8

THE PEIT'S ECONOMIC AND FINANCIAL FRAMEWORK

8.1. FROM PEIT OBJECTIVES TO THE ECONOMIC FRAMEWORK

The PEIT objectives and guidelines provide the economic and financial framework to reconcile the following needs:

a) To sustain an adequate rate of investment, at all times taking account of the basic balances of the Spanish economy (including public finances) and its future competitiveness, and the relation between the requirements for investment in innovation and in fixed capital. Recent studies in this field have shown that the accumulated marginal productivity of public capital is nearly 1.5, in other words a one euro increase in public capital translates long-term into a GDP increase of almost 1.5 euros.

b) To focus efforts in those transport modes, such as rail, whose development will facilitate it possible to reconcile the aims of meeting increasing demand for mobility and sustainable development in transport, also guaranteeing high standards of quality and safety.

c) In parallel, to develop the infrastructure networks, and the appropriate regulation of transport services, including their financing requirements.

d) In financing terms, user-payment not just of the costs of infrastructures but also external costs generated by transport is seen, according to European Union indications, as the fundamental financial instrument to regulate transport demand and to ensure that the resources required are not an unsustainable burden on the public budget, especially in financing new international connections among European Union countries. It may be that a system whereby the transport user pays all associated costs will need a long transition period, but the line to be pursued should be set out in the coming years.

e) On the other hand, scenarios for the financing of infrastructures must take account of growing maintenance costs, which have been rather relegated in recent years, but which are nonetheless fundamental in a country where a high level of infrastructures is already provided. Such an enhanced assignment of resources to these items must, particularly in relation to the road network, lead to a reorganisation of the infrastructure management model. The creation of the State Highways Agency will include maintenance of the road network among its other tasks.

f) Likewise, as has been reiterated throughout this document, safety is one of the major concerns of policy on transport and its infrastructures; it is thus proposed to set up a Transport Safety and Quality Agency, where efforts will be directed toward improving safety conditions, and monitoring the service quality indicators and the state of the infrastructures.

8.2. FINANCING SOURCES

In Spain, revenues from the budgets of the various Administrations and their subsequent assignation to fund infrastructures continue according to the principle of the single fund: taxes are not specific in their application in the financing of budget items, and what is collected by the public coffers is placed in a single or common fund which the State or the Administration concerned distributes to its activities, without reference to the source or origin. This principle has shifted only very recently, with the introduction of the special hydrocarbon surcharge to help finance the healthcare system. Thus, in general, in the long run it is taxpayers who are funding infrastructures.

The growing need for resources to finance infrastructures has, for some years now, led to thinking about the possibility of using certain specific tax categories, particularly related to road use:

- A charge for infrastructure use, on automobiles and heavy vehicles.
- Soft tolls on dual carriageways where there is a free alternative route.
- Special levies on those benefiting directly from road projects.

The following are some of the sources of financing, briefly summarised, classified into two groups, budget and off-budget financing, linked to the ultimate source of the funds, i.e. whether it is the taxpayer who finally pays for the infrastructure (budget financing) or the user and/or direct beneficiary who does so (off-budget financing).

8.2.1. Budget financing

Direct investment

This is the traditional budget investment (charged to taxpayers) where the infrastructure is paid for with public funds from the public department with competence for that particular mode of transport. Such activities are paid for in work certifications, entered entirely as public expenditure –which may be a deficit, so increasing public debt– in the financial period when the work is done.

Deferred investment

Budgetary mechanisms for deferred investment include:

- Total payment: The investment is met from public funds and charged to the Budget, and differs from direct investment in that the total cost of the infrastructure is paid when delivered. The value of the work is calculated as public expenditure at the time when the Public Administration’s payment commitment arises (the principle of accrual).
- Shadow toll: Investment financed by the private sector with a Public Administration commitment to pay during a given term, through charges agreed according to public use of the infrastructure. The Administration’s periodic payments for each budget period are calculated as public accounted expenditure during that term.
- Infrastructure management service: for an existing infrastructure, a contract is concluded to provide services to users. Charged to the General State Budget, the Administration periodically pays sums as accounted public expenditure for each budget period. Moreover, the party providing the service undertakes in advance to make the appropriate investments in the infrastructure.

Indirect investment

- Capital transfers: The State charges to the Budget a capital transfer to an investor (an Autonomous Community, Municipality, Public Corporation or Holding Company). The capital transfer is accounted as public expenditure at the time when the payment commitment arises. The item which is the future target of the investment accumulates to the investor’s assets.

- Capital contributions: Capital flows from budgets to Public entities which have their own management capacity. These bodies (Public Corporations, Autonomous Bodies, State Corporations or Consortiums) are able to generate resources so that there are prospects that the contributions will be recovered. For this reason, these contributions are treated as financial investments and are not considered public expenditure. And because these entities generate their own resources and are able to go into debt, they have some self-financing capacity (off-budget financing).
- Participative Credits: Through a capital contribution, the State finances a company which invests in infrastructure. Such a contribution must be essential to the viability of a project which is unable to attract the necessary resources on the financial market. These are State financial investments which are not accounted as public expenditure.

European funds

Flows from the European Union are not granted solely to Public Administrations, but also to other public institutions or to the private sector. Aid from European Funds for transport infrastructures has been applied as follows:

- To the Public Administrations, incorporated into the General State Budget and that of the remaining Administrations.
- To public or private entrepreneurial investors, for example in certain port and airport projects.

Other budgetary financing mechanisms

Some systems for the collection of taxes or charges from users can also be treated in part as *budgetary* financing mechanisms, whether for the use of the infrastructure as in the case of levies for the road transport of goods, or using concepts similar to the Vehicle purchasing or circulation taxes, whereby the funds collected using these systems are incorporated into the general tax flow according to the single-fund principle already referred to. If however they are applied directly to sector activities, this is treated as *off-budget* financing.

8.2.2. Off-budget financing

This concept refers to a set of tools or mechanisms for providing infrastructures with financing entirely or at least in large part from the private financial market. This relates basically to systems whereby the resources are generated from charges on the infrastructure user.

Public works concessions: The State awards a concession contract to operate an infrastructure. For its part, in addition to this right, the private agent takes on an obligation to complete an investment program. Thus the remuneration comes from the collection of charges agreed with the infrastructure user who, ultimately, bears the cost of the investment.

Public Entities, Public Corporations, Autonomous Bodies, State Corporations, Consortiums and Mixed Corporations: Entities created *ad hoc* by the State or by it and private agents for a particular purpose (construction and/or operation of an infrastructure) and a given period. The State's interest in these corporations is treated as a financial investment and is not computed as public expenditure.

A public domain concession: Similar to the public work concession, whereby the State awards the right to operate or use a public asset. A private agent's investments in the public domain revert to the Administration free of liens and encumbrances when the concession ends.

Crossed financing formulas: This makes it possible to finance one public project with resources generated by the operation of another, both being part of a contract between the State and a private agent. In such cases, the resources can be structured in a charge to the user, or with a shadow toll (taxpayers) so that referral must be to the model selected in calculating the effects in terms of public expenditure.

8.2.3. Public-Private Partnerships (PPP)

Partnership between the public and private sectors is designed to reconcile the need for infrastructure investment with the requirement to maintain budgetary discipline. The European Union not long ago took the first steps to elucidate this question, and facilitate such operations.

Eurostat has recently clarified the rules on the book-keeping treatment in national accounts of contracts signed by public bodies acting in collaboration with private entities. It is a condition, if such investments are to remain off-budget and not be computed as public expenditure, that the private partner assume both the construction risk and the so-called demand risk.

8.2.4. The ultimate source of financial resources: Toward the principle of charging

With budgetary financing and subject to the single fund principle of de-coupling, it has been taxpayers who, ultimately, have to a great extent taken up the cost of infrastructures, sharing in their payment to the same degree as those using or benefiting from them.

Awareness of the existence of costs (external costs) generated by the infrastructure's users, plus the needs to finance them, have aroused interest in the development of charging policies. In the environmental sphere, such a policy is expressed most graphically by the principle of "the polluter pays".

Unlike the model in most countries, initiatives arise which evade the principle of single fund, so that part or all of the tax on fuel and vehicles goes to the financing and upgrading of infrastructures in that area, as highlighted above, usually through a special fund whether or not assigned to public Administration budgets.

8.3. TRANSPORT INFRASTRUCTURE INVESTMENT IN RECENT YEARS

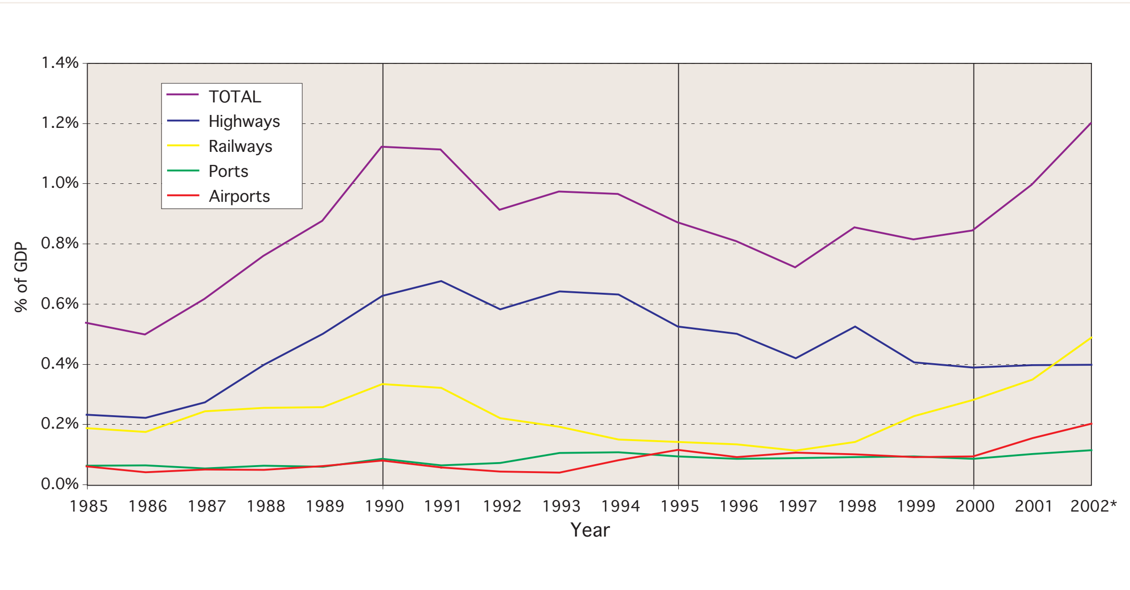
Since the second half of the eighties, major investment has taken place aimed at overcoming the country's shortfall in transport infrastructures and to position it better to face the challenges of competitiveness generated by European Union membership (Figure 35).

From 1992, infrastructure investment began to drop in GDP terms, because of the policy of containment of public spending which defined the strict budgetary criteria imposed by the European Union on Member States wishing to join the first phase of Monetary Union.

Thus the search began for possible alternatives to conventional budget financing. Recent years have seen the implementation of financing systems and formulas complementing traditional budget resources. Notable among these is Public Entity financing, particularly in rail, through the Rail Infrastructure Manager (GIF)[6] and the introduction in road and rail of the system of deferred disbursement, with total payment of the price, also known as the "German method".

In accordance with the theoretical classification of the sources of financing explained in this chapter, an analysis follows of the way the financing of future investment is distributed, depending on whether originating in Budgets (the General State Budget and European Union Funds) or Off-budget.

FIGURE 35. Trends in state investment in transport infrastructures (% of GDP). 1985-2002



8.3.1. Budgetary financing

Budgets have been and continue to be the major source of financing, although as bodies have been set up and as they have begun to attain self-financing capacity from their own revenues and indebtedness, the burden on the Budget has dropped.

At present, virtually just road and rail resort to this source of financing; the former basically through the Directorate-General of Roads, along with private participation through concessions, and the latter through the Directorate-General of Rail and, partially, through the Public Corporations ADIF, *RENFE Operadora* and FEVE, according to their self-financing

[6] Set up in 1997, it has now disappeared in that form, and has been integrated into Administrador de Infraestructura Ferroviaria (ADIF) which began operations on 1 January 2005.

capacity, including their debt potential. There has however been private involvement in this mode in recent years with the concession of the Figueras-Perpignan sector.

In rail, GIF has been receiving capital input from the State through the Budget, allowing for financing charged to indebtedness without affecting the public deficit in accounting terms. Similarly, the public entities *RENFE Operadora* and FEVE are not self-sufficient, and receive funds from the State through the Budget in the form of contributions or capital transfers.

Thus for 2000-2003, the capital input to GIF accounted for 30% of rail investment funding, 20% in 2004 and 28% in 2005 according to General State Budget figures (PGE).

A good part of the financing in the last four years (some 20% of total investment) comes from European funds (the European Regional Development Fund -FEDER-, Cohesion Funds, Aid to the Transeuropean Transport Networks, the European Economic Space and specific European Commission initiatives); the most important of these have been the Cohesion and FEDER Funds.

Such Funds are assigned to General State Administration projects (the Ministries of the Environment, of Development, and others) as well as to those of other Public Administrations (autonomous and local) and of bodies and enterprises linked to any of these Administrations.

In the 2000-2006 funding schedule Spain is assigned between 61 and 63.5% of the total Cohesion Funds amounting to 18 billion euros (at 1999 prices). This represents approximately 11.16 billion euros, roughly half of which go to transport infrastructures. Under the FEDER in the same period, this country will receive about 30 billion euros, about a third of which will be used for transport infrastructure projects; Resources granted to the Ministry of Public Works and Transport amount to 6.8 Bn €.

8.3.2. Off-budget financing

The capacity for indebtedness of Public Enterprises and Entities attached to the Ministry is a key when it comes to allowing infrastructure financing. Of these institutions, it is worth distinguishing those which are completely self-sufficient from those which, in the meantime, are not.

On the one hand, AENA and *Puertos del Estado*, set up in 1992 and 1993 respectively, finance most of their investments with revenues from their activity collected as charges from their users, although they do maintain a minority channel of financing from European funds. However, the lively investment rate has been obtained through a high level of indebtedness, principally for airports, where in 2003 AENA's indebtedness (short- and long-term) reached 99% of its equity capital.

RENFE Operadora and FEVE receive funds from the State in the form of capital transfers specified in the Budget, in addition to any European funds that may come in. In this sense, they have a channel of budgetary financing. For its part GIF has been receiving European funds and capital input from the State. Revenues from a royalty for use of rail infrastructures will allow ADIF in the future to use the financial market to implement some of its investment (off-budget financing).

Public Enterprises and Entities can turn to indebtedness to the extent that their financial situation permits. Notable here is AENA which has used this procedure to fund a substantial part of its investments, around 60% in recent years. The debt potential of these institutions within the PEIT horizon may be conditioned by their current indebtedness levels.

Table 4 shows the ratio of indebtedness and the debt/investment ratio of various public entities for each year 2000-2003.

TABLE 4. *Public entities' percentage of indebtedness 2000-2003*

PUBLIC ENTITY INDEBTEDNESS	2000	2001	2002	2003
Debt/equity ratio				
AENA	19	32	56	99
Puertos del Estado	9	11	12	12
GIF	6	10	12	*14*
RENFE	294	298	291	*313*
FEVE	95	133	178	194
Debt/investment ratio				
AENA	14	44	26	65
Puertos del Estado	11	14	11	21
GIF	1	0	0	*9*
RENFE	100	202	128	*138*
FEVE	0	104	47	53

Data in italics refer to 2004 State Budget closure estimates
Source: Closed data from the Balance Sheet and Financing Table of each entity in the General State Budget (2000-2005)

Finally, part of the financing comes from private initiative. The importance of this source of finance has grown during the last decade, to 15.2% in the 2000-2003 period. This growth has been due to the high level of port concessions, virtually equal since 2000 to the rate of investment of the public institution *Puertos del Estado*, to the higher use since 2001 of this financing source for roads, and the launch of the first rail sector concession, in 2004 for the Figueras-Perpignan sector.

8.4. CONDITIONING FACTORS FOR INVESTING IN AND FINANCING OF PEIT INFRASTRUCTURES

8.4.1. Budgetary discipline in the framework of the Stability and Growth Pact

The fundamental aim of the Stability and Growth Pact is to ensure the budgetary discipline of the countries which go into the third phase of Economic and Monetary Union, to uphold the commitment to cut the public deficit pursuant to the Maastricht convergence criteria. The main feature or conditioning factor lies in countries' undertaking short-term to keep the public deficit at less than 3% of GDP and, medium- and long-term, to hold public deficit close to equilibrium or in surplus.

The fact that France and Germany, the two countries of greatest economic and political weight in the Union have for several years breached that Pact, has meant that its validity has had to be reconsidered, leading to its reform or "evolution", with the modification not of the Pact itself but of the mechanisms for its application.

Within this framework, the Stability and Growth Pact and the Budget Stability Act may undergo changes within the Plan's horizon, and that may at some stage affect planned investment levels and the weight of possible sources for their financing.

8.4.2. European Funds

European Funds which have until now borne a substantial part of investment will undergo changes in the new European framework with the Union enlarged to 25 members.

While sums received by the EU-15 Member States from the Community budget are not affected in 2000-2006 by new States' membership, the amount and spread of Funds for the next period, 2007-2013, is at the negotiation stage, and the final results are hard to predict accurately. In any event, with European Union enlargement, Spain both nationally and regionally enhances its positive position relative to the Community mean in terms of per capita product.

It is in principle anticipated that a possible cut in European funds can be offset by a corresponding increase in the assignment of resources in General State Budgets, with the requisite that the existing budgetary stability commitment is fulfilled, which may ultimately demand an increase in off-budget financing sources if investment levels are to be maintained.

8.4.3. Legislative change

The new rail model

The enactment of the Rail Sector Act, on 1 January 2005, has altered the present situation in this sector, implying on the one hand that the State takes on the maintenance of the conventional rail network, which it owns, and which had been in the hands of RENFE, funded through State capital transfers. On the other hand, the Public Corporations *RENFE Operadora* and ADIF have been set up, to take over among other things the functions of the former GIF.

In this new structure, the Ministry of Public Works and Transport and ADIF undertake infrastructure investment, each in its field, while most of *RENFE Operadora*'s investment is in rolling stock and its own installations.

The greater volume of rail infrastructure among State Assets, and this Plan's conservation and safety guidelines mean a change in the budget items allocated for the maintenance of that infrastructure, which is taken up directly by the Ministry of Public Works and Transport in RENFE's place, the effect of this already being felt in the 2005 Budget.

In the framework of this change of model, in 2004 the State assumed most of RENFE's debt (5.429 billion €) which, by December 2003, amounted to 7.255 billion euros.

Public-private participation in Infrastructures

The Models for Public-Private Financing of Infrastructures, while not absolutely novel, have become particularly relevant in recent decades, both inside and outside the Community, generally matched with the common denominator of budget limitations and the growing need for more and better infrastructures.

The same has happened in public-private partnership in Spain, with a substantial increase in the last decade in the amount of infrastructure built with financial input from private resources. This formula has been most applied in Spain in the construction of dual carriageways, motorways and ports.

The preferred formula so far has been the *concession regime*, as part of the *purely contractual* formulas referred to in the Green Book on Public Private Collaboration, and Community Law in the field of public contracting and concessions (COM (2004) 327).

The feature of this model is the strong link between the private partner and the end user: the private party rather than the public sector provides a service to the population, but under the public sector's control. Likewise, the contractor's remuneration has basically taken the following form:

- paid by the service users (tolls), and levies
- subsidies granted by the public authorities.

There is a legal framework in Spain, Act No. 13/2003 of 23 May, regulating contracts for the concession of public works, which is broader than the one described in that it refers to the following:

- Infrastructures in general: roads, rail, ports and airports.
- Tolls paid directly by users.
- A shadow toll paid by the Administration (art. 246.4 of the Public Administration Contracts Act). The Administration can pay for the project according to its use, and in the manner provided for in the particular administrative specifications.
- Soft tolls, a mixture of direct tolls and subsidies.
- Other contributions from the Administration (Article 224.3 of the Public Administration Contracts Act) which, while generically limited to the existence of "reasons of economic or social benefit, or the presence of special demands arising from the public purpose or general interest of the project covered by the concession", may take the form of: joint financing of the project with monetary or non-monetary contributions, subsidies or loans with or without interest, or participative loans, provided that the principle is always applied of the concession holder's assumption of the risk.
- The operation of commercial areas (Article 246.5 of the Act) as an activity complementary to public projects, subject to the principle of unified management and control by the Public Administration granting the concession, and run together with the project by the concession-holder, directly or through third parties in the terms established in the specifications.

Investment needs arising to cover programs currently in progress plus those arising in the future from the application of the PEIT mean that adequate use must be made of the potential of these models for public-private partnership.

8.4.4. The Role of the Public Entities

Puertos del Estado and AENA continue to invest in infrastructures in the same way as they have been doing until now, financing them with their own revenues from the collection of charges for the use of their infrastructures and, where necessary, resorting to debt.

AENA's current accounting situation and its high indebtedness ratios, the result of heavy spending on the enlargement of Madrid-Barajas and Barcelona airports, will force it to cut its high investment rate in coming years, and which will be able to change direction only in the second half of the effective term of the PEIT. In any event, the aim of financial self-sufficiency also continues to be irrevocable for AENA.

On the other hand, it is planned for ADIF to implement a significant level of rail investment, minimising the impact on the General State Budget with sources of financing and formulas for public-private participation which prove adequate.

RENFE Operadora investments from 2005 will be limited to rolling stock and the company's own installations, while FEVE investments, which are comparatively lower, will continue at a rate similar to the present one, with the inclusion of the criteria for action previously indicated in this Plan.

8.5. AN ECONOMIC ESTIMATE OF PEIT ACTIONS

Table 5 sets out the estimated investment volume for transport infrastructure projects in the various modes contained in the Strategic Plan, and is the result of individualised assessment by the General Directorates, Entities and Enterprises responsible for each planned project, an aggregate valuation whose financing viability has been compared in overall terms, taking account of its relation with the Spanish economy's accumulated GDP during the term of the PEIT. The planned volume of investment is clearly much more accurate in the short-term, with the figures based on studies and projects. Moving forward in the Plan's horizon, the lack of definition is greater, in terms of both the action to be taken and of its scope (which will depend among other factors on the outcome of planning and prior studies carried out in due course). Thus levels of investment will be specified later, in the related Sector Plans.

This assessment includes non-infrastructure projects which are basic to the PEIT proposals for enhanced transport services, and which must therefore be taken into account in the framework of the Plan.

8.6. THE PEIT FINANCING STRATEGY

In the light of the considerations and investments arising from the actions set out in the previous paragraphs, the following is a set of strategies for financing the PEIT.

- An attempt will be made to ensure that investment remains stable, with improved investment possibilities which prove to be compatible with budget stability, using the potential for increased public revenues arising from the greater productivity of economic factors.
- Budget financing will continue to be the main source for financing transport infrastructures, of the order of 60% of investment in the Plan's horizon (Table 6). These

TABLE 5. *An economic estimate of PEIT projects, 2005-2020*

ACTION	AMOUNT (millons of euros)	% OF TOTAL
Rail transport, except urban projects	**108,760**	**43.70**
High-performance	83,450	33.53
Maintenance and upgrading of the conventional network	18,000	7.23
Elimination and upgrading of level crossings	3,560	1.43
Rolling stock	3,750	1.51
Road transport, except urban projects	**62,785**	**25.23**
High-capacity routes	32,105	12.90
Upgrading and improvements	7,500	3.01
Maintenance and operation	22,580	9.07
Road transport services	600	0.24
Air transport	**15,700**	**6.31**
Safety and Manoeuvring Area	2,150	0.86
Terminals	5,760	2.31
Security and Air Navigation	3,224	1.30
Intermodality, Environment, etc.	3,387	1.36
Maintenance	1,179	0.47
Sea transport and ports	**23,460**	**9.43**
Port infrastructures and installations	22,480	9.03
Sea rescue, safety and the environment	980	0.39
Intermodal goods and passenger transport (1)	**3,620**	**1.45**
Backup to the network of nodes and intermodal platforms	1,200	0.48
Land access to ports	1,220	0.49
Program to promote goods intermodality	400	0.16
Program to promote passenger intermodality	800	0.32
Urban and metropolitan transport	**32,527**	**13.07**
Roads	4,077	1.64
Urban integration of rail	2,400	0.96
Rail commuter services, including rolling stock	10,050	4.04
Backup to public transport and interchanges (2)	16,000	6.43
Research, development and innovation	**2,040**	**0.82**
Transport R&D+i program	1,610	0.65
Pilot actions for innovation in transport	230	0.09
Program to foment innovation in transport	200	0.08
TOTAL PLANNED PEIT ACTIONS	**248.892**	**100,00**

Notes:
(1) Support for the network of passenger interchanges, in urban actions.
(2) Includes Ministry of Finance subsidies for infrastructures and services.

resources will be channelled through both the Ministry of Public Works and Transport Directorates and the public entity *Administrador de Infraestructura Ferroviaria* (ADIF).

- Proportional use will be made of direct and deferred investment systems, to meet the deadlines for implementing the Plan's actions, holding to the commitments of budget stability and reduced public-account deficit.
- In the context of rail sector liberalisation, the introduction of the levy for the use of rail infrastructure will mean the self-financing of part of the investments assigned to ADIF.

- The Public Corporations AENA and *Puertos del Estado* will be financially self-sufficient, and will hardly require budget resources for investment in these transport modes.
- It is planned to increase private sector participation with the use of Public-Private Partnership formulas. An increase is foreseen in private financing, to close to 20% of total investment. The system most used will be the concession of public projects in ports (with an estimated approximate volume of 50% of total planned investment), in roads according to the criteria established in Section 5.2 (approximately 25% of investments in new infrastructures) and, to a lesser extent, in rail. This will be done by fomenting collaboration between the public and private sectors to optimise the viability of projects using this management pattern, in line with European Union recommendations.
- The active participation of the Autonomous Communities and Local Institutions will be drawn on in financing coordinated action.

TABLE 6. *Sources of PEIT investment financing*

TYPE OF INVESTMENT	SOURCE OF FINANCING		% OF TOTAL INVESTMENT
	Budget	Off-Budget	
Roads	75.0%	25.0%	26.81%
Rail	81.4%	18.6%	48.00%
Airports	2.2%	97.8%	6.50%
Ports	9.7%	90.3%	9.72%
Others	27.7%	72.3%	8.97%
TOTAL	**59.5%**	**40.5%**	**100.0%**