The transportation system in the Sicilian touristic development

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1 INTRODUCTION

In order to diagnose a regional economic system it is important to analyse the existing reality and the principal elements that have produced the relationships between economic variables and their evolution; in this sense we ussed to isolate the economic situations from those structural, to intervene with suitable measures of economic polictics.

It is well-known that when the problems are of a structural nature, "strong measures" are needed, asking for consistent financial efforts, a diffused and shared political action and a temporal arc that often goes beyond the political cycle.

The matter deal in our contribution can be framed among the Sicilian economic system; the work force unemployment, particularly juvenile and female, can be decreased by a pronounced process of regional economic development.

We are convinced that if it doesn't change the way of doing business, the relationship between capital and job within the functions of production, the economic culture and the perception of the environment in the productive processes, in transports and in consumption of goods we can deduce only that an increase in GDP will be able to bring lasting comforts and stable places of employment.

The present society is founded upon the mobility of subjects and goods, so that it becomes essential to guarantee the efficiency of the transportations' system, agreement like accessibility and mobility in a territory, punctuality and safety in transfer.

Transport plays a primary role in the tourist sector, both in reference to the attainment of the destination for tourists, and relatively to the moves that he will effect.

Departing from the consideration of the geographical marginality of Sicily within the European Union, transport immediately assumes a strategic position in the demolition of those that we can call "geographical entrance barriers"; in this sense the European transportation policies, very careful with the problems of widening, safety and environment, little be done for Sicily, which has been recently equipped with valid programmatic tools producing operational tools that according to us will result effective in the middle-long period.

The current condition of the Sicilian transportation's system is very critical. According to the Istituto Tagliacarne, the Italian Mezzogiorno and Sicily are characterized by an inferior level of infrastructures to the Italian average. In fact, the South has a presence of infrastructures on the territory equal to 78,1 percent of the national middle level, although Sicily is on a high level, it is inferior with a value equal to the 86,2 percent.

The present contribution analyzes the fundamental role that an efficient system of transport plays in the local economic development, detaining on the peculiarities of the Sicilian system, and on the relationship between planning and realization of an efficient system of transport and tourist development, considered a fundamental objective in the auspicious process of Sicilian economic development.

2 TRANSPORT FROM "ESTERNALITY" TO "RELATIONAL GOOD"

In the economic literature the available infrastructures of transport in a territory are considered, as positive esternalities for firms operating in a territory; they together to other infrastructures, form the "urban armor" from whose consistence depends the success of the economy of a territory.

The single infrastructure of transport does not produce development; on the contrary the existence of a whole combined infrastructures and services of transport constitute the potential offer of mobility. This whole constitutes a new good for operators and it has got the characteristic of public good. It represents a particular public good for which the analysis cost-benefits show a collective profitability, connected to the fact that it makes the operating external economies whose individual cost of production clearly overcomes the individual profitability.

The offered service has to be consider as a "relational good", whose fundamental characteristic is the fact that its utility grows to the growth of the number of operators that it serves. "Relational goods" are immaterial goods and their doctrinal presuppositions are verifiable in the organizational theory, which push up to consider the organization as specific factor of production within the enterprise and in the esternality's theory, largely used in the business studies to understand the technical, economic and financial equilibriums of the enterprise and their position in the market.

Nevertheless, they cannot be assimilated neither to the organization, nor to the esternality; the organization implies the business identity in how much it is projected in a structure and it finalizes the activity of it; esternalities are recepited from the recipient without any effort, while the relational good contributes to the formation of a process of external coordination to the firm and its presence allows it to overcome the cases of market failures.

The relational goods explain the level of the business productivity and it is characterized by connecting the public aspect and the private interest in the economic problems; it represents an abstract good, but not for this evanescent, often deprived of market value for its prevailing character of public good or of esternality, but essential to explain true values of market of many other goods and services.

The effectiveness of the relational good occurs only if the potential consumers are aware of its existence and they are able to exploit their positive potentialities; from this awareness derives the effectiveness and the efficiency of such goods.

The conceptual category of the relational good shows a fundamental utility in the mobility studies and it is expressed through a system of relationships to which are associated economic effects that can be isolated in comparison to the effects produced by the single elements of the system.

It is important to use the concept of network within projects of planning and economic development; it is necessary to proceed as following:

- a) to identify the territory of reference within the net under observation;
- b) to individualize the remarkable network (transports) and its relationships with other available network;
- c) to define the linkages and such form can suffer modifications both endogenous and ectogenous.

Even if it can seem simple to identify the area of reference of a network, its complexity concern the demand to verify the dynamics of the flows that tie the points in which the net structure is identified.

When linkages appear one-way linkages, they are not closed to ring and don't form a net, the economies of net are very low if not negative; in these cases it is necessary to plan economic politics aimed to create connections of net and this can mainly happen through the creation of infrastructures able to optimize the different ways of transport and with the introduction of mechanisms, prizes and restrictions, that facilitate the formation and the diffusion of a culture of cooperation.

To such characteristics the recent "Regional plan of transports and mobility" of the Sicilian Region responds and particularly the "operative plan of transport and logistics" dated December 2003.

The public intervention in the transportation sector can be motivated both from demand to realize a collective interest, whereas the individual affairs would conduct toward non cooperative behaviors, and from demand to remove the causes of failure of the market.

In the first case the intervention connects itself to the fact that transport means pure public good, according to Samuelson, in it possesses the characteristics of the indivisibility and "not excludibility".

In the mass transportation system both the characteristics are present.

Indivisibility is proper of a service offered to masses of consumers and its "not excludibility" derives from the recognition of the nature of public service in how it answers to particular demands of sociality.

Therefore, public intervention is motivated by the presence near the operators of non cooperative behaviors, whereas the cooperation becomes necessary for the excellent attainment of Paretians equilibriums (efficiency for the collectivity).

In these cases it is opportune the public intervention not so much as directed manager of the service but rather to promote operational behaviors for the whole collectivity.

It therefore appears priority to verify the motivation of the public intervention between policies and intervention. This way treating itself of public good in the sense of Samuelson the price cannot be fixed so that to cover the whole cost of production.

In the case of service that assumes a marked public connotation, the price has to shape as tool of rationing, it serves to distribute the question to avoid the double face of the phenomenons of congestions or low mobility.

The politics of prices, in other terms, doesn't aim to engrave on the aspects related to the production of transport service. Only in the case of public interest the politics of intervention should primarily concern the side of the offer, intervening on the productive models rather than on the prices' system.

3 TRANSPORT, TOURISM AND ENVIRONMENT

Nowadays the economic effects of transport and its infrastructures are considered with increasing skepticism.

Thanks to highways and airports, regional products arrive more easily on the international market, but at the same time the competitive products have a continuously growing market. Tourists can reach much more comfortably and quickly beautiful places as such Sicily and other parts of the world. Competition grows; new investments attract more new tourists to lower prices and produces an increasing number of problems.

One of the greatest problem is environmental pollution, which damages. Transport has become the first environmental problem in Europe, and its consequences concern everyone, also the inhabitants of the most remote zones.

Nevertheless some successes can be recorded: cars are today less pollutant and they have lower consumptions but the increasing transport on the road, the greater distances crossed by trucks and airplanes, the brief holidays from Europe to far parts of the world have annulled the successes of technological progress.

Today transport in Europe is responsible for:

- 65% of nitrogen oxide (ozone and acidification of the ground);
- 47% of volatile organic substances;
- 10-25% of dusts;
- 6.5% of sulphurous anhydride.

In the high urban zones or industrial concentrations like Rome, London, Athens these values are higher. In these cities the average reaches the 80% of the above substances.

It seems very important to eliminate the so called "not necessary transport", that means reduction of kilometers, to organize suitable cities to the demands of pedestrians and cyclists and to develop "tourism of brief distances".

We cannot forget inside this analysis, that involves interactions among transport and regional economy, the impact of transport on the environment and on the territory.

The importance of the correlation between transport and environment aim to become a factor of added value. In fact, environmental goods constitute a fundamental resource for leisure time, tourism, mobility not tightly tied up to the traditional models of industrial production. Other remarkable aspects of transportation's impact are the following:

- permanent damage to the landscape;

- pollution;
- energy consumption;
- metropolitan integration;
- congestion;
- quality of urban life;
- control of territory.

At least so far such elements have been partially considered within choices and specific transport projects but the assessments of environmental impact within single projects don't allow to underline the complexity of relationships between transport, economy, environmental impact, for which it is necessary to pass from an aseptic vision to a global vision.

It would not be futile in such a context to elaborate a general plan that describes the connected possibilities of economic development to the relationship between territory, transport, environment. A lot of possibilities of added value, in an economy that has the tendency to characterize more and more as a tertiary economy, they depend really from a correct formulation of such a relationship.

In the 6th "Plan of environmental action" of the EU there are many indications on transport related to climatic changes such as the gas reduction in the aviation and the maritime navigation; at the same time it proposes the passage to more effective and cleaning up transportation and the improving of the organization and logistics.

In this Plan the promotion and the development of the use of alternative fuels and vehicles is proposed to low energetic consumption and the internationalisation of the environmental costs in price of transportation with suitable tools, as well as fiscal ones.

We are rather sceptic in front of the indications that we can see in the dissociation from the economic growth to the demandn of the transport, while we agree with the indication that it is necessary a consistent development in research and in innovation.

4 TRANSPORT AND TOURIST DEVELOPMENT IN SICILY

Tourist demand and transportation demand are tightly correlated as one can generates the other.

The tourist demand seasonal, the opportunity of infrastructural interventions has to be serious in the optics of a cost-benefits analysis at national level, also considering the international conjuncture.

The analysis on transport-tourism relationship is not often exhaustive because it takes in to consideration investigations on the families related to their leisure time, and therefore it does not include foreign tourists or other important segments that form the global demand of transport.

Tourist phenomenon in relationship to its impact on the transportation system records a shortage of data availability; nevertheless, according to us it is important to investigate on the binomial transport-tourism in an integrated system of cause-effect, in order to draw some conclusions on its evolution.

An efficient system of transports has to be able to satisfy such a growth.

The demand of people's mobility can be analyzed in short, medium or long distance mobility. Short mobility distance aims to increase the social welfare growth and the consequent raising of income destined to consumptions and trips.

The demand of mobility at medium and long distance, that has the most greater impact on infrastructures, increases with the European economic integration process, the increasing globalization of the international markets, the reduction of transportation costs, the growth of the GDP per-capita, the increasing demand of tourist services.

It is necessary to keep in mind the systematic features of demand studying the tourist movement impact on the transportation system:

- assembled under temporal profile and subject to raises and bending;

- elevated concentration in some geographical areas;

- it is seasonal and it often has consistent variations for one year to the other.

Traffic raises provoke congestion and it represents an additional cost for tourists and other consumers, shaping itself as a negative esternality.

A fundamental problem between tourism and transports is represented by the opportunity and the convenience to make compatible performance demand, in the short run, with the objectives of infrastructural policies.

In the last decades in Italy mobility demand is increased more than the Italian GDP, and people and commodities flows are greater than is never happened in the past.

An ISTAT survey confirm that, in Italy, the most greater tourist flows are assembled in June-September, but while for Italians the peak of arrivals and presences is recorded in August, for foreign tourists the peak is in July. The Italian tourist flow is influenced by some national economic variables: prices of the hotel performances and catering, cost of tourist facilities, the occupational trend, the incoming policies in the destination for household consumptions.

As regard foreign tourist demand, some features are tightly connected to the international economy, as exchange rates, inflation, safety and destination.

Fundamental element to value the impact of tourist flows on National transportation system is the distribution of trips for single type of transport. For example, italians prefer travelling by car, specially for short-medium distance trips, while less-used alternatives are buses and trains.

In case of longer trips, a notably growth concern the demand of transport by airplane.

According to some studies, Sicilian transportation system constitutes one of the most consistent expense in the tourist budget.

While in Italy the expense of tourist fluctuates between 15 and 20% for freight charges, in Sicily such value is double.

The relationship between transport and tourism can be analyzed both from the point of view of the demand and from that of the tourist offer. The demand introduces a strong component of seasonality. In order to face seasonality it is necessary to make a load capability that would stay low during the low season. The cost relapses would be nearly unbearable.

On the contrary, a transportation policy aimes to overcome seasonality by private initiatives and to solve serious phenomenons of congestion that are emphasized by the Messina straits.

Such phenomenon involves a drastic increase of tourist route time, which often considers such conclusive variable in the choice of tourist place to reach.

It would be opportune to intervene in all levels to mitigate the seasonality of tourist demand influencing above all the politics of the firms to effect the summer closings to which the vacations are connected.

Regarding the offer, tourist agencies have the tendency to propose offers that include transportation time among tourist activities (cruises); we can notice that whenever grows transport cost of the in tourist's budget, agreement among firms that manage services of transport and firms that manage tourist-hotel activity are often determinated.

The Sicilian receptive structures is often excluded by these organizational processes, that ask for the presence of great tour operators, as well as an efficient infrastructures system.

5 THE SICILIAN TRANSPORTATION SYSTEM

The condition of insularity and the peripheral location in comparison to the European markets and to the principal suppliers of raw materials represent some negative features for the Sicilian development; such geographical position in strategic terms could be exploited to place as logistic base in the point of intersection of the commercial routes in the Mediterranean.

The insufficient accessibility to the touristic poles and the surrounding areas, the excessive times of trip and the ineffectiveness of the transport systems are all elements that determine a loss of competitiveness of the enterprises and the Sicilian territory in terms of tourist and commercial attractiveness.

It can undoubtedly result of great utility monitoring the state in the island's transportation system.

In Sicily there are the followings airports:

- Palermo Punta Raisi, now Falcone-Borsellino, the most greatest insular airport;
- Catania Fontanarossa, a very busy airport;
- Trapani Birgi;
- Airport of Pantelleria, predominantly local traffic;
- Airport of Lampedusa, that records an increase of tourist traffic and congestion due to the seasonality.

The plan of development foresees public interventions for the construction of new airports in Sicily.

The airport in Palermo is connected with the principal Italian cities, with some French cities, Swiss, German and Dutch, with London, with Morocco, with Tunisia and with Malta.

The airport in Catania offers connections with the principal Italian cities and with the European cities of Frankfurt, London, Paris, Bruxelles, Stockholm, Amsterdam.

The airport of Lampedusa in the summer period is connected with Palermo, Rome, Bologna, Parma, Milan, Bergamo and Verona.

Very interesting is the growth of Birgi airport.

The working air carriers in Sicily in the transportation system with scheduled flights are Alitalia, Air One, Air Europe, Air Sicily, SiFly, Volare Group and, more recently, British Airways.

Analysing the maritime transportation system, the indications of transports community policies and the National plan of transport recognize to this typology of transport a role of primary importance for a rapid decongestion of roads and a reduction of pollution.

From a tourist point of view, the plan includes the opportunity to sustain and to stimulate the realization of structures for the nautical tourism. The tourist importance of nautical recreation is underlined by the rate of growth of the compartment, that is attested around 8%, and from the economic and occupational relapse on the territory that it involves. According to a survey there is a boat every seventy inhabitants and that a further development of the sector is primarily limited from the lack and from the inadequacy of specialized structures.

In Sicily there is a limited offer of structures for nautical sports, the only operating structures are at Porto Rosa and at Marina Villa Igea; the development of such typology of tourism asks for the predisposition of a regional system, since the single structures don't have enough places. To such goal the plan of transportation development foresees a tourist harbor system, through the refurbished or the functional adjustment to the European standards of the so many existing structures.

Relatively to the railway system a Plan of FSS Spa has been arranged with the aim to increase the competitiveness of the railway transportation in a scenery of liberalization of the market and development of services.

A fundamental importance is represented by the road transports.

The totality of the existing roads in the Sicilian territory, amounts to Km 20.821; 2,74% are highways that connect Palermo to Catania, to Messina and Mazara del Vallo, Alcamo, Trapani, Messina and Catania; 17,25% from state roads and 80,01% from provincial roads.

Special road nets have been arranged for the metropolitan areas in Palermo, Messina, Catania, Enna and Agrigento.

From the present datas, the prevalence of cars is used in the metropolitan moves of the citizens, that underlines the mentioned problem: the environmental and acoustic pollution, the congestion of the traffic and the difficulty in parking.

6 THE ROLE OF TRANSPORT WITHIN THE REGIONAL TOURIST PLAN

The planning of Sicilian policies has recently estabilished in the predisposition of the "Piano Regionale dei Trasporti".

The priority objective of the Plan is to improve the quality and the efficiency of the system, starting a territorial development in respect of the environment that allows a competitiveness' expansion of enterprises and the increase of quality life, as well as to break the isolation of Sicily in the national and international connections.

The project is based on a rationalization of the existing resources, on an integration of the plurality of the vectors and a development of more ecological transportation systems, by qualifying railway net, by sustaining the collective and individual maritime transport and by estimating the realization of a great Mediterranean airport.

For this purpose, some priority objectives have been individualized:

- to improve the conditions of the mobility of passengers and goods with the aim of armonising the territorial distribution of economic and social activities of the island;
- to assure the social function of public transport, guaranteeing the proper functions in the urbanized areas, favoring the mobility of commuters, students, workers and others categories and the connections with the terminal poles (port, airport and railway);
- to reach a greater environmental quality, and to raise the levels of life quality in the urban areas, allowing the use and the sure practicability of the spaces to cyclists and pedestrians, limiting the use of the individual motorized transport and promoting collective public transport, reducing energetic consumptions, polluting issues and noise, protecting citizens' health and improving safe circulation, in harmony with the principles enacted by national and community rules.

These objectives involves some anticipated actions:

- to create and to multiply opportunity of economic development in areas at risk of depression;
- to contribute to the expansion and the competitiveness of the main sectors of the regional economy and those with greater perspectives of development;
- to sustain the stability of the population in the rural areas contributing to avoid impoverishment of social structure of vast areas of some regions.

The Regional planning finds its scenery of reference in the National and European directives, to guarantee the coherence with the objectives of the plans of rearrangement urbanistic and territorial and plain of partner-economic development.

The plans for the four formalities of transport in Sicily contemplate:

- \checkmark to minimize the generalized mobility cost;
- ✓ to increase the safety level of the transportation systems, through interventions based on the reorganization of transportation offer and interventions to eliminate specific infrastructural and managerial lacks;
- ✓ to protect the archaeological, monumental and historical environmental patrimony reaching to the maintenance and the retraining of the territory, valorizing secondary roads, railway stations with historical-environmental value to strong characterization of the Sicilian landscape.

Specifically analyzing and from a point of view of potential tourist it is possible to build a synthetic picture of the structural situation of the Sicilian transportation system that claim for a definite improvement.

7 THE "SICILIAN AUTOPORTI"

It is broadly affirmed that transport, both of goods and of people, constitutes a strategic component of the regional territorial economic system.

From this it comes down that every sectorial politics owes to be turned from one side to promote the competitiveness of the economic system through the rationalization of the logistic system and creating the conditions to overcome the geographical position of some areas, and from the other to contribute to the decongestion of urban areas with the consequent improvement of environmental quality.

To the attainment of such objectives the "autoporti" will contribute, which will constitute a first base of aggregation of some economic operators from which it has origin a process of rationalization of the distribution of goods in Sicily.

They are infrastructures to support activities of access and distribution of goods and they should develop the followings functions:

- safe standstills within SNIT;
- standstills for vehicles;
- standstills for unity of load;
- assistance services for vehicles and for travelling personnel;
- no ties on entry and exit veichles and on tonnage;
- deposit of distribution; regional or district central deposit;
- diversified rotation;
- special packaging areas;
- railway connections;

The "Accordi di Programma" have been signed for the realization and the management of six "autoporti" individualized by the Decreato Assessoriale 27/02/04 n.35.

Such autoporti will be realized in Catania, Naro, Trapani, Victoria, Polizzi Generosa and Milazzo, and they will offer logistic and technique assistance.

Moreover the support is anticipated for the treatment of the goods transported by road, for the rationalization and optimization of loads and finally for the harvest and the distribution of products on the brief-averages distances and in urban circle.

The necessity of a net of "autoporti" in Sicily is anticipated from the planning of sector recently started by the Department of transport and particularly from the regional Plan of the transport of the commodities and the logistics, as well as from the special Study of the "autoporti" in Sicily.

This study that underlined as the consequential effects from the presence of a "net" for goods don't only concern the operational sphere of transport, but it also involve the impact on a territory and on the productive economic system of different intensity according to the urban dimensions in which the structures is involved.

8 INFRASTRUCTURES AND EMPLOYMENT EXPENSES

By using the Regional plan of transport and mobility data, it is possible to understand the effects of the expense programmed for infrastructures on employment.

For the calculation of the new occupational effect that is esteemed at n.177.428 unity, a trunk dynamic multiplier in the sixth year is used, with specific values for every single expense that oscillates between 2,4 to 3,7.

In this way, so much the effects are estimated on global demand that those on the tourist system in its complex.

The effects on global demand are represented in figure 1, that record the effects on the tourist sector, estimated 20% of the global effect value

The last column shows the effects on employment.

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SYSTEMS OF TRANSPORT	EXPENS ES	MULTIPLIER	GLOBAL EFFECT	TOURIST EFFECT	MULTIPLIER	OCCUPATIONAL EFFECT
ROAD	9.331.746	3,70	34.527.460,2	6.905.492,04	0,02	138.109,84
RAILWAY	2.967.044	2,90	8.604.427,6	1.720.885,52	0,02	34.417,71
MARITIME	510.549	2,40	1.225.317,6	245.063,52	0,02	4.901,27
TOTAL	12.809.339		44.357.205,4	8.871.441,08		177.428,82

Figure 1. Expenses for infrastructures and occupational effect

Values expressed in mln of euro

It is important to observe the qualitative aspects of positive effects on the regional economic system; such effects are of difficulty, not to say impossible, quantification ex ante.

"Total quality" policies that invest all the economic sectors of Sicily, contributing in a decisive way to the overcoming of an atavistic state of backwardness in which its economic system is still found.

9 CONCLUSIONS

It is not simple to point out some "miraculous recipes" for tourism in Sicily; data and incomplete information, elevated mutabilities of socioeconomic realities make the process of inference that allows to foresee where Sicilian tourism will go very difficult.

Will it develop following a virtuous path of sustainability, within the receptive potential of the territory and directed to valorize and to exploit all the resources (environmental, cultural, etc..) that are in Sicily?

Will it go out of this platform with consequences that can go towards the overcoming of the load capability or toward a "slow" tourism for the principal motor of development and occupation to be considered, where it is possible to taste so many "grandmother's recipes" and discover the presence of cultural aspects?

Undoubtedly, the Sicilian transportation situation is very critical. The amount of interventions along the main roads and railways is increasing.

A satisfied tourist, a delighted tourist, brings with himself the tastes of Sicily that will stay in his mind for a long time: we hope that Sicilian sun, salt, tastes and heritage can become the right mix of Sicily known in the world and the four passages that will bring tourists in Sicily from every continent.

The connected problems related to Sicilian transport are based on fundamental variables.

First of all, it is opportune to underline the connection between transport and development, so that to confirm that the sector must be jointly imagined with other politics of territorial development.

Besides, the delay of the Sicilian infrastructure is to interpret more elusively as an indicator of delays in services of transport, but also as an index of satisfaction of the final consumers.

Moreover, we have to underline the relationship between accessibility and potential for the development of a territory. Also, in the sector of the transport, Sicily has to intensify the necessary actions to equip it with efficient services, is them public or private, traditional or innovative, since it is evident as the quality of the accessibility has repercussions on the ability of the territory to attract investments.

We must not in every case forget the persistent borders of ambiguity on which both the model of most proper development of transport for the economy, but interventions able to increase the system efficiency of the and how it can compete with the realization of strategies directed at reducing the dependence of road transport.

The increase of mobility will concern all means of transport, and should also bring about a modal redistribution that would see, in general, a recovery of the role of the maritime way and airplanes.

The Regional plan of transports proposed by the competent "assessorato", fixes the lines of the Regional policies of transport in harmony with the elaborate indications of regional economic politics in the center of economic planning regionale.

The foreseen guidelines by the Regional plan of transport should contribute in the next decade to move the question of mobility toward the maritime and railway vector in the optics of a general rebalance of the modal functions of the transport system .

In conclusion, despite the persistent difficulties that hamper the Sicilian transportation system, the strategies of intervention individualized in the regional circle provides more than a simple hope of a change in tendency, stabilise rapid results in a short time. In this way, it is desirable that potential of economic development of Sicily could finally be concretize, especially those concerning the notable historical, artistic, natural and cultural heritage present in the island, that could potentially become the fulcrum of the Mediterranean economy.

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