

INFRASTRUCTURES AND TERRITORIAL PLANNING

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SUMMARY / ABSTRACT

The technical infrastructures and especially those linked to the physical base or natural infrastructure are the ones that most deeply affect the modification of the physical environment of the regions. For both the engineer and the planner, these technical infrastructures are the main instrument for ordering and developing a territorial economy.

Keywords: territory, infrastructure, management, external economy, soil.

RESUMEN

Las infraestructuras técnicas y, especialmente, las mayormente ligadas a la base física o infraestructura natural, son las que más profundamente inciden en la modificación del entorno físico de las regiones. Tanto para el ingeniero como para el planificador, estas infraestructuras técnicas constituyen el principal instrumento para ordenar y desarrollar armónicamente una economía territorial.

Palabras clave: territorio, infraestructuras, ordenación, economía externa, suelo.

RESUM

Les infraestructures tècniques i, en especial, les més lligades a la base física o infraestructura natural, són les que més profundament afecten a la modificació de l'entorn físic de les regions. Tant per a l'enginyer com per al planificador, aquestes infraestructures tècniques constitueixen el principal instrument per ordenar i desenvolupar harmònicament una economia territorial.

Paraules clau: territori, infraestructures, ordenació, economia externa, sòl.

The various professionals in the field (engineers, architects, geographers, sociologists, economists, ...) who, faithful to the tradition, in a diverse but continuous way, have contributed to the modeling of the territory, cannot be absent in the new approaches of the arrangement of the same. Demographic increases, migrations, larger agglomerations, exceeding minimum development thresholds have led to a variety and intensity of land uses that can no longer be addressed by independent actions.



Public works are moving from the countryside to the city, to the urban region, and new grassroots approaches are being imposed. Interdisciplinary collaboration is the only valid instrument for approaching a reality of interactions, of interdependencies, of unknown and often unwanted reactions.

In this brief space it is not intended to teach, not even to show the complex problem that results from the territorial organization and the infrastructures; in fact, very few specialties may be absent in territory planning.

The domination of men and women over the earth physically translates into a modification of the space in which they operate. It is the aspects of this work of permanent recreation of the geographical environment that are systematically analyzed under the title of "land management".

The "territorial organization" includes, in this conceptual planning, the territorial structure, developing with structuralist vision that was born under the name of *human geography*; secondly, *land policy*, understood more broadly than just urban; and finally, *territorial planning*, the aim of which is the French "aménagement du territoire", so difficult to translate.

In any of the three aspects mentioned, the planning of the territory must consider the conjunction of four different structural orders, namely:

- natural infrastructure or physical base,

- technical infrastructures,
- socio-economic structures, and
- socio-political superstructures.

In this article, we will limit ourselves to the consideration of technical infrastructures and especially those that are most closely linked to the physical base or natural or agrarian infrastructure, because they are the ones that have the most profound effect on the modification of the physical environment of our countries. For both the engineer and the planner, these technical infrastructures are the main instrument for ordering and developing any territorial economy.



Creating technical infrastructure sometimes involves the destruction of valuable natural areas, such as the case of a riparian forest, but also an active management that reflects in rhythm and meaning. of the socio-economic evolution of the territory and affecting both geographical and functional aspects. Infrastructure creates what, from Marshall¹, is known as *external economics*, from which directly productive activities benefit. That is why we do not doubt its suitability in many cases, almost always occupying the rural area, but we demand its just compensation to the owner of the land affected by them, a question that does not happen in

¹ **Alfred Marshall** (1842 - 1924) was one of the most influential economists of his time. He studied at Cambridge University, where he excelled at his aptitude in mathematics. In 1868 he became professor of political economics at Cambridge. He collected ideas from the classics with marginalist input from contemporaries, synthesized where he searched, and highlighted the reasons and requirements for partial equilibrium. He is famous for his comparison of scissors with how prices are the determinant of the encounter between supply and demand.

most actions, nor are they paid. punctually to expropriated the affections generated in his property (Franquet, 2012)².

It also raises the preferential alternative to the so-called *propulsion infrastructures and the accompanying infrastructures*. The former try to encourage or fit into desired locations a priori economic growth; the second are facing an unsatisfactory demand for services or, in the worst case, the appearance of external diseconomies, driven by the congestion of existing infrastructure.

Without succumbing to historical determinism, it must be stated - based on past experience - that basic infrastructures largely determine the arrangement of space, not only on the economic side, but also on three others aspects: the political, the social and the human. Although we admit, with J. M. Keynes³, that an example never shows anything, let us also agree with him that this same example can illustrate a certain line of reasoning.



Orderly soil is not an active land, from the point of view of territorial planning, as it does not have the minimum number of precise infrastructures; and it is the level and class of the same that finally ends up differentiating the rural *facies* from the urban ones.

In human terms, it must be said that infrastructures condition the urban fabric in terms of both the morphological and the functional, but also the

² Vide *El sector primari a les Terres de l'Ebre (Una aplicació dels mètodes quantitativus)*, Ed. IDECE. Tortosa, 2012.

³ **John Maynard Keynes** (1883 - 1946), was an economist and British professor of world renown. His ideas had a great impact on economic thought and politics. He is particularly remembered for advocating for interventionist government policy, with which the government, using fiscal and monetary measures, would help mitigate the adverse effects of business cycles. He is recognized as the father of modern macroeconomics and his ideas spawned a Keynesian and a post-Keynesian economic school.

quality of life that the individual can enjoy. They are largely responsible for the circumstances of existing depopulation or congestion.

Of course, creating infrastructure is a significant expense. The political community must resolve on a difficult balance or dilemma between the creation of social equipment (of which basic infrastructures are only a part) or of directly productive activities, which, if opposed, generally, in order of the allocation of resources are still aids from a strictly economic point of view.

Directly productive activities such as agroforestry benefit from external economies, which results in lower costs. The most recent theory emphasizes this fact, claiming that there is a functional relationship between the cost of production and the availability of capital stock, but this relationship is hardly quantifiable in the same way as that established for the classical function of production of microeconomic theory.

The road that we still have to go in terms of the creation of new infrastructures and the organization of the territory in our regions is very long. Despite this, and without wanting to fall into the nostalgia that the great Catalan poet Martí i Pol⁴ was referring to when he said: *Too often we turn our eyes back / the voracious nanny sucks our eyes*, it is also true and there is obviously important works in our territory that tell us, between the jokes and darkness of some present bewilderment, of a prodigious and splendid past.



⁴ **Miquel Martí i Pol** (1929 – 2003) was a Catalan poet, writer and translator, one of the most popular of the 20th century. He is the author of one of the best-selling poetic books in Catalan literature, *Estimada Marta* (1978). His poems speak of inner life, the fight against a system he considers unfair, and the battle against the disease that would accompany him for more than thirty years, multiple sclerosis.