same market. Consider, for example, the toll charging systems for motorway concessions that, as provided for in the Authority's statutory provisions, are based on the price cap method, with determination of the productivity factor X on a five-year basis. By providing a stable framework of reference for each regulatory period, these systems include periodic incentives in favour of motorway concessionaires in order to stimulate recovery of productivity and reduction of operating costs, thereby curbing tariff dynamics. They further provide for systems to ensure that lack of investments or delayed investments, extra revenues related to underestimated traffic forecasts, and premiums and penalties for service quality, are reflected in the tolls, thus turning into benefits for the users.

Another set of tools relates to the regulation of the quality of services and, in particular, to the definition of minimum quality standards of those subject to public service obligations. The Report describes in more detail the measures that have identified quality standards, minimum levels and measuring indicators to be applied to service contracts covering rail and maritime transport, respectively⁵. Similar provisions are contained in the opinions released by the Authority on the mode of operation and organization of taxi services⁶. These standards, to be included in the service contracts, set out which information is to be made public, are supplemented by measuring indicators and periodic verification requirements and supported by a penalty system. They include regularity and punctuality of service, cleanliness and comfort of rolling stock and infrastructure, feedback systems by users and representative associations, to name but a few. In this case, the regulatory measures impact on the relationship between the awarding entity and the infrastructure manager; at the same time, they indicate minimum levels of satisfaction to be ensured to users with respect to the specific features of each service.

If, under the minimum standards of service quality, the impact of regulation for the benefit of citizens and users becomes more visible, they are immediate with regard to the Authority's competences in the field of passenger rights protection. In exercising these functions, the Authority defines the minimum content of the specific rights that may be claimed by users, including the right to compensation: a *sui generis* area of activity, which has been thus far exercised to define the minimum content of the rights held by HS season ticket holders for high-speed rail transport services, those of passengers of PSO rail services and maritime transport passengers that intend to lodge a complaint for carriers' disruptions. These functions, as identified in the Authority's statutory law, are supplemented by those specifically related to the monitoring of the enforcement of EU regulations concerning the rights of rail, bus, sea and inland waterway passengers. Minimum content of rights and EU regulations typify subjective rights and legal entitlements that are thus expressly defined and supported by measures to ensure their implementation, on the assumption that passengers are the weaker party to the transport contract⁷. They essentially consist in the following: non-discrimination in the use of the service, assistance and accessibility for passengers with disabilities and/or reduced mobility, receiving information prior to the ticket purchase and in the different stages of the journey, possible cancellation of journey (with reimbursement) in the event of disruption,

⁵ Please refer to Part Two, paragraph 3.4.

⁶ Please refer to Part Two, paragraph 3.3.

⁷ Cf. Recital 3 of Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights and obligations, which reads as follows: "Since the rail passenger is the weaker party to the transport contract, passengers' rights in this respect should be safeguarded."

assistance and compensation in the event of long delays or cancellations, carriers' liability in respect of passengers and their luggage, right to a quick and accessible complaint-handling system in the event of disruptions.

Unlike minimum quality standards and unless their scope of application is clearly defined, the rights of users and passengers apply regardless of the nature of markets, whether they are subject to public service obligations or provided on commercial terms. Above all, unlike minimum quality standards, the protection of rights applies directly to individual users and passengers that may exercise them, challenge any non-performance (or improper performance) of contractual obligations by the service provider, and apply for compensation⁸.

3. Behavioural economics

As mentioned above, today citizens and users may rely on new means of information and simultaneous expression of buying preferences to meet their mobility needs, including on a personal basis (tailor-made services). Transport undertakings are being forced to review their organisational models and strategies and to provide increasingly efficient and customer-centred services. MaaS services associated with the use of digital platforms are gaining ground⁹. Operators in the sharing economy, such as Lyft, Grab, Didi Chuxing, Go-Jek, Uber, FlixBus, BlaBlaCar, in their respective areas of activity, capture latent trends in demand and re-define the boundaries of reference markets.

Thus, the uptake of digital technologies impinges on the supply of transport services, makes market segmentation less significant and modifies traditional competition models. These changes provide an opportunity for developing public policies and call on the regulator to take into account the behaviour of the users. The active participation of users in the design and planning of transport services replaces the role traditionally played by operators: a new ethos based on openness, participation and interactivity unfolds. On the other hand, a more efficient use of infrastructures enables unused resources to be mobilised.

Users and their behaviour are at the heart of behavioural economics, which has provided keys to their understanding and analysis through *behavioural insights*¹⁰. These operate on empirical evidence, to be systematically collected, that allows to anticipate how users and citizens will react to potential public policies in order to increase their effectiveness. In the context of behavioural sciences, the *nudge theory* proposes that indirect suggestions may influence the motivations and incentives underlying the decisions of individuals and groups to improve their welfare, while ensuring full freedom of choice. This is a mix of tools, mainly based on information, that public decision-makers could apply so as to encourage desirable behaviour. If, on the one hand, behavioural sciences provide a cognitive input to the process of public policy-making, on the other hand, nudging influences the architecture of individual and group choices. Hence, the use of behavioural insights facilitates an understanding of citizens' behaviour in the event a specific policy is introduced. The knowledge of an individual's regular behaviour when he is making a choice, enables public decision-makers to simulate beforehand the effects of the rules they intend to adopt and plan them in relation to the desired and expected effects.

Already in 2008, the European Commission introduced the knowledge and analysis of cognitive and behavioural sciences in the activities of regulation and information to European citizens in different economic sectors¹¹. The Organisation for Economic Cooperation and Development (OECD), the United

⁸ In this case, the obligations derive directly from the travel pass and not indirectly from the service contract between the awarding entity and the undertaking operating the service.

⁹ MaaS refers to sets of public mobility services (local or regional public transport), shared dial-a-ride services (such as car- or bike-sharing, collective taxi) and individual dial-a-ride services (car hire), that are integrated with each other, customizable and available by means of digital platforms and applications.

¹⁰ Cf. J.J. Laffont and J. Tirole, *A theory of incentives in procurement and regulation*, 1993, MIT Press, Cambridge-Massachusetts and London-England and, more recently, J. Tirole, *Economics for the Common Good*, 2017, Mondadori, Milan.

¹¹ For this purpose, the Commission has identified a dedicated unit (*Foresight, Behavioural Insight & Design for Policy*) and later established a *EU*

Nations (UN) and the World Bank (WB) also promote the application of behavioural insights to public policy making process in various economic sectors¹². This approach is beginning to be applied in Italy by other regulatory authorities, too, building on the above international initiatives, that have focused, *inter alia*, on the analysis of the individuals' behaviour to promote more efficient and informed consumption.

By projecting this potential on the functions of the Transport Regulation Authority, behavioural insights could be applied to minimise disruptions, steer planning on the basis of the needs of users and potential users and increase the matching of quality of, on the one hand, the services supplied and, on the other, the expectations of citizens and users.

4. Concluding remarks

The above considerations show that the range of entities on which the effects of regulation are produced is broader than that to which it is expressly addressed by specific measures and monitoring activities. As stated above, the purpose was not to anticipate here the discussion of matters developed in the Report, but rather to provide a unitary interpretation key to the relationship between the Authority's activities and the improvement of citizens' and users' welfare. It thus appears that, although in different forms, all the regulator's interventions have an impact on users, and that users are increasingly aware and active players in a new ethics of participation. Hence the observation that regulation may contribute to increase the levels of satisfaction and welfare, and that it is useful to further explore its methods and effects.

Indeed, by continuing to operate on efficiency and quality of services, the regulator performs the functions that are traditionally entrusted to it. However, in order to take up the challenge of promoting the welfare of users and mobilise unused capacity, it is necessary to bring out and enhance behaviours that express potential demand.

This development is hindered by constraints that correspond to the information asymmetries which prevent full knowledge of the reasons and structure of mobility preferences. In order to overcome these constraints, the application of behavioural economics to the analysis of citizens' and users' behaviour and expectations enables to identify the key factors to plan changes in the way public policies have thus far sought to meet people's mobility demand and needs. This opportunity, to be seized, would allow to improve, in particular, the local and regional public transport system, in a way that better meets the need for environmental sustainability of transport. Public decision-makers could apply these tools to better simulate the demand for customised services, plan the supply and, in turn, nudge virtuous behaviour.

On the other hand, in order to develop a regulation that is geared to mobility needs and requirements, even unexpressed, it is important to measure its effects and the development and progress of welfare, together with the most efficient ways to pursue it. In this context, the independence of the regulator remains essential to address issues that could arise from the co-existence of conflicting roles and objectives¹³. The exercise is only at the beginning: on this the Authority will continue to focus its attention.

Policy Lab, in order to support both the definition of EU policies by identifying behavioural aspects, and the collection of information on how behavioural insights approaches are used at the national, regional or local level. More recently, in the context of the Interinstitutional Agreement devoted to "Better Regulation", the EU Commission intended to make the policy-making and legislation process even more transparent, based on real evidence, by encouraging a transparent process involving citizens and other stakeholders throughout the procedure, and therefore paying particular attention to the responses of those directly affected.

¹² Behavioural insights and public policy, OECD, Paris, 2017 at <http://www.oecd.org/gov/regulatory-policy/behavioural-insights-and-public-9789264270480-en.htm>.

¹³ Constitutional Court, Judgment No 41 of 15 March 2013.