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The role of the State in planning and funding transport infrastructures: The French example

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Summary

The paper analyses how the French State, relatively interventionist when compared with other countries, is positioned when contrasted with other administrative levels and players (companies, inhabitants, etc.) involved in planning transport infrastructures. The objective is to define the methods used by current planning practices and those used by the State and how these have changed over time.

Today's context has seen considerable changes in the State's role (increased complexity in planning and public decision-making processes, partial transfer of the risks associated with mega-projects to private companies) and the need to develop new forms of national planning governing transport infrastructures.

The paper has two objectives:

- to show how the national transport policy in France has changed from centralised planning (1945 to 1970) to a more complex form of planning (1970 to 2007). The planning governing the period from 1945 to 1970 was centralised, rational, and focused on economic development and regional planning. The planning governing the subsequent period was less centralised and characterised by an increased level of dialogue between the State and the public, a reduced level of State financing achieved through privatisation (motorway concession-holders), and the incorporation of environmental protection requirements.
- to show how national transport planning in France is currently in a phase of research following the rejection of the most recent transport Plan and the loss of a very large source of income resulting from the privatisation of motorway concession-holding companies.

Key-words: transport infrastructure, planning, State, financing, France.

Introduction

In many countries, the State is currently withdrawing from a large number of economic sectors (energy, transport, etc.). This separation began in the 1970s as a result of economic crises. It continued at a slower rate following the fall of the Berlin

Wall and the economic globalisation of the 1990s. Other institutional levels began to appear as a result of decentralisation to the regions (France, Spain, Italy, etc.) and within the European Union itself following the Maastricht Treaty. The latter saw the European Union begin to issue directives and regulations that had to be applied by the various European States in accordance with the principle of subsidiarity.

The States have repositioned themselves in a number of different ways. Partnerships between institutional, economic and political partners have become more flexible. Control over public policies attempts to horizontally integrate various sectors (transport, education, health, etc.) to further develop sustainable development (Amin and Thrift, 1994; Healey, 1998). In France for example, the regions increasingly have their own transport planning policies and the State often has difficulties in financing State-Region projects (Ollivier-Trigalo and alii, 2007). Control over public policies has become more complex over the last few years and sometimes the State has been obliged to introduce concepts of uncertainty into its decision-making processes as well as private management and performance practices.

The paper analyses how the French State, relatively interventionist compared with other countries, is positioned when contrasted with other administrative levels and players (companies, inhabitants, etc.) involved in planning transport infrastructures. The objective is to define the methods used by current planning practices and those used by the State and how these have changed over time.

The thesis argues that, generally speaking, there have been considerable changes in the State's role for several decades (a general increase in the complexity of public decision-making processes (Gaudin, 2002)).

The methodology used was mainly historical. An analysis of works by historians was carried out and historical sources (archives, reports, etc) and interviews were also used. A chronology is presented in appendix 1.

The paper has two objectives:

- to show how the national transport policy changed in France from centralised planning (1945 to 1970) to a more complex form of planning (1970 to 2007). Planning between 1945 and 1970 was centralised, rational and focused on economic development and regional planning. Planning during the subsequent period was less centralised and characterised by an increased level of dialogue

between the State and the inhabitants, a reduced level of State financing (since 1991) as a result of privatisation (motorway concession-holders) and the incorporation of environmental protection requirements.

- to show how national transport planning in France is currently undergoing a research phase following the rejection of the intermodal transport plans *(schémas de service collectif- SSC[1])* in 2005 and the loss of an important source of financing (dividends provided by motorway concessionary companies).

The paper focuses on railway and interurban road infrastructures and, more particularly, the policy governing motorways. The latter have developed to a much greater degree than the railways since the 1960s and are characterised by an innovative financing system – the concession.

1 1945-1969: "Rational" transport planning and regional development managed by the State

11 French planning characterised by centralised State action (1945-1969)

111 The return of a centralised State following the Second World War

The economic role of the State became more important from 1945 to 1949 due to the destruction wreaked by the Second World War. There was a tremendous need for reconstruction (a large number of bridges, roads, hospitals, houses, and so on had been destroyed). Under these difficult circumstances, the French people and politicians from all politic parties (left-wing with the French Communist Party and Socialist party, and right-wing with the Christian Democrats and Gaullists) turned away from the liberalism of the 1930s and embraced the concept of a centralised State.

French thinking concerning the role of the State had also changed since 1930, with young senior civil servants (such as Jean Monnet) defining a new economic policy based on the theories developed by John M. Keynes (Neiertz, 1999).

They believed that economic policy had to be centralised. Growth, employment and

[1] Specific French terms and acronyms are explained in the glossary at the end of the paper (appendix 2).

purchasing power became the goals of the State's economic policy and were considered as elements requiring optimisation.

After 1949, the State remained very active and strong. It also continued to be an important economic player with the aim of achieving optimum economic development in a difficult context. The dynamic optimisation theory achieved consensus among economists such as Maurice Allais as it was regarded as a modernisation and growth factor. It is a theory based on real prices, and the pricing of goods and commercial services at marginal cost[2] (Neiertz, 1999).
Automobile lobbies pressurised members of Parliament and senior civil servants from the Ministry of Public Works to adopt this economic theory. A working relationship between this group and the Ministry's transport department was established. This resulted in the domination of the *Haut comité des transports* (Higher Council of Transport) which was responsible for defining coordination between the various monomodal modes of transport. However, this approach was unsuccessful.

The change of government system in 1958 and the creation of the 5th Republic reinforced the State's authority in France. General de Gaulle became President of the Republic and the French State reinforced and modernised the tools used to apply economic policy. Regional planning and development plans and policy focused on regional and national development and became a very important policy.

In addition, the birth of the European Economic Community (EEC) reinforced the spread of liberalism within political and economic circles over the medium to long term. The EEC wanted modes of transport to be used rationally and the removal of international trade barriers.
The principles of EEC policy were established by the decisions taken on 30th March 1965 and the agreement dated 22nd June 1965. International transport was not yet concerned by quotas, and national regulations and tariffs were harmonized by the opening of the European market. However, these new regulations did not have a major impact on infrastructure planning in France.

[2] The marginal cost is the cost of the last produced unit, with or without increases in production factors (Lakehal, 2000)

112 Nationalisation of utilities

According to Neiertz (1999), by 1946 this Keynesian economic approach and the alliance of right-wing and left-wing political parties led to a new economic planning policy and the nationalisation of certain utility companies such as power suppliers (electricity, gas, coal) and Paris's urban transport system. The State wanted to develop a greater independence from economic and financial lobbies and decided to nationalize these companies.

Semi-public companies (*sociétés d'économie mixte)* were created. These non-profit companies had a specific legal status, with their capital held by the State and local authorities, and carried out missions and services of general interest. They included Air France, Compagnie Générale Transatlantique, Compagnie des Messageries Maritimes, etc. However, the national left-wing/right-wing consensus had become increasingly fragile by 1946 and the last nationalisations took the form of semi-public companies.

113 The development of "a public service" ideology within a large number of companies

The development of nationalisation extended the public service concept to a wide range of companies. Common interest was defined by the promotion of national growth following the Second World War, but the State found it difficult to force private companies to apply these goals.

There was no correlation between monopolies, public companies, administrative management or public service (Neiertz, 1999).

This resulted in non-public companies being given the responsibility of managing public industrial and commercial services. They had to guarantee the continuing operation of the service (365 days a year), user equality (applied through prices) and be able to adapt the service to meet the demand level. But these companies also had to operate within the rules governing industry and business: financial management, accountability and legal responsibility before the courts. These service companies (State companies, semi-public companies, etc.) were governed by private law but also had to respect the common interest while remaining profitable.

114 Centralised planning

1141 National planning placing emphasis on transport (1945-60)

Planning was introduced into government practices. It had been developed during the Second World War and since 1941 had consisted in redistributing wealth across the country. However, it was a particularly bureaucratic process. It was further developed in the 1950s by senior civil servants to increase economic growth as France was suffering from a difficult economic situation at that time. The national Planning Committee (*Commissariat Général au Plan*), created in 1946, established five-year national plans under the leadership of Jean Monnet who had considerable international and political experience and been among a group of senior planners been trained in the 1930s.

The approach to planning changed in 1947. The first plan (the Monnet modernisation and development plan) concerned the use of the money provided by the Marshall Plan. It was adopted in January 1947 and concerned all economic sectors: coal, electricity, iron and steel industry, building materials, transport, fuel, etc. Transport represented one of the plan's priority concerns and 70% of investments programmed for rebuilding over the period from 1947 to 1950 concerned this specific sector.

Railways were favoured until 1951 because of the pressure applied by the French railway board (*SNCF*) given that railway infrastructures had suffered to a greater degree during the war than roadways. The adopted policy was one whereby the railway network would assure long-distance, large-scale transport, with the roads used to take goods to their final destination.

Transport planning remained monomodal, even though operational coordination had been envisaged by the law passed on 14th November 1949. For example, the profitability levels of the various projects were not compared. The creation of a special road investment fund (*Fonds special d'investissement routier*) in 1951 by André Rumpler, public works engineer and director of roads and roadway

infrastructures (Ministry of Transport), redirected a proportion of the financing towards the roadway network. This fund was autonomous and financed by a specific budget and a levy on fuel taxes. Over the first few years it was used to rebuild roads and bridges that had been destroyed during the war. Although this first plan did not define any particular planning doctrines, road use was encouraged by senior Ministry of Transport civil servants.

1142 Concerted planning to encourage the production of more goods (1945-60)

The starting point for the planning method set up by Monnet was to introduce a macro-economic Keynesian control with just a touch of liberalism in which the State held a powerful position in order to control production and demand. Monnet wanted to develop a concerted economic and planning process. To this end, the *Commissariat Général du Plan* became a meeting-place for company managers, trade-union leaders, economists, user representatives, etc. This approach was completely different from that taken by the militaristic bureaucratic planning resulting from the ideological framework imposed by the Germans during the Occupation (Neiertz, 1999, Kuisel, 1977 and 1984).

Paul Delouvrier, chief planner (Ministry of Construction), who went on to plan urban development in the Ile-de-France region in the sixties, applied this liberal ideology to the economic calculation methods used by the *Commissariat Général au Plan*. He was aided in this by his close contacts with the State's financial Inspectorate and the CEOs of nationalised companies. The Monnet plan was extended from 1950 to 1952 to match the implementation of the Marshall plan. Monnet became Chairman of the High Authority of the European Coal and Steel Community and was then named as head of the *Commissariat Général au Plan.* This move saw him replaced by Bernard Hirsch who organised the 2nd Plan (the Hirsch Plan). However, the investments envisaged by the plan were not budgeted and State's role was one of incitement without any direct intervention. The plan was fundamentally based on taking the interests of the concerned economic players into consideration.

The objective of this plan (1954-1957) was harmonious economic growth achieved through better production methods and lower costs as well as economic equilibrium

attained through prices, incomes and foreign trade (Neiertz, 1999). Much use was made of statistics to determine quantified economic objectives (such as production rates). Transport planning remained monomodal even though a law passed on 14th November 1949 envisaged coordinating the various modes of transport (see 1141). .

1143 Spatial planning favouring rural development (1945-60)

The Minister for Urban Reconstruction and Planning and public works engineer, Raoul Dautry was replaced by Eugene Claudius-Petit who detailed a highly centralised regional development plan in 1950. These two ministers believed that the State needed to increase rural development and limit the growth of large cities in order to obtain a better population and activities distribution across the country. Their approach owed a debt to the earlier publication of a book by Jean-François Gravier, "Paris and the French desert" in 1947 which had launched a reassessment of the economic and demographic weight of Paris when compared with other parts of the country.

The 3rd Plan (1958-1962) pursued the same general goals as the previous one. Objectives concerning housing, medical and educational amenities were added. Transport infrastructure projects focussed on motorways, with a high priority level given to the highly congested Paris-Lyon-Marseilles axis. The north canal (*Canal du Nord*), whose construction was interrupted in 1914, was included in the adopted projects as waterway transportation was being increasingly requested to transport coal and steel. In addition, the congestion on a large number of infrastructures encouraged the government to finance national infrastructure projects on existing axes or around large cities. The Plan was finally withdrawn in 1960.

1144 New transport infrastructures developed by the regional planning policy to alleviate traffic on heavily used axes (1960-69).

Planning and regional land use continued to remain centralised, even after the election of General de Gaulle as President of the Republic given that the new government system introduced by the 5th Republic reinforced executive powers. The 4th Plan (1962-65) exemplifies the doctrines of this period. The State had strong economic

tools to implement a regional development policy, such as the power to specify where public investments should be made (education, transport, etc), and this resulted in the planning of mega-infrastructures. Senior civil servants working for the Ministry of Public Works and Transport believed that transport had a considerable influence on where activities would be located and that consequently, it should play a major role in regional development policy (Neiertz, 1999).

According to classical economic theories, the localisation of activities is optimal when it minimises the charges for transporting raw materials and finished products (space must be homogeneous and the competition perfect). Transport charges were considered to be proportional to the transported weight and the distance to be covered as the crow flies. Economic policy was no longer centred on a return to growth scenario – given that this had already been achieved – but rather the distribution of this growth across the country. The adopted method used macro-economic models to share the resources between the regions in order to satisfy as much of the community as possible. As a result, the financing provided by the Plan was distributed among regional action areas.

The 4th Plan, supported by André Rumpler, Director of Roads in the Ministry of Public Works, also envisaged the revival of the motorway program. The first national road Plan was approved by the government on 30th March, 1960 and included 3,324 km of motorways and 15,500 km of national highways. A law on the status of motorways was voted in 1955 providing for the payment of tolls within the framework of a concession-holding contract[3]. The Head of the *Commissariat Général au Plan*, Pierre Massé, had to convince the Minister for Public works, Pierre Buron, of user acceptance of toll motorways given that until then motorways had traditionally been free of charge in France. It was felt that tolls would not be well accepted by the population.

The priority of relieving congestion in major urban centres overrode regional planning

[3] The concession-holding contract allowed a *société d'économie mixte* (semi-public company) to build and operate new motorways by collecting tolls. The financial resource provided by the toll was used to reimburse the loans obtained to finance the motorway.

policy, and a greater effort was demanded from roads[4]. The head of the *Commissariat Général au Plan* arbitrated between the various projects and modes on the basis of the amount of the concerned investments, but without taking into consideration any intermodal coordination. The 5th Plan (1966-1970) aimed to control the major economic equilibriums resulting of the opening of borders instigated by the European Community. This approach was clearly not particularly compatible with centralised planning. The Plan favoured industrial mergers to make industry more competitive on an international level and placed emphasis on nuclear power, data processing and aeronautics. It should also be noted that transport planning in France is still independent from European transport policy which is more focussed on the implementation of shared general regulations.

But the preparation of the Plan had become more complex because of the increasing number of statistical evaluation tools. It became harder to allocate the investments to be made in the various projects, and the Ministry of Public Works and Transport found itself confronted with a significant number of financing sources and a large number of special interest groups (*SNCF* – French national railways –, road transporters, etc.).

1-2 Methods used to make choices and prioritise infrastructures adapted to match this policy.

121 A more rational space planning method

Since 1945, each Ministry had arbitrated between projects on the basis of financial criteria. Transport infrastructure projects were decided as a result of dialogue between economic players, user representatives and the Ministry of Public Works in order to avoid over-concentrations of facilities. Investments were decided by decree. The Third Plan, which did not run its full course, marked a transition period between consultative planning and a more centralised planning (4th Plan).

The 1962 Regional Land Use Plan, published under the aegis of the *Haut Conseil du*

[4] It was anticipated that the number of cars would double in the 1960s.

Ministère de la Construction (Higher Council of the Ministry of Construction) stated that "economic development action essentially comprises (...) the definition of a general plan with long-term objectives and directives to achieve these objectives, as well as implementation plans drawn up to meet the hierarchy of pressing needs and which include selecting the most efficient actions, being those having the most multiple effects. These plans and programmes must, in a coordinated manner, integrate actions of interest to all economic and human activities" (p 4).

A national and regional statistical analysis of energy industries, communication networks, industry, agriculture, etc. covering the short and long term was carried out. The objective was to determine the current and future distribution of infrastructures across the country. Transport infrastructures were planned on the basis of a monomodal system.

Regional committees were consulted and had to adapt their proposals to match the policies decided by the State. These planning programmes were then made subject to the executive authority and approval by Parliament. The implementation of the national development plan was governed by a fundamental constraint, being the profitability of the investment. This factor governed the order in which the projects were carried out.

122 The use of economic calculation

Based on the industrial Fordist model, 1920 to 1930 saw the first steps being taken to rationalise the methods used to choose projects and accord implementation priorities. The years following the 1935-45 war were marked by considerable use of economic calculation, even though this approach was not particularly modern. France needed to finance a rebuilding programme and, to that end, had to develop new management methods. The State was responsible for managing a large number of sectors (nationalisation of large companies: coal mines, gas, electricity) and this placed senior civil servants (civil engineering sector) on the front line insofar as managing the industrial sector was concerned. It was necessary to innovate and this was facilitated by the developments being made in econometrics and mathematical economics.

The marginal cost theory, developed by Maurice Allais[5] after 1945, based tariff and cost calculations on general interest. As a result, public companies had to respect two rules: "to be able to satisfy the demand and adjust production to ensure that the marginal cost was equal to the selling price" (Etner, 1987). The marginal cost is defined as the cost of the last produced unit, with or without increases in production factors (Lakehal, 2000) . This allowed the user company to set production and prices. However, this theory was not always appropriate to the economic context of that period given that it potentially required fundamental modifications to business management structures. For example, in the case of the French railways (SNCF), it would have been necessary to consider the closing down lines and abandoning standard price rates. This would have been in contradiction with the public service concept (Neiertz, 1999).

1-3 Transport policy gradually redirected towards road use

Due to the pressure of the railway lobbies, the first two Plans placed emphasis on rail transport. This was despite the fact that there was a greater need to rebuild the roadway networks and that road traffic levels were rapidly increasing. The creation of special road investment funds *(FSIR)* in 1951 redirected a proportion of infrastructure financing to roadways. However, the lack of profitability rate comparisons between the various modes of transport prevented any intermodal transport planning.

In the 1950s, public works engineers wanted to prove that roadways were an economic development tool as important as that provided by the railroad. This situation led André Rumpler to increase the financial means available to the *Laboratoire Central des Ponts et Chaussées* (department of civil engineering central laboratory). In 1958, he created a special motorways service responsible for providing technical assistance to the departments[6] as well as a roadways studies service. At the same time, the railway and transport department established a programme of railway line closures in reaction to the obsolescence of certain lines and the success of the private car transport. However, this programme only resulted in 885 km of lines being closed.

[5] A public works engineer.
[6] Departments are administrative divisions forming part of a region.

But the government did not assume the coordination of intermodal investments, even though this important factor was mentioned in each Plan. The only technical coordination carried out was by SNCF in order to organise the changeover from rail to road for the final transportation of freight to the end destination. The head of the *Commissariat Général au Plan* arbitrated between the projects for each mode of transport in function of the investments envisaged by the Ministry of Finances which continued to fall year by year for each programme. Choices were made without any preliminary intermodal coordination studies being carried out.

Interurban motorways showed a profitability rate[7] greater than railway and waterway projects (air transport investments were not applicable at that time). Motorway became the mode provided with the highest level of investment. Public investments in national motorways increase by 185% between what had been attained by the 4th Plan and the forecasts for the 5th Plan, motorways by 170 %, urban public transport (with the exception of RATP – the Paris public transport authority) by 130%, and other infrastructures by between 10 and 90% (Neiertz, 1999). A road and motorway construction programme was launched in 1960 (no similar programmes were launched for the other modes). It envisaged the construction of 1,933 km of interurban motorways and 225 km of urban motorways by 1975. The most urgent construction projects concerned the over-saturated routes (Paris-Lyon-Marseille, Paris-Lille, etc). Other less urgent motorway projects were also envisaged. Finally, the programme also included renovation works to 6,500 km of other roads (widening, etc) (Zembri-Mary, 1999).

1-4 An innovative financing system to cover the cost of building motorways

While investments into the railway network were greater that those invested into the roadway network, motorway projects were able to take advantage of a means of financing already used in France, the concession. This financing system provided the income to construct a dense motorway network. Other modes of transport continued to be financed by public funds or the resources provided by tickets sold to users.

[7] Roadway and motorway project profitability rates were always greater than 14 %. The equilibrium level was set at 8 %.

The special roadway investment fund (*FSIR*) was created by the law dated 30th December 1951. As it did not represent a constant source of financing, it did not allow for any long-term planning. The financing provided by *FSIR* varied according to specific economic or political situations. For instance, the fuel tax intended to finance *FSIR* was regularly lowered by governments between 1955 and 1970. The amount not given to *FSIR* was allocated to maintaining the national road network. New motorways and improvement works did not have a regular source of public financing.

As a result of this situation, a specific financing system was implemented for motorway construction. The works were partially privately financed and this had the effect of financially separating the motorway sector from the rest of the country's roadway network. This concession system (using on toll collection) was based on a "build and operate" principle. This system made it possible to use the available public funds to improve and maintain the existing roadway network.

Law no. 55-435 dated 18th April 1955 was instigated by Edgar Faure, Prime Minister of the centre-left government. This law defined the status of motorways and only accepted the financing of motorway infrastructures by concessions "in exceptional cases" and, even then, only in partnership with local communities or public bodies. The law envisaged the provision of advances to cover the concession companies until they achieved their return on investment. These advances could be financial (*FSIR*) or other (already built works, studies, sites, etc.). The concession companies collected tolls to finance the motorway construction (Zembri-Mary, 1999).

The first five concession companies (called *Sociétés d'Economie Mixte Concessionnaires d'Autoroutes* or *SEMCA* [8]), created between 1956 and 1963[9], strongly depended on the State because the preparation of the contracts, the works management and operations were carried out by the Department of Civil Engineering *(Ponts et Chaussées)*. The annual loans to these companies were programmed into

[8] See the status of *sociétés d'économie mixte* (semi-public companies) in chapter 112.
[9] The Esterel-Côte d'Azur motorway company was created in 1956 and the *Société de la Vallée du Rhône* in 1957. The *Autoroute Paris-Lyon* company was created in 1961 and the *Société des Autoroutes Paris Normandie et des Autoroutes du Nord de la France* in 1963.

State budgets and set the toll price levels. The 1955 law was extended by law no. 58 336 dated 29th March 1958 which granted concession companies with a State guarantee covering the loans they were allowed to contract. The law also granted them advances to ensure their financial balance during the first years of operating.

Decree no. 60-661 dated 4th July 1960, drawn up by Robert Buron, Minister of Transport and Public Works, removed the mention of "in exceptional cases" from the 1955 law. This made it easier for the Ministry to make use of the concession system. This first recourse to private financing permitted the launching of the 1960 Road Plan and the construction of the Lille-Paris-Lyon-Marseille motorway, completed in 1970.

1-5 New legislation concerning land use allowing urban development

The growing need for housing, public facilities, transport infrastructures, etc., required new laws concerning land use to allow the State to rapidly acquire land on which to build the amenities needed by an urban population that had increased by 14 million in the period between 1945 and 1975. On 31st December 1958, Pierre Sudreau, Minister for Construction, produced a decree concerning the *zones d'aménagement concerté (*urban development zones) [10]. The State had a pre-emption right allowing it to buy land in the concerned area and launch town planning operations.

Edgar Pisani, Minister of Construction, pushed through the Land Use Act dated 30th December 1967 following 18 months of debate. The law introduced planning and land use procedures *(plan d'occupation des sols*) as well as joint land planning procedures permitting private-public partnerships for the construction of building projects.
These laws permitted the rapid urbanisation of new suburbs around Paris and other cities, and the creation of five new towns in the Ile-de-France region[11]. They were needed because Paris at that time was attracting a considerable number of people from the rural environment as well as the large number of French repatriated to France following Algeria's independence. The demand for new housing was also high because of the destruction wreaked by World War II.

[10] The decree was voted following the passing of the law dated 7th August 1957. The decree dated 30th May 1969 replaced the "priority urbanised zone" procedure.
[11] The administrative area covered by Paris.

A relationship was created between the location of transport infrastructures and the urbanisation process. This resulted in the areas around the stations serving the Ile-de-France regional express train network to be used to locate the residential districts of the new towns being built (for example, line RER A up to Marne-la-Vallée). Motorway interchanges were used in the same way. These measures saw Le Corbusier' functional theory being used in Ile-de-France region to organize land use. The land reserved by the State for new constructions was zoned according to use (employment, housing, leisure, commerce, etc). This approach obliged planners to develop transport infrastructures between these areas to create travel links between them.

But, unlike other European countries (Great Britain, Sweden, Finland, etc), no green belts or zoning policies were established to prevent urban dispersion and sprawl. The creation of local land use plans (*Plans d'Occupation des Sols* followed by *Plan Local d'Urbanisme in 2000)* were intended to control the construction of new buildings. However, each local authority was responsible for its own local plan and was authorised to organise town planning on its particular scale. This construction could occasionally result in an-urban development taking the form of housing districts and shopping centres.

2 1969-1985: decentralisation, public participation, liberalisation of the concession system, new methods for choosing projects.

2-1 A new context

The conceptual framework underlying the major projects carried out by President G. Pompidou underwent changes. The main objective of the 6th Plan (1971-75) was to create an inland transport market (excluding urban and interurban public transport) to improve service quality and productivity (Neiertz, 1999).

Following the crisis of the 1970s, the policy focussed on market deregulation (freedom of movement for people, capital and goods) and replaced the indicative

economic planning that had formerly controlled the market. The centralised, national policies of the 1960s were replaced by a reduced level of planning and a widening of national decisional levels at both higher levels (European Community) and lower levels (decentralisation and regionalisation). Both the European Community and local authorities would subsequently have an influence on the development of the French motorway network during the 1990s.

These changes to doctrines and economic policy which saw the State assuming a less dominant role, took place in parallel with increasing powers being placed in the hands of the regions and local authorities, resulting in these becoming active partners working with the State.

22 From centralisation to decentralisation

Until 1964, the communes, departments and State were the only administrative levels in France. The status of regional administrator *(préfet) was* created in 1964. This person represents the State on a regional level. The creation of the regional metropolitan study and development body *(Organisme régional d'études et d'aménagement métropolitain – OREAM)* in 1966 generated thinking concerning regional transport. Law no. 72-619 dated 5th July 1972 created the regions but they were given limited powers and did not have their own transport networks. It did not create any real decentralisation with a resulting transfer of powers from the State.

However, regional statutory authorities (*EPR -Etablissement public regional*) were able to organise transport, produce regional transport plans and invest in infrastructures and rolling stock. The *EPR* received money from the State for their investments. They were able to levy a few taxes and take out loans.

The regions had been interested in transport planning since their creation. In addition, the 1973 oil crisis led the government of the Prime Minister of the time, Pierre Messmer, to create regional transport plans. These included railway projects because the fossil fuel consumption of trains was less than that for cars. The decentralisation of regional transport continued with the decree dated 30th September 1977 defining a new State position. The decree was enacted by Prime Minister (right-wing) Raymond Barre and his government. The regions were given new transport powers

(reorganisation of the railway services, buying of rolling stock, operating contracts with operators). The only source of financing provided was that resulting from the savings that the regions helped the State make on the financing of regional trains. The State returned these savings to *EPR*. With the decree dated 24 September 1979, the departments (an administrative level below that of the region) were allowed to create departmental public transport plans, reorganise the roadway service and sign contracts with carriers, etc. The regions and departments were able to propose road services to replace railway services and close down railway lines.

François Mitterrand's new socialist and communist government put an end to these infrastructure transfers and railway line closures in 1981 to encourage users to make greater use of public transport. It pursued the decentralisation process with the inland transport act *(Loi d'Orientation sur les Transports Intérieurs – LOTI)*[12] dated 30th December 1982. The law was drawn up by Charles Fiterman, communist Minister of Transport.

The regions did not make much use of their new planning powers in the period from 1981 to 1995 and there were few new or revised regional transport Plans (Zembri, 2004). The contracts signed between the regions and the *SNCF* gave a new scope to the operations. Planning contracts were signed between the State and the regions, resulting in new infrastructure projects, buying of rolling stock, etc., and the distribution of financing costs between the State and the regions. These contracts reinforced the role of the regions in transport planning.

But the logic governing the regions meant that they reacted to immediate situations. The planning contracts used from 1983 onwards made the regions dependent on the State's financing priorities. During the 1980s, the State was much more interested in

[12] The *LOTI* introduced three new elements:
- Greater intermodality through the development of multimodal infrastructure plans (never developed).
- The right to transport (being the right of the population to have good transport conditions : modal choice, access to information).
- Greater transparency in the choice of investments, with the obligation of an *a posteriori* evaluation for infrastructure projects costing more than FRF 500 million.

financing roadway projects and, as a result, the regions limited their number of railway projects. The State did not transfer any resources to the regions for operating railway services.

23 The State opens the planning procedure and the construction of infrastructures to public participation

231 Ecological arguments against extremely large transport projects

The ecologist movement has existed in France since the 1970s (the first political ecological movement was founded in 1973 and presented presidential election candidates in subsequent years). The movement adopted a general approach to the effects of economic growth stating that while this measure was indispensable, it was also necessary to limit its development. In particular, it criticised the ill-considered use of natural resources and space, uncontrolled technical progress and increased mobility[13], etc. At that time, the arguments against infrastructure projects seems to correspond more to an opportunity to express the ideals of the ecologist movement than a specific criticism of infrastructures. Rather than being directed against the infrastructures themselves, it was a criticism of the social and economic excess they represented (Zembri-Mary, 1999).

The environmentalist influence was present very early on in the process of constructing infrastructures. The law dated 10 July 1976 on the protection of nature introduced impact assessments to analyse the relationship between infrastructures and their environmental effects. The public inquiry democratisation act (1983) aimed to assure the satisfactory insertion of infrastructures into their environment (anti-noise walls, protection of animals, and so on). Given that there was strictly no intention to reduce the construction of infrastructures (particularly motorways), the contents of this environmentalist influence proved to be a much watered-down version of the ideas and demands made by the first ecologist movements. It was not until the middle of the 1980s that the ecologist movement developed a specific doctrinal policy.

[13] Source: *Ressourcer l'Ecologie*, independent ecologist movement, 30 p.

232 The democratisation of the public inquiry

The public enquiry system was formalised by the directive dated 14 May 1976 concerning the information provided to the public prior to the construction of new infrastructures. The directive was drawn up by the Prime Minister (right-wing), Jacques Chirac, and his government. It specified the public enquiry procedure and the information to be provided to the public: main purpose of the project, the reason for the project, its nature, cost and consequences, how it inserts into the environment and the measures taken for its insertion. The directive also included for the inclusion of various alternatives to the project and the reasons justifying the final decision. The expected advantages had to be compared with the potential disadvantages. The public inquiry had to demonstrate that the project represented a public utility greater than that of any private interests.

It was important that the State be able to justify the project and its choices . The directive was followed by complementary measures: the law dated 10th July 1976 concerning the protection of nature introduced the idea of an impact assessment and a greater concern for the environment during the study phases, the reform of the town planning code (30th December 1976) which increased the rights of associations, and the acts of 17th July 1978 and 11th July 1979 which simplified access to administrative documents.

Huguette Bouchardeau, Minister of Environment and Quality of Life (left-wing) introduced the act dated 12th July 1983 concerning the democratisation of public inquiries and the protection of environment. This law required that the effects of a project on the environment be studied (noise, modification to traffic circulation, etc.) and widened the inquiry procedure to include consultations with local residents concerning these issues. The aim of the consultation was to determine whether or not the project was in the public interest. Rather than simply concerning those people who were to be expropriated from their land, the consultation now had to take all residents into consideration. It became a consultation between the State administration and the public.

Nonetheless, the new procedure was open to criticism. It was felt that the inquiry

came about too late in the planning and construction of the project (upstream dialogue would have permitted the integration of more requests and comments from the population). The formalisation of the inquiry procedure multiplied the rules and possibilities of conflict. While the information provided to the public was complete (construction profiles, cost-benefit analysis, geology, traffic forecasts, etc.), discussions became far more technical with the public finding it difficult to have a full understanding of the project.

24 Financing system adapted to essentially finance very large projects

241 Liberalisation of the concession system to finance the motorway network

The 1970s were characterised by an acceleration of the motorway programme to match the industrial development policy promoted by President George Pompidou. There was a need to consolidate the concession-based motorway financing system and, to that end, the Minister of Transport, Raymond Mondon (right-wing) decided that it should be liberalised.

The concession of motorways to private companies meant that private funds could be used to finance the network. Motorway concessions were only granted to semi-public motorway concession companies *(Sociétés d'Economie Mixte Concessionnaires d'Autoroutes – SEMCA)*[14], providing them with concession contracts up to 1970. There was a dual objective: to increase financing possibilities and have the concession companies compete against one another to reduce costs and accelerate the implementation of the projects. Four private companies were created: Cofiroute in 1970 for south-western France, AREA for motorways in the Rhone-Alpes Region, APEL in 1972 for projects in eastern France and ACOBA in 1973 for the Basque Coast. The concession contracts allowed private companies to construct and operate motorways for a 35-year period. On completion of this period, the motorway became State property. However, the duration of the concession was extended with every new motorway segment built. The State was responsible for the development of the network (it set the technical programmes, layouts and engineering standards).

[14] See paragraph 1-4.

The *SEMCA* became more independent and developed their own design and construction departments. This saw the creation of Scetauroute, a subsidiary of the central land use development company *(Société Centrale d'Equipement du territoire – SCET)* responsible for carrying out studies for *SEMCA* projects.

242 The motorway concession system

The loan (either public or private) was limited on an annual basis within the concession contract and reflected the financial market. The State provided a guarantee of up to 75% for *SEMCA* and between 40 to 70% for private companies. The guaranteed *SEMCA* loans were raised in France and abroad by the National Motorway Financing Body created in 1963 to replace the failing *FSIR*. The rest of the investment was financed by standard loans that were not State-guaranteed. Private companies and SEMCA were able to benefit from equalizing advances and deferred State repayments.

Each motorway project was subject to a financial arrangement specified in the concession contract. This indicated the amount of the loans, the State grant to the *SEMCA* (which initially consisted in construction advances to be repaid within 15 or 25 years), the subsidies provided by the local authorities concerned by the projects, and the use of toll income from motorways that had already been paid off (only for *SEMCA*) through the implementation of an efficient pricing policy (such as that operated on the Lille-Marseille motorway). The concession operation of major motorways by private companies allowed the State to make considerable savings and reduce its advances.

The liberalisation of the concession system also provided an indicator of its reliability. It permitted the construction of over a thousand kilometres of motorways between 1960 and 1970. State financing was rare (as already seen with *FSIR*) and the national authorities saw that concessions provided the means to develop the motorway network the country needed and whose construction had for many years suffered from a lack of sufficient capital.

243 Toll payments considered as a temporary measure to pay for the completion

of the network

The toll solution was considered by public works engineers as being dissuasive for users and in contradiction with principles of regional planning based on equity, but State financing for motorways was insufficiently reliable. François Mitterrand's socialist government insisted that the motorway network be completed and the payment of tolls appeared to be the only possible source of financing to assure the construction of a national motorway network and attain land planning objectives. Tolls were considered as a temporary measure to be used to finance the missing motorway axes and refund loans. A number of financial solutions were proposed in the report submitted by G. Dreyfus (1982) to overcome the cost of constructing a dense motorway network: equalization of toll receipts between the concession companies, nationalisation, financial participation by the regions, etc.

The regional planning objective was maintained despite the financial difficulties suffered by the concession companies. Consequently, the motorway network as defined *a priori* in 1960, remained feasible. It can be seen that despite the crisis faced by the network, the values (social and economic utility) underlying its development since the outset continued to remain valid.

244 Consolidation of the financing system: grouping of the *SEMCA*, harmonisation of toll levels and income equalization (1982)

Following the 1970 reform authorising private companies to hold concessions and the liberalisation of *SEMCA* intervention methods, François Mitterand's new socialist government introduced a new motorway sector reform in 1982 that reversed the direction taken by the previous reform.

This second reform was based on regrouping the *SEMCA* within the public *Autoroutes de France* structure. Among the private companies, only Cofiroute retained its status. The other private companies had failed because of the large loans they had to reimburse. The *SEMCA* were merged with these companies. The profitable *SEMCA* refunded the financial advances they had received from the State to *Autoroutes de France* and this sum was then redistributed by the State to the non-profitable

companies in the form of advances.

Tolls were harmonised on the basis of a single kilometric price level which could be increased in the event of having to construct motorways over difficult terrain (a situation where the cost of the infrastructure is clearly higher). This reform took place within the context of the inland transport act *(Loi d'Orientation sur les Transports Intérieurs - LOTI*[15]*)* which strongly justified the issue of providing the same conditions of access to the network for all.

The reform had a dual objective. Politically, it was necessary for the government of Prime Minister Pierre Mauroy to ensure public control over the development of the network and thus over the private companies, which George Réverdy (1995) summarised by the formula "to stop the financial haemorrhage in favour of the private sector". Financially, it was necessary to find a solution for the four private companies suffering economic difficulties. As a result, the financing system found itself based on a single model applicable to all the companies and applied through the centralisation of resources (Zembri-Mary, 1999).

The toll was the main source for financing the network. Toll payments were maintained on paid off sections[16] despite the fact that the concession had to cease once the loans had been reimbursed. It was in fact the equalization between concession companies through *Autoroutes de France* that led to profitable concessions being extended over time. The income derived from these sections was used to finance an acceleration in the construction of new and less profitable motorway sections. However, it should also be noted that there were no plans to increase toll prices (apart from inflation-based increases) as this would dissuade users from using the network (Zembri-Mary, 1999).

The State also modified its methods of participation. It ceased providing construction advances (payment of funds allowing the concession companies to begin construction rather than having to wait for the motorway to begin providing income from toll

[15] See paragraph 2-2 for the definition of *LOTI.*
[16] Being the oldest or most used motorways which were built to handle a heavy traffic level.

payments). These advances were no longer necessary as the companies had constant financial resources provided by the equalisation of toll receipts. The contribution of the State to capital stocks[17] (an amount of FRF 2 billion, being around about €300 million), was intended to allow concession companies to increase the volume of their loans and thus accelerate the construction of the network envisaged by the national roadways Plan.

The financing of the new accelerated motorway network construction programme (decided by the State in 1988) was therefore exclusively based on toll receipts and it was consequently necessary that the traffic volume provided the concession companies with a high level of toll receipts. This led to the development of traffic simulations which were used to determine the financing capacities of the concession companies (3% growth predicted up to 1995 and 1% beyond). Traffic levels in fact increased by more than that.

2-5 Methods for choosing projects within a context of reduced public funding

In the 6th and 7th Plans, the planning programming budgeting system (PPBS) (circular dated 20th January 1970[18]) was used instead the marginalist theory. This method was encouraged by Jacques Chaban-Delmas, Prime Minister, who sought a higher level of modernity. The objective was to introduce more rationality in public expenditures choices and to develop the most efficient way in which to apportion allocations within each ministry and between ministries. As revealed by the 6th (1971-1975) and 7th (1975-1980) Plans, this was clearly required given the increasing level of collective needs However, financial resources were limited. New needs (transport infrastructures, public amenities, etc.) did not require further investments as

[17] Being the product of the privatisations that took place between 1986 and 1988. Source: document from the Highways Department, information meeting held on 25 May 1987, 6 p.

[18] The circular made the following modifications to the cost-benefit analysis when compared with the 1964 circular: "updating of numerical values to be taken into account for calculating advantages; greater appreciation of certain technical data such as travel times, safety conditions, etc.; comparison between various sequences for the progressive installation of a connection (the 1964 instruction only considered cases concerning isolated installations); greater appreciation of unquantifiable advantages within the framework of the new PPBS methods".

alternative means existed to satisfy them. Financial and administrative measures, as well as private measures were able to complete public actions (Neiertz, 1999). Rather than being a list of projects, the Plan represented a global strategy. As stated in the 1970 roadways department application manual, “technical and economic studies (by PPBS) permit the selection of the most profitable works” given the large number of new infrastructures to be provided (such as the 1960 national roadways programme). It is difficult to assess whether or not the State and public works engineers agreed with one another as to the use of PPBS rather than the marginalist theory for transport projects. This point has not yet been studied.

To accompany this new method, the new government under the presidency of G. Pompidou prepared monomodal transport plans that concentrated projects around the densest zones. As recommended in 1950 by Jean Monnet, the Plans were compared with one another. However, there was no integrated intermodal planning and this explains the closure of secondary interurban railway lines during the 1970s. While the number of projects was limited, it should be noted that the continued construction of a dense network of interurban motorways remained programmed.

The cost-benefit analysis, invented by public works engineers, permitted comparisons between the various projects and determined the sum allocated to each mode (this method had first been used for motorway and roadway projects). The projects were evaluated according to their cost and their advantages. The direct advantages concerned road users (reduced travel time, increased comfort and safety, etc.). These parameters could be measured (hours and minutes, number of accidents, litres of petrol, etc.) and financially converted into unit values (cost of a litre of petrol, cost of a death, etc.). The indirect advantages concerned the effects that a project could have on regional planning, urbanisation, transport policies and economic development. However, these advantages were not as easy to measure. It was not possible to given them a financial value and compare them with direct advantages. The financial value was replaced by qualitative elements (impact of the project on the creation of industrial estates, housing areas, etc.). Cost-benefit analyses allowed comparisons between various projects for the same connection and to base these on similar criteria (road and other transport modes) to determine budgets.

This resulted in needs being evaluated and translated into long-term objectives. Programmes corresponding to these objectives were set out, indicating the necessary or available means to partially or completely attain the selected objectives. A choice was then made between the various programmes based on the cost of the project and its effectiveness.

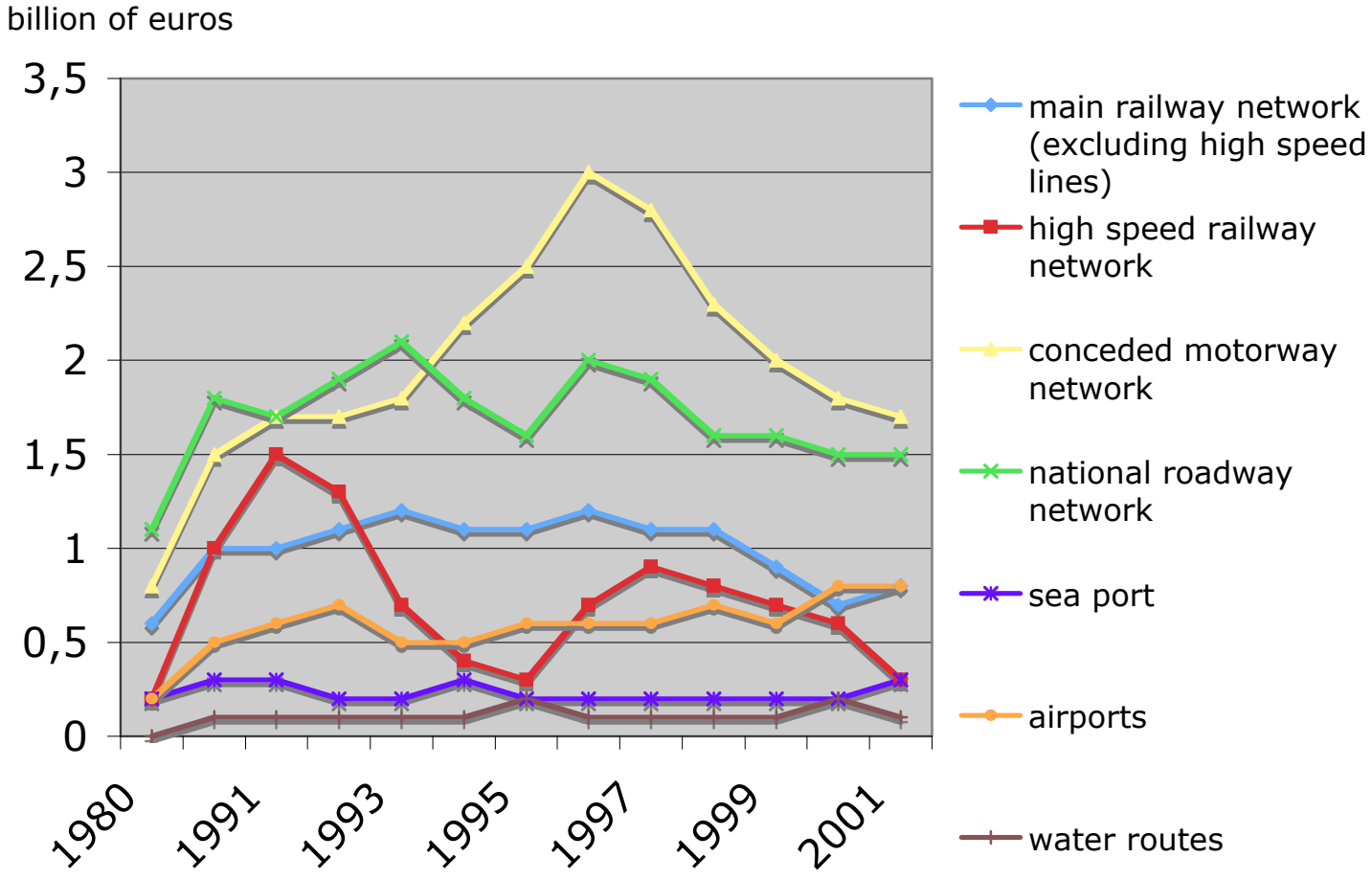
However, at the beginning of the 1970s, F. Plassard (1977) noted that the PPBS had not been fully tested for the motorway network. Until then, it had essentially been used to optimise the financial management of central and regional departments (especially the Ministry of Construction) and the concerned secondary roads.

3 - 1985-2007: Less State, new issues.

31 Reduction of investments awarded by the State to *SEMCA* and *SNCF* (France's historical railway operator)

The State reduced its contribution to infrastructures .

Changes in State transport infrastructure investments from 1980 to 2001 (in billion of euros) source Oudin (2003)



Taken from a high point in 1991-1992, high speed railway investments fell until 1995 when they increased again until reducing as from 1997. Main railway network investments fell as from 1996.

State spending on the national roadway network increased until 1993 and then fell. State spending on the conceded motorway network (SEMCA) increased until 1996 and then fell. However, investments by local authorities progressively increased but did not compensate the loss of all other State spendings (roadway and motorway infrastructure spending sources fell by 7.7% between 1996 and 2001 for the entire roadway network).

State spending on waterways remained constant, spending on maritime transport

slightly increased and air transport increased considerably although remaining low when compared with the other modes of transport.

311 The State withdraws from financing the rail network.

The law dated 13th February 1997 transcribing EC Directive 91-440 into French law separated infrastructure management from operating management, with the resulting reduction of the operator's debt. The management of the rail network and the proportion of the debt corresponding to infrastructure costs were transferred to *Réseau Ferré de France* (RFF - railway infrastructure owner and operator). *SNCF*, which has retained all railways employees, was made responsible for maintenance in exchange for payment from *RFF*. *RFF* had to assume a debt of FRF 20 billion.

The State reduced its contribution to infrastructures by 42.3 % between 1997 and 2005 (Neiertz, 1999). This contribution also had to cover the annual servicing of the debt and a proportion of proportion of programmed investments. The State did not want *RFF*'s debt to be assimilated into its own debt as this would have worsened the ratio set by the Maastricht treaty. It was therefore essential that State financing did not exceed 50 % of *RFF*'s resources. State financing was essentially reserved for the high speed train network (TGV), with just a little set aside for the rest of the network.

312 The State increasingly withdraws from financing the concession-operated motorway network

The 1988 national road Plan modified the concession system parameters by accelerating the construction of the network. The State increasingly withdrew from financing the conceded network which, as a result, became totally dependent on toll receipts. Traffic levels became the fundamental criteria for the construction of the network. Although the Plan had regional planning objectives, it was also a response to growing traffic levels (it was also necessary to pick up European traffic flow given the important role played by roads in the economics of the transport system).

3121 How to finance the accelerated construction of the motorway network?

The successive 1988, 1990 and 1992 national road Plans reflected the State's desire to accelerate the construction of the network. This was either a sign of an increased level of confidence in a more favourable economic context or a reaction to the threat of future European regulations being introduced to govern the attribution of concessions. There was no competition between the concession companies in France, and this went

against the principles of the European Community.

The 1994 reform established by the Ministry of Construction and Transport gave physical form to the objective of these Plans and changed the financing system. Relationships between concession companies were detailed through a planning contract and changes to the setting of toll prices. This resulted in the *SEMCAs* being geographically restructured by the grouping together of both profitable and unprofitable companies, with financial transfers (toll receipts) from the former to the latter The following societies were grouped together: ASF (*Autoroutes du Sud de la France*) and ESCOTA (*Esterel-Côte d'Azur, Provence, Alpes);* SANEF (*Société des Autoroutes du Nord et de l'Est de la France*) and SAPN *(Société des Autoroutes Paris-Normandie*); SAPRR (*Société des Autoroutes Paris Rhin Rhône*) and AREA (*Autoroutes Rhône-Alpes).* An equalization was created between profitable motorways and regional planning motorways (which made little if any profit)[19] by a new extension to the concessions.

The concession companies were provided with a capital of which 99% was held by the State, *Autoroutes de France* and the *Caisse des Dépôts et Consignations* (State-owned deposit and consignment office). The remainder was held by local authorities. The capital essentially took the form of a specific annual loan that began in 1994. The amounts of these loans were as follows[20] (for *SEMCAs* and Cofiroute[21]): FRF 3,809 million in 1994 and FRF 1,404 million in 1995 for the *SEMCAs,* FRF 331 million in 1996, FRF 784 million in 1997, FRF 749 million in 1998 and FRF 1,144 million in 1999. The completion of the network was specified in five-year planning contracts signed between the State and each regional unit. This approach represented an innovation in the concession system and specified investment commitments. These contracts also specified the tariff policy to be adopted by the concession companies.

Prior to 1994, the increase in toll prices resulted from an agreement between the company and the State. Following the reform, the toll level was defined to meet the financial resources requirements of the companies for the duration of the planning contract, and to match traffic forecasts and the size of the network (the planning

[19] These motorways had to serve rural areas with low traffic levels.
[20] Source: *Bilan du Fonds de Développement Economique et Social* (1997) and *Comité Interministériel Economique et Social* (1998).
[21] The only private concession company.

contract also gave the companies a + or – 15% margin in setting toll rates to allow them to adapt their income forecasts to meet changing traffic levels (a positive margin in the event of reduced traffic or a negative margin in the event of increased traffic)).

3122 The introduction of real competition in the concession system

From 1st January 1998 and following a long period of exemption, European regulations forced the French State to introduce real competition in the attribution of concessions for motorway sections yet to be built[22]. The EC Directive dated 14th June 1993 (no. 93-37) concerning the construction contracts and public interest concessions, obliged European States to introduce new procedures to guarantee the equality of the candidates for the attribution of public interest concessions.

The French motorway financing system did not fall within the framework defined by the European Community for several reasons. The first was the lack of competition between *SEMCAs* and even with the last remaining private company, Cofiroute, for obtaining concession contracts. The European Community also generally condemned the way in which the French government provided aid to private companies and *SEMCAs*. The assistance granted by the French State to extend existing concessions appeared to provide direct assistance in financing new motorways.

As a result and as from 1993, the State was obliged to issue European invitations to tender. Given the rules of open competition, the system of financial transfers between concession companies was called into question as the construction and concession of new motorways could no longer be given to a single company without an invitation to tender. The continuing extension of the initial concession contracts was no longer acceptable. Each new motorway section had to have its own concession contract. The State could no longer grant a concession for a non-profitable project without simultaneously granting a subsidy and publishing this information .

France obtained a five year exemption from the 1993 EC directive on public interest concessions and, as a result, was able to continue developing its motorway network. It is not completely unthinkable that the roadway Plans at the end of the 1980s and the

[22] This EC order changing the French way of financing motorways fell within the scope of the introduction of rules governing competition as had been introduced in the railway sector through Directive no.91-440 (1991) which required a separation between railway infrastructures and railway operation. The same enforcement took place in the telecoms sector as from 1st January 1998.

1994 reforms that permitted the accelerated construction of the networks were purposefully aimed at benefiting from the exemption granted by the European Community. For example, Lionel Jospin, Prime Minister, signed the Declaration of public interest for the Saint-Julien-Puy-Lavèze-Combronde section of the A 89 motorway on 10th January 1998 despite the adverse opinion of the board of public inquiry. Until 1998, the State could also justify the concession of motorway sections to predetermined companies on the basis of *premonition* despite these concessions theoretically being subject to Europe-wide publicity. The result, as specified by a document issued by the Motorways Department in 1992[23], saw European tender announcements being published for a number of small conceded sections. These were allocated to the companies that usually carried out the works. A number of concession contracts were signed *in extremis* before 1998.

The appointment of Jean-Claude Gayssot (Communist Party) to the Ministry of Construction in 1997 and the appointment of Dominique Voynet (Green Party) to the Ministry of Planning and the Environment in 1997 resulted in a moratorium on motorways construction.

3123 Motorways privatisation

The order dated 28th March 2001 (number 2000-273) drawn up by the Ministry of Economy and Finances and the Ministry of Construction and Transport imposed general accounting rules on the *SEMCAs* to allow them to submit tenders for new concessions both within Europe in compliance with European regulations (see section 312) and outside the European Community. These saw the end to the State's financial assistance to the companies and their exemption from general accounting rules which in the past had been justified because of the long period needed to attain financial equilibrium (loan levels were very high). The State's commitment to assuming liabilities on conclusion of the concession period was withdrawn.

The carrying over of administrative motorway expenses[24] (provision for depreciation and debt interests) that could not be covered by toll receipts until they became profitable was withdrawn. The concession extensions from 2019 to 2032 for *ASF* and

[23] Source: *note de travail sur les concessions autoroutières et le droit communautaire,* réf. 97/580, version 2 dated 23rd December 1997, Direction des Routes (Highways department).

[24] These administrative expenses were offset because they are not legally considered as financial losses able to threaten the existence of the concession company.

from 2014 to 2026 for *ESCOTA*[25], being the first profitable *SEMCAs* to have been the subject of an opening of capital , permitted the absorption of these new charges by the concession companies. The depreciation, recalculated from the beginning of the concession and extending over the duration of the new one, was intended to produce a financial gain by the end of the concession period. A motorway is a product to be maintained, not one to be replaced. Using this hypothesis, the financial gain would be recovered by the shareholders (Zembri-Mary, 2002.)

This reform made profitable concession companies financially attractive to private partners in search of new investments, at least on completion of a period during which they would have to refund very heavy loans. Finally, the equalization between profitable and non-profitable sections was made non-applicable to the most recently conceded sections. These saw a concession contract being signed for each section, with specific accounts established for each of these. The measures placed emphasis on the assessment of paid-off motorways. The concession companies took out loans to finance construction, but without any financial guarantees or assistance from the State (a situation that explains the subsequent privatisation). Up to 2001 they were refunded through toll receipts that also financed the concession company's profit margin (Zembri-Mary, 2002.).

However, the profit provided by paid-off motorways (which would subsequently become increasingly numerous) could not be recovered by the State to finance other infrastructures and transport modes until the termination of existing concession contracts, despite the fact that transport infrastructures were costing an increasing amount and seeing increasingly heavy traffic levels. The capital of the *SEMCA Autoroutes du Sud de la France* was opened to private shareholders in 2003.The *Société des Autoroutes Paris-Rhin-Rhône* followed in 2005. Naturally the State wanted to recover the toll incomes from paid-off motorways to finance the construction of railway, river, and other infrastructures prior to privatisation.

A transport infrastructures financing agency (*AFITF*) was responsible for the redistribution of toll receipts to the various types of infrastructures but only recovered a proportion of the product resulting from the sale of the companies as starting capital.

[25] The reimbursement of loans contracted through the *Caisse Nationale des Autoroutes* (a body that helped the State finance motorway construction projects) was extended to 2015 -2017 for ASF (in a single loan) and to 2013-2015 for ESCOTA.

It did not have a regular income that would have mechanically increased until the end of the concession contracts. The financing of transport infrastructure projects was limited for several years, much like the modal shift policy. In addition, the State did not exert its role as regulator on the private companies. Investments were not carried out according to the envisaged calendar (road widening, etc). Toll prices varied according to the lengths of the sections and the traffic they carried and were increased at a level greater than inflation[26]. This contradicted the obligatory clauses in the concession company's contract and changed the application conditions governing the traditional concept of providing a universal service (being the access of users to a standard service at a reasonable price).

313 The use of private public partnerships

PPP were introduced by Gilles de Robien, Minister for Construction, Transport, Land Planning, Tourism and the Sea and their role was defined by order no. 2004-559 dated 17 June 2004. They allowed the State or a public body to entrust to an organism – for a given period matching the paying off period of the investments or the selected financing methods – a complete mission comprising the financing of the works or amenities necessary for the public interest, the construction of the works, their maintenance, operation and management, as well as other services needed to assure the public utility mission (such as traffic control, etc.). The private partner was remunerated by the State or the local authority throughout the duration of the contract. This payment could be based on performance-related objectives. Under French law, the contract is terminated if the public authority is unable to define – alone and in advance – the technical means needed to assure the construction of its projects, their legal and financial framework or, if the project is urgent (due to the length of time that public funds will be used), to be able to prove that it is sufficiently reactive.

The interest of this system is that it is able to finance projects within the context of a limited public budget. The risks taken by the company receiving the financing resources concern the project's construction and operation, as well as its service and performance qualities. These aspects are used as the basis for the remuneration paid by the authorities. Concession, as defined in France, is remunerated through the tolls

[26] Source: *Rapport de la cour des comptes sur ASF*, 2008.

paid by the users and through the financial participation of the public authorities (in the case of non profitable concessions). A PPP can include other missions apart from that of the construction and operation of an infrastructure, such as modal shifts, urban restructuring or multimodal projects. This type of financing permits a global infrastructure project that incorporates planning, construction and operation, and places all these aspects in the hands of a single company.

It should be noted that for the time being, PPP projects are fairly rare (up to March 2006, only 12 out of 38 PPP projects had been implemented). Certain projects were abandoned because of the complexity of controlling the works and the contract. Nonetheless, the Ministry for Ecology, Sustainable Planning and Development strongly recommend its use.

32 Public decision-making that is more transparent and with a greater focus on multimodality

321 The idea of public consultation is integrated into the process of planning and implementing projects.

As conflicts concerning the construction of new transport infrastructures multiplied during the 1980s and 1990s (TGV Mediterranée, A 400 motorway, etc.), a far-reaching national debate took place concerning major transport infrastructures. The conclusions, published in the Carrère Report (Carrère, 1992), revealed the need to begin dialogue prior to the public inquiry and debate the usefulness of projects on regional levels. At the end of the day, the public inquiry process was not sufficient to be considered as real dialogue concerning the infrastructure project as it had already been incorporated into the national plan. The Minister of Planning, Housing and Transport, Jean-Louis Bianco, published a circular on 15th December 1992 concerning the need to control major national transport projects. This circular transformed the proposals made by the Carrère report into rules. In addition, a new conciliation procedure was introduced by the State for managing its public projects.

It included the need to discuss with local elected representatives, associations, building owners and the coordinating prefect[27]. This was followed by the State's provision of a summary of the conditions governing the constructions to be carried out. The discussions concerned the end-purposes and relevance of the infrastructure

[27] The prefect represents the State in each *Region* and each *département.*

from an intermodal point of view. The layout studies went into greater detail so that inhabitants would clearly understand the route to be taken by the infrastructure. The public inquiry was particularly focused on the economic development of the served areas. The application of the State's commitments concerning environmental protection were made subject to controls.

Minister Michel Barnier introduced a law that was voted through on 2nd February 1995. This law created the public debate commission (*Commission de Débat Public - CNDP*). The CNDP made it possible to organise discussions with the public prior to the beginning of layout studies and the public inquiry. The discussions concerned the objectives and characteristics of major public operations of national interest presenting a strong socio-economic stake or having a significant impact on the environment. Socio-economic and environmental studies had to be carried out in a more rational manner. The discussions were used by the public authorities to reassure local actors in the event of disagreement, explain the value of the project and, as a result, make it easier to legitimise public decisions. The decision to carry out a project was made when the project was incorporated into the multimodal transport infrastructure plans (*Schémas multimodaux de Services Collectifs* - SSC) up to 2005 and subsequently in the list of the projects forming part of the interministerial land development and competition committee (*Comité Interministériel d'Aménagement et de Compétitivité du Territoire* - CIACT). This meant that decisions were taken prior to public consultation.

However, since the 1990s, associations opposing certain projects became increasingly knowledgeable and learned how to clearly develop their arguments against projects and argue technical and economic problems in a highly professional manner. They even successfully obtained the cancellation of a declaration of public interest made by the Council of State[28] (A 400 motorway, Annemasse-Thonon-the-Bains). A difference was created between important transport projects (dialogue, public discussion, public inquiry) and less important projects which were only subject to the public inquiry.

322 The failure of multimodality

During the 1970s and 1980s, the organisation of the regional planning became

[28] The *Conseil d'Etat* (literally Council of State) is a public institution responsible for two missions. It advises the government and is the supreme judge for appeals against decisions taken by a public authority.

centralised due to the emergence of local communities and new EC prerogatives. Transport infrastructure policies remained sector-based. The governments during the 1990s encouraged intermodality. While the 1982 inland transport act (*LOTI)* was an intermodal law, the necessary reorganisation of the Ministry of Transport (which had a department for each mode) and the Ministry of Regional Planning had not yet been sufficiently reorganised to control and develop intermodal forms of transport.

Multimodality was reaffirmed by the law dated 4th February 1995. This law was developed by Charles Pasqua, Minister for Regional Development (member of the *Rassemblement pour la République,* a right-wing party) but remained deficient as the planning procedure was always focused on sector-based transport infrastructure plans, such as roadway plans, inland waterway plans and high speed railway plans. These plans were individually prepared with difficulty by each Ministry of Transport department and, consequently, multimodal and intermodal planning was complex. Infrastructure planning was based on an offer-based logic. In addition, the law stated that no part of French territory should be located at more than 45 minutes or 50 km from a motorway exit or TGV station. As can be seen, transport infrastructures were regarded as an element of a regional planning logic that demanded that each inhabitant have good access to fast networks.

The right-wing party (*Rassemblement pour la République*) returned to government with the 1997 political changeover (election of Jacques Chirac as President of the Republic). The new government revised the Pasqua law by introducing a new act (June 25, 1999), drawn up by the Minister for the Environment and Planning, Dominique Voynet, specifying national land planning and transport infrastructure policies. Intermodal transport plans (*Schémas de Services Collectifs - SSC*) replaced monomodal plans (one for passengers, the other for freight transport). Planning covered a 20 year period. The objective was to analyse needs, seek the means available to satisfy them – without overly focusing on new investments – and carry out far-reaching dialogue with all those concerned.

Sustainable development formed part of these objectives. The government encouraged the creation of an intermodal traffic equilibrium. Regional planning had to be compatible with the SSC and integrate the regional transport plan. The SSC were revised at the same time as the planning contracts signed between the State and the

Regions[29]. However, the SSC were only applicable until 2005. Dominique de Villepin (Prime Minister) decided to terminate them as they were too difficult to implement as it was not easy to apply similar criteria concerning the evaluation of the effectiveness and quality of service for each mode and clearly define these concepts. This would have required evaluating the level of user-service provided by each project. As a result, since 2005, transport infrastructure projects have been included in the *CIACT (interministerial land development and competition committee)* list. For the time being, transport infrastructure plans have been sidelined.

33 Methods of choice and project prioritisation: integration of environmental concerns

In March 1986, a circular issued by the Motorways Department (Ministry of Town Planning, Housing and Transport) introduced the multi-criteria method (ten criteria to be taken into account to evaluate the collective relevance of a project) which followed on from the *LOTI* (inland transport act) instituted by Charles Fiterman, Minister of Transport on 30th December 1982. This law introduced a public decision system focused on multimodality, with the choice of projects being made according to their economic and social effectiveness, and their cost (article14 of the law). This extended the previous situation which only concerned the benefits derived by the State, users and concession companies.

The objectives of national economic policy (such as employment) and regional planning policy[30] were integrated into the methodology. The multi-criteria analysis took the following into account: effects on regional and local economies and regional planning, safety, user advantages (reduced travel time, comfort, etc.), a qualitative analysis of the project's effects on the environment, the incidence of the project on other modes of transport; employment in the roadwork sector, energy consumption required to maintain the project and traffic levels, the economic assessment (with taxes for the State and toll receipts for the *SEMCAs*), and a cost advantages analysis (see part 2-5 for details). This meant that layout alternative and each project could be

[29] These contracts specified the proportion of financing to be provided by the State and by the Regions for the main transport infrastructure projects.

[30] Source: *Problèmes politiques et sociaux*, special "La route" issue, La documentation Française, 1987, no.571.

compared – using identical data – with other projects covering the same route.

The thinking within the various departments (motorways, ports, road transport, and air transport) within the Ministry of Transport continued to develop a multimodal transport policy that fully examined external effects (congestion, pollution, etc.). A working group chaired by Marcel Boiteux, civil engineer, published a document (Boiteux, 1994) on the improvements that could be made to the evaluation methods. This document was used as a basis for a new directive issued on 3rd October 1995, although economic calculations (with evaluation in euros) continued to be the reference method for public decisions. However, it integrated far more environmental factors requiring financial evaluation and the qualitative evaluation of potential economic effects (employment, etc.).

Following a new phase of reflection by the working group chaired by Marcel Boiteux (Boiteux, 2001), this incorporation of environmental effects and dialogue saw changes in the methods used. The group recommended a more detailed analysis of environmental effects and their social costs (effects of traffic barriers, value of the time spent by transport users, cost of noise nuisances, value of human life and injuries resulting from accidents, etc.). The directive dated 25th March 2004[31] signed by the Minister of Construction , Gilles de Robien, integrated an increased level of dialogue into the project evaluation process and incorporated an analysis of the conditions governing national and social balance, and the effects of the projects on local development. To summarise, projects were prioritised according to the results of the multi-criteria analysis, the level of economic profitability and that of financial profitability. The economic profitability level meant that it was possible to check whether investments and operating expenses generated sufficient advantages evaluated in euros (such as reduced road safety) for the community and their comparison with the cost of the project. The financial profitability level provided an evaluation of the needs for public investments given that a project can be useful for the community (with a positive rate of economic profitability) but not achieve financial equilibrium due to insufficient receipts.

These methods were used for interurban projects but left a gap in the evaluation of urban projects concerned by other criteria that had not yet been specifically defined

[31] Updated on 27 May 2005.

(integration of the infrastructure into the city, etc.). In addition, long term uncertainties and risks related to the technical and economic environment, delays and conditions for implementing the projects, as well as the various layout hypotheses, also needed to be taken into consideration.

General conclusion

Planning policies by the French State were particularly robust during the period from 1945 to 1969. Following WW2, both left- and right-wing political parties wanted to have a powerful central State to carry out the tremendous amount of required rebuilding work. Consequently, the State played an important role in planning the economy by, among others, nationalising the transport companies. The "public service" concept spread to many industrial branches. Planning at that time could be defined as liberal as it resulted from dialogue with economic players – an aspect insisted on by Jean Monnet who was very marked by the Keynesian theory of macro-economic control (Neiertz, 1999).

Transport planning doctrines were based on considerably developing badly equipped rural services and improving the service offered on congested axes. At that time, the environmental effects of transport infrastructures and traffic levels were not taken into consideration. There was no such thing as intermodal planning as each transport mode was considered individually by the planning practices used by the State and the Ministry of Public Works. Roads gradually became the favoured mode due to sector-based financing and the use of concessions to finance the construction of the new motorway network through toll payments, The considerable and urgent need for new infrastructures made it essential that public decision-making be based on rational criteria. The use of economic calculation permitted cost-benefit analyses to be carried out and allowed comparisons between projects using the marginal cost theory which finally proved not to be adapted to public service companies.

The election of George Pompidou as President of the Republic in 1969 reduced the State's role. President Pompidou had a more flexible planning approach than General de Gaulle and this resulted in a change in economic doctrine which became one of market deregulation. This obviously had an influence on French transport policy and provided the basis for a more open type of transport planning. The power of the State under the former President was reduced by the increasing power given to the regions which, in 1974 and 1982, were provided with new competences for planning and

operating passenger rail transport networks. However, the regions took a certain time to make use of these new powers.

Although the European Community established a number of measures concerning transport, it had not yet developed a common policy. However, because all concerned inhabitants had to be consulted during the public inquiry, the State had to provide a more detailed justification of its infrastructure projects, but it nevertheless remained the main player for the construction of a motorway network able to serve its industrial policy. The accelerated construction of this network in a difficult financial context led the state to the use of a new economic calculation method: the Planning Programming Budgeting System. The method was based on evaluating criteria concerning all users (time-saving, etc.) and allowed the concept of general involvement in the public decision-making process to be maintained.

During the 1980s, the State withdrew from financing the railway and motorway networks. The most important change that took place during that period was the opening of the capital of profitable concession companies to the private sector and the privatisation of these companies.

During this period, the concession system – in which the State played a considerable role – was modified as a result of EC regulations. The State introduced the EU reform five years after its implementation date as this reform did not allow the construction of a very dense motorway network or create real competition between concession companies. The reform also ended the public financial assistance used to construct unprofitable motorway sections. The State chose to open the capital of the *SEMCAs* (2003) and develop privatisation (2005) because it needed funds to finance pension schemes and avoid increasing the public debt. The main consequence was the loss of a financial source to finance new infrastructures, particularly for alternative modes of transport.

Planning practices changed but, for now, the reasons for this have not been studied. The *SSC* were not used because of a lack of finance and the last *Contrats de Plan Etat-Région* (State-Regional planning contract) were implemented with a great deal of difficulty as the State lacked the finances and the regions were incapable of assuming the financing of the projects (major roads, railway lines, etc.) themselves and had to delay the beginning of works. The State no longer held the strong planning role that it

had had 15 years previously[32]. and this is why it no longer organised long term transport infrastructure programmes. The doctrine was unclear and multimodality was not applied in the way imposed by the intermodal transport plans (*SSC)*.

Planning and building procedures became more complex and there was an ever-greater level of discussion between the public authority and the public. The methods used to evaluate projects incorporated an ever-increasing number of criteria, such as the impact of the project on pollution, congestion, safety and so on. Certain of these criteria included sustainable development objectives. It is clear that an infrastructure such as a motorway can contribute to increasing safety levels.

Infrastructure projects became global transport and urban development projects planned over 15 to 20 year periods rather than simply being the "connection routes" they had been in the past. For example, the L2 motorway in Marseille was a project that incorporated urban regeneration, social objectives, intermodality, etc. The *Météor* project (automatic metro in Paris) was a technical innovation incorporating a new social element (automation meant no human drivers who might potentially go on strike) able to assure service quality under all circumstances. Mega-transport projects were used to resolve existing social problems, such reducing the isolation of districts with high unemployment levels.

The planning and funding of transport infrastructures are currently in a state of uncertainty. The traditional planning method (in which the State plays a strong role) no longer exists. The last conference dealing with environmental challenges (*Grenelle de l'Environnement*, 24th & 25th October 2007) introduced a new transport planning doctrine and, once again, multimodality has become the main objective of the transport policy. To reduce pollution, railways and waterway networks[33] need to be encouraged more than roads and motorways[34]. Freight traffic needs to switch over to the railway network. A national plan for a new transport infrastructure has to be drawn up, but the public transport financing for 2008 is insufficient to meet these new objectives and in any case does not favour public transport. Freight traffic has difficulties in switching over to the railway network because *SNCF* has closed down a

[32] Source: discussions held in May 2008 with Ponts et Chaussées engineers having worked on the planning of transport infrastructures.
[33] 1,500 km of tramway and 2,000 km of high speed train (TGV) track are planned.
[34] The objective is a 20% reduction in transport pollution by 2020.

large number of unprofitable freight lines. In a nutshell, there is currently no coordination between official doctrine, future plans and financing, and consequently multimodal objectives are not currently being taken into consideration. According to SNCF, the State refuses to take a policy stand.

The development of new means of financing (such as PPP) and the emergence of new types of partnerships are changing the traditional conditions governing motorway construction. For example and unlike the past, private concession companies now only accept profitable concessions. For the time being, project evaluation methodologies do not integrate risks or uncertainty[35]

Local planning and funding has become more complex and are also in an uncertain context given that projects are in a dynamic process that is seeing a large number of adjustments being made between the authorities, private partners and the public. In France, the projects themselves have broadened to become global urban projects incorporating a large number of constraints (such as urban regeneration).

References

AMIN (A.), THRIFT (N), eds, 1994, *Globa lisation, Institutions, and regional development in Europe*, Oxford, Oxford University Press.

BALLADUR (Edouard), 1969, *Rapport sur la politique routière,* copied document.

BOITEUX (Marcel), 1994, *Transports, pour un meilleur choix des investissements*, Commissariat Général au Plan, La documentation française, 132 p.

BRENNER (Neil), 2004, *New state spaces, Urban governance and the rescaling of statehood*, Oxford, Oxford University Press.

BRUA (Jacques), 1993, *L'accessibilité des zones à faible densité de population*, a report written by the Department of Civil Engineering General Council *(Conseil Général des Ponts et Chaussées)* and the General Council of the Agricultural, Waterway and Forests Engineering Department *(Conseil Général du Génie Rural, des Eaux et Forêts)*, 47 p.

BOITEUX (Marcel), 2001, *Transports: choix des investissements et coûts des nuisances, Commissariat Général au Plan*, La documentation française, 325 p.

[35] Source : discussions held in november 2007 with an economist having worked at the Direction régionale de l 'Equipement Ile-de-France.

CARRERE (Gilbert), 1992, *Transports destination 2002: débat national*, 4th meeting, 4th June 1992, Montpellier.

COMMISSARIAT GENERAL AU PLAN, 1971, *6ème Plan 1971-75, Rapport de la commission aménagement du territoire,* La documentation française.

COMMISSARIAT GENERAL AU PLAN, 1976, *Rapport de la commission, Préparation du 7ème Plan*, La documentation française.

COMMISSARIAT GENERAL AU PLAN, 1980, *Transport, préparation du 8ème Plan 1981-85*, La documentation française.

COMMISSARIAT GENERAL AU PLAN, 1992, *Document introductif à la préparation du 9ème plan.*

COMMISSARIAT GENERAL AU PLAN, 1991, *Projet de rapport portant examen du 10 ème Plan (1989-92) à mi parcours.*

COMMISSARIAT GENERAL AU PLAN D'EQUIPEMENT ET DE LA PRODUCTIVITE, 1961, *Rapport annuel sur l'exécution du plan de modernisation et d'équipement*.

COMMISSARIAT GENERAL AU PLAN D'EQUIPEMENT ET DE LA PRODUCTIVITE, 1967, *5ème plan 1966-1970, rapport particulier, routes de rase campagne et voierie en milieu urbain*, La documentation française.

CONSEIL ECONOMIQUE ET SOCIAL, 1961, *Avis et rapports*, no.2.

CONSEIL GENERAL DES PONTS ET CHAUSSÉES, 1993, *Cohérence de la planification et de la programmation des réseaux routiers français et européens*, SETRA.

CONSEIL SUPERIEUR DU MINISTERE DE LA CONSTRUCTION, 1962, *Plan d'aménagement du territoire.*

COUR DES COMPTES, 1973, *Rapport public sur la politique routière et autoroutière*.

COUR DES COMPTES, 1986, *Rapport public sur la politique routière et autoroutière*.

COUR DES COMPTES, 1990, *Rapport public sur la politique routière et autoroutière*.

DELEGATION A L'AMENAGEMENT DU TERRITOIRE ET A L'ACTION REGIONALE, *Politique d'aménagement du territoire, loi de finance pour 1970, 1971, 1972.*

DELEGATION A L'AMENAGEMENT DU TERRITOIRE ET A L'ACTION REGIONALE , 1975, *Politique d'aménagement du territoire.*

DELEGATION A L'AMENAGEMENT DU TERRITOIRE ET A L'ACTION REGIONALE, 1978, Ministère des transports, *Transports et aménagement du territoire, Schémas régionaux de transport,* report prepared by the interministerial coordination group, La documentation française.

DELEGATION A L'AMENAGEMENT DU TERRITOIRE ET A L'ACTION REGIONALE, 1997, *Schéma national d'aménagement et de développement du territoire.*

DREYFUS (Gilbert), 1982, *Rapport sur la situation actuelle et le devenir des autoroutes françaises*, janvier 1982, internal Ministry of Planning report, 62 p.

ETNER (François), 1987, *Histoire du calcul économique en France*, Economica, 304 p.

FOURNIAU (Jean-Michel), 1994, "Les pratiques françaises de conduite des grands projets d'infrastructure de transport", *Flux*, no. 18, pp 33-47.

GAUDIN (Jean-Pierre), 2002, Pourquoi la gouvernance, Presses de sciences po, 138 p.

GRAVIER (Jean-François), 1949, *Paris et le désert français*, Flammarion.

Groupement des autorités responsables des transports, 2000*, Vingt ans de politique de déplacements*, GART, 258 p.

HEALEY (Patsy), 1998, Collaborative planning in a stakeholder society, *Town planning review*, 69 (1), January , 1-21.

JOIGNAUX (GUY), LLANOS (Jacqueline), 1994*, L'évaluation des infrastructures de transport en question*, INRETS, Actes no.43, 122 p.

KUISEL (R.-F.), 1984, *Le capitalisme et l'Etat en France, modernisation et dirigisme au XX ème siècle*, Paris, Gallimard, 480 p.

KUISEL (R.-F.), 1977, "Vichy et les origines de la planification économique, 1940-1946", *Le mouvemenent social,* n° 98, pp. 77-101.

LAKEHAL (Mokhtar), 2000, Dictionnaire d'économie contemporaine, 2000, Vuibert, 735 p.

NEIERTZ (Nicolas), 1999, *La coordination des transports en France, de 1918 à nos jours*, Comité pour l'histoire économique et financière de la France, 798 p.

OLLIVIER-TRIGALO (Marianne), PIECHACZYK (Xavier), 2001*, Evaluer, débattre ou négocier l'utilité publique?, Le débat public en amont des grands projets*

d'aménagement: un thème pour une communauté d'idées, Les collections de l'INRETS, 302 p.

OLLIVIER-TRIGALO M (dir), BARONE S., DABLANC L., DEBIZET G., FAURE A., GOURGUES G., GUÉRANGER D., RIGAUD P., WOLFF J.-P., ZEMBRI P., ,ZEMBRI-MARY G., 2007, *Six régions à l'épreuve des politiques de transport. Décentralisation, régionalisation ferroviaire et différenciation territoriale*. Synthèse INRETS no.55, 233 p.

OUDIN (Jacques), 2003, *Financement des infrastructures à l'horizon 2003*, rapport d'information au Sénat n°303.

PERROUX (F.), 1962, *Le 4ème Plan français*, PUF, Que-sais-je ?

PLASSARD (François), 1977, *Les autoroutes et le développement régional*, Economica, Presses universitaires de Lyon.

QUINET (Emile), 1990, *Analyse économique des transports*, PUF, 302 p.

REOCREUX (Anne), DRON (Dominique), 1996, *Débat Public et infrastructures de transport*, report to the Ministry of the Environment.

RUI (Sandrine), Ollivier-Trigalo (Marianne), FOURNIAU (Jean-Michel), 2001, *Evaluer, débattre ou négocier l'utilité publique ?,L'expérience de la mise en discussion publique des projets : identités et légitimités plurielles. Ateliers de bilan du débat public*, Les collections de l'INRETS, 358 p.

SAUZAY (Michel), MERCADIER (Michel), 1996, "*Avant projet de rapport de la commission Réseaux et territories", chaired by Mr. Jean-François Poncet*, preparatory SNADT works.

STP, 1998, *Méthodes d'évaluation des projets d'infrastructures de transport collectifs en région Ile-de-France*, study report, 74 p.

THOENIG (Jean-Claude), 1973, *L'ère des technocrates: le cas des Ponts et chaussées*, ed d'Organisation.

ZEMBRI (Pierre), 2004, *La planification des transports au niveau régional, une lecture des évolutions de ces 25 dernières années*, CERTU, 198 p.

ZEMBRI-MARY (Geneviève), 1999, *Maillage autoroutier et territoire: permanences et mutations du modèle de développement du réseau autoroutier français*, PHD, Ecole Nationale des Ponts et Chaussées, Paris, 396 p.

ZEMBRI-MARY (Geneviève), 2002, « L'ouverture de capital du groupe ASF-ESCOTA », *Flux,* no.50, pp.76-79.

Appendix 1: Chronology

1946 : nationalisations, creation of the *sociétés d'économie mixte* (public private companies).

creation of the *Commissariat général au plan* (National Planning Committee).

use of the marginalist theory

1947 : 1st Plan (Plan Monnet)

1951 : creation of the *Fonds spécial d'investissement routier* (special roadway investment fund).

1954-1957 2nd Plan (Plan Hirsch)

1955 : law concerning the status of motorways

1956-1963 : creation of the *SEMCAs* (semi-public concession companies).

1958 : 5th Republic (new constitution) General de Gaulle elected President of the Republic.

1958-1962 : 3rd Plan

1962-1965 4th Plan

1966-1970 5th Plan

1969 : Georges Pompidou elected President of the Republic

1970 : use of the PPBS, creation of monomodal transport plans

1971 : creation of private concession companies.

1971-1975 6th Plan

1972 : creation of the Regions

1977: regions given new transport responsibilities (reorganisation of the railway services, purchase of rolling stock, operating contracts with operators).

1979 : departments given the right to create departmental public transport plans.

1982 : *Loi d'orientation sur les transports interieurs* (inland transport act).

1983 : Law on the democratisation of public inquiries

1980s and 1990s: numerous disputes regarding the legitimacy of public decision-making concerning transport infrastructures

1986 introduction of multi-criteria analysis

1992 circular on the management of mega-transport infrastructure projects

1995 creation of the national public debate commission

1995 "Pasqua" law reinforcing multimodality.

1998 EC regulation concerning the allocation of concessions

1999 multimodal transport plans (*schéma de services collectifs or SSC*).

2003 the capital of *SEMCA*s opened to the private sector.

2004 PPP directive

2005 cancellation of the multimodal transport plans, privatisation of the *SEMCAs*

Appendix 2: Glossary

Agence de financement des infrastructures de transport (*AFITF*): transport infrastructures funding agency

Caisse des dépôts et consignations: State-owned deposit and consignment office

Comité interministériel d'aménagement et de compétitivité du territoire (CIACT): interministerial development and competition committee.

Commissariat général au plan: French planning office.

Commission nationale de débat public (CNDP): national public debate committee

Conseil d'Etat: Council of State

Contrat de Plan Etat-Région (CPER): State – Regional planning contract

Etablissement public régional (EPR): regional statutory authority

Fonds spécial d'investissement routier (FSIR): special roadway investment fund.

Loi d'orientation sur les transports intérieurs (LOTI): inland transport act

Organisme régional d'études et d'aménagement métropolitain (OREAM): regional metropolitan study and development body.

Plan d'occupation des sols followed by *Plan local d'urbanisme*: land use plan, local urban development plan.

Réseau ferré de France (RFF): railway infrastructure owner and operator

Schémas de service collectif (SSC): intermodal transport plans

Société centrale d'équipement du territoire (SCET): central land use development company.

Société d'économie mixte (SEM). Semi-public companies: these have a specific legal status and their capital is held by the State and local authorities. These non-profit companies carry out general interest missions and services

Sociétés d'économie mixte concessionnaires d'autoroutes (*SEMCA):* semi-public build and operate motorway concession companies.

Société nationale des chemins de fer français (SNCF): French national railways.