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The assessment tool for the design of the territories. The impacts from the road infrastructure in the inland areas of the province of Reggio Calabria

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Abstract

The large scale works that most deeply mark the fate of a territory are certainly the transport infrastructure (broad lines of road and rail links, ports, airports, intermodal nodes), which have important economic implications for the entire production and commercial apparatus located in the industrial and urban areas.

The preventive analysis to verify the quality of the infrastructure projects is entrusted to the feasibility studies, which are the most appropriate tool to evaluate the opportunity to make a public investment.

The assessment of the effects of transport infrastructure is a key element of regional planning and, in particular, the planning of new infrastructure. However, it is important not to underestimate the assessment culture, even in the case of renovation of existing works, where both the accurate detection of the context data and the verification of both impacts that can be generated by the interventions, is very often neglected.

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1. Introduction

The role of the design of major infrastructure is to trigger development processes.

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The large scale works that most deeply mark the fate of a territory are certainly the transport infrastructure (broad lines of road and rail link, ports, airports, intermodal nodes), from which can be expected, in a relatively short time, significant economic benefits for the entire production and commercial apparatus located in industrial and urban areas (Camagni, 2000). A territory, such as the South Italy, suffers for the presence of few efficient infrastructures, the more the realization of works constitute the opportunity to accelerate the growth process (Cremaschi, 2000; Calabrò & Della Spina, 2014).

In this general conception of development are actions to modernize the A3 Salerno-Reggio Calabria. The verification process prior to the implementation of public works is entrusted by the Italian legislation to feasibility studies (Law 144/1999), designed as a preliminary tool to support public investment decisions (Dosi, 2002). As part of the *ex ante* evaluation the FS, which is a necessary condition and not enough at the start of the design, is used to select those project ideas that respond successfully to the technical-economic evaluation procedure (Art. 10, c. 4 of Legislative Decree no. 229/2011), performed through the cost-Benefit Analysis. The ACB, which has the purpose to verify the degree of utility of the work for the community through the procedures of monetization of externalities, however, is not the only technique applicable in the FS, where they can find occasion of application other types of instruments such as, for example, multi-dimensional ones.

The effectiveness of the valuation techniques, which are essential instruments for the rationalization of the decision-making process, is very dependent on two factors. First of all the evaluative instrument, although strictly enforced on the analysis of indicators describing the actual situation of the context under investigation, it may not be able to correctly interpret the natural development of future events, maintaining that margin of uncertainty and unpredictability of the future that the economic assessment of projects instead tries to combat and reduce (Roscelli, 2005). Secondly, the effectiveness is affected by the technical capacity assessor in setting the assessment question and in the appropriate use of available data. Therefore, only after the realization of a transformation and its use for the system we can see *ex post* the correspondence between the objectives and impacts actually generated. One example is the motorway A35 Bre-Be-Mi (Brescia-Bergamo-Milano) opened in July 2014, which should have been a case of model project financing, proved to be a flop in just over a year due to an incorrect determination of the application.

The *ex post* study on the modernization work of the Salerno-Reggio Calabria in the territorial area of Bagnara Calabria (RC) was intended to compare the effects insurgents after the completion of the work with historical data prior to the intervention. The result of the survey has revealed that the project has generated a series of negative impacts in the territory, which, however, in the specific case, can't be returned to that margin of error that is inherent in the evaluative discipline but rather, to a design approach that has paid attention to the technical and construction aspects neglecting the necessary socio-economic insights.

This is an example of bad practice not uncommon in the design of public works, where the detection of the status indicators, or the intervention of previous data transformation, is not really a practical tool for the definition of the existing critical and, therefore, for the construction of the project objectives to be pursued for the resolution of the same (Calabrò & Della Spina, 2014). If, in the design of new works, the analysis of facts and the estimate of future impacts occupy a preponderant and fundamental part of the whole design process, often, wrongly. It is not given the same attention as part of the restructuring of existing infrastructure, where the estimate of externalities is often a neglected practice.

On a wrong pre-planning matrix and the obvious evolution of the local economy in the hinterland of Bagnara Calabria underlying the project proposal of the new motorway junction called Sant'Eufemia-Bagnara the A3 SA-RC, advanced to the Superior Council of Public Works by the Province of Reggio Calabria, Environment Sector, Energy - State Property Water and river APQ and Infrastructure, in 2012, during the phase of construction has begun the adaptation of the Salerno - Reggio Calabria to the CNR / 80 regulations, in order to resolve the critical economic development of the territory which occurred just after the realization of some jobs.

2. The dynamics of roads flows in the area of the Costa Viola

The A3 motorway, Salerno-Reggio Calabria, has always played a key role on a national scale, connecting large areas of land that are developed, particularly in the province of Reggio Calabria, both along the Tyrrhenian coast and inland pre-Aspromonte. In fact the notable feature that carries the highway for the Reggio area, instead, it is to

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