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**PUBLIC-PRIVATE PARTNERSHIPS
IN THE PORT DOMAIN IN
DEVELOPING COUNTRIES:
RISK ANALYSIS, SHARING AND MANAGEMENT**

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Introduction

Extension of the activities of the ISTED transport division to the port sector, at the instigation of its Chairman, Jean Smaghe, led to the formation of an ad hoc think tank, the port group, in January 1999. The port group has the task of coordinating and monitoring new activities of the transport division. Chaired by Michel Henry, head of the INSTED transport division and Chairman and CEO of BCEOM, and coordinated by Michel Meynet, Assistant Director of the ports and coastal maritime transport division, the port group members include players from the French institutional authorities and ministries, port authorities and donors, and the engineering and other private companies involved in this sector.

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This report constitutes the first move in ISTED port-related activities, and has a dual objective: the first is to serve as a guide for the franchisor (in connection with the preparation of franchise files), and secondly to assist in the rapid analysis of the risks of a project for a franchisee candidate, within the framework of a joint approach in terms of risk analysis and sharing.

This report was prepared by Hervé Martel, during his time as a trainee at ISTED while he was preparing his professional thesis for the ENPC (University College of Bridges and Highways). This work was coordinated by a select working group¹.

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SUMMARY

The introduction of private management in the port domain has represented a strong trend in the developing countries over the last few years. This principally concerns the handling and storage of freight transiting via the port, and funding and operation of the infrastructures and equipment required for these activities. This trend has involved the setting up of complex, multi-dimensional partnerships between the frequently public port authorities, and the terminal operators.

This report makes an analytical approach to the risks with which the port operator can be confronted, with the aim of identifying the principles for equitable sharing of each risk analysed between the parties involved.

*This analysis demonstrates that the notion of port terminal operator covers a range of different situations, depending on the one hand on the type of traffic handled, and the degree of competition surrounding the activity on the other. This diversity substantially conditions the degree of **regulation** of the operator's activity required on the part of the port authority. This regulation has major implications for the operator, both in terms of the level of risk carried and capacity for risk management. This being so, the principles adopted for sharing the risk between the port authority and the terminal operator must take this essential aspect into account.*

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Reducing the situation to its simplest terms, the terminal operator carries two fundamental risks:

- *a **cost risk**, or a risk of exceeding initial cost estimates for the construction or operation of the project, and*
- *a **revenue risk**, or commercial risk, depending on traffic and charge rates practised.*

*There is nothing extraordinary about this situation. Any enterprise, operating in any field of activity, has to carry these risks. However, the terminal operator conducts its activity in the public domain, and can have the support of public investment, supply a public service, and enjoy a de facto monopoly. Over and above the legislative and statutory framework, **regulation** of its activity to a greater or lesser degree is consequently necessary. This regulation can cover a number of technical aspects (definition of the project, performance standards, standards relating to maintenance of the facilities, etc.), economic aspects (public service obligations, restriction of the field of activity) and financial aspects (control of charge rates, fees or subsidies).*

What is the impact of this regulation on the cost and revenue risks, and in what way does it condition the principles for sharing these risks?

Cost risk

The constraints induced by technical regulation have an impact on the initial estimation of project cost (investment and operation). On the other hand, **provided the rules of the game are established at the outset**, and provided they are clear, stable and complied with, **they do not affect the excess cost risk** which then only depends (apart from cases of force majeure) on the ability of the operator to implement its project. **It is then perfectly comprehensible that the operator should carry the excess cost risk in full.**

Where the excess cost stems from changes in the regulation system or legal framework established prior to signature of the contract, the principles of risk sharing must then depend on the very nature of the activity. Two situations are possible in this case:

- **the service provided by the operator is not regarded as a public service.** The degree of regulation is then low, and has no reason to change. The risk of changes in the legal framework is considered by the operator as a country risk, such as exists for any industrial company. It is reflected by an adjustment of the initially anticipated level of return, and can be subsequently passed on to customers through increases in charges. The operator carries this risk or not;
- **the service provided by the operator is a public service.** The contract concluded between the port authority and the operator is then similar to a public service franchise agreement. Integration of this risk by the operator, should the latter agree so to do, would then increase the cost of the service provided, and would have an adverse impact on the user. Furthermore, regulation imposed on the operator as regards charge rates could make it impossible for the operator to pass on increases to the user at a later date. It therefore appears equitable that this risk should be shared. The principles of risk sharing should be clearly defined on signature of the franchise agreement, and can cover guarantees of stability, or appropriate compensation (lifting of charge rate constraints, indemnities or other considerations, etc.).

Another risk for the operator is present in all cases. This is the **political risk** of non-compliance with the terms of the contract by the public authority, or the imposition of discriminatory measures with respect to the project. This risk can be reduced by various methods, or hedged. The assessment of this risk nevertheless represents a major factor in the decision of the operator to proceed with the project or not.

Revenue risk

In contrast to the cost risk, regulation has a direct impact on the extent of the revenue risk for the operator, and on the latter's ability to manage this risk. The revenue risk is in fact the principal risk involved in a port project, due to the uncertainty inherent in traffic level predictions.

As a general rule, it is desirable to assign the traffic risk to the operator. This is possible and justified in a case where the activity is not a public service. Sharing of profits between the port authority and operator can then be envisaged under certain circumstances. This is also possible in the majority of cases where the activity is subject to genuine competition.

On the other hand, **sharing of this risk is frequently necessary in the case of a public service monopoly.** The substantial degree of regulation required in this case imposes such constraints on the operator that the latter has no means of managing the commercial risk. The port authority can then, as appropriate, either provide the franchisee with a guarantee of non-competition, or ensure a minimum level of activity by means of a variable

subsidy paid, where actual traffic is below the target level, thus compensating the loss of earnings of the operator partially or in full.

While the operator is then no longer fully responsible for its revenue level, it must continue to bear responsibility for its costs. The regulation system must not therefore go back on the principle of assigning the project risk to the operator. This is the case where the contract provides for a guaranteed minimum level of return, or adjustment of charge rates according to costs.

The principles of risk sharing between the public port authority and the operator finally depend, to a large extent, on the degree of public service accorded (or not) to the activity concerned by the national authority and resultant regulation. The initial situation is frequently that of a stagnant public sector, incapable of clearly identifying, among the various tasks in which it is engaged, those which relate genuinely to public service, and which, when delegated or franchised to an operator, demand strict regulation. While a form of partnership always exists between the port authority and the operator, the port terminal operator activity does not always embody the characteristics of a public service, and does not therefore require the same level of regulation in all cases. Note however that **any form of regulation induces excess costs**, namely the cost of the additional risk imposed on the operator, reflected by a requirement for a higher rate of return, and the cost of resultant considerations or simply the cost of supervision. **The objective should therefore be to regulate only in those cases where this is clearly essential.**

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The port terminal operator has numerous partners in all cases, the most important of which include the port authority of itself, all of which participate, alongside the operator, in supplying the latter's customers with the global service which they expect, namely a comprehensive port service or even an end-to-end transport function. Consequently the port authority is not only a regulator but also the primary partner of the terminal operator. From this point of view, this type of "horizontal" partnership does not differ from that which can exist between two companies. The partnership must therefore involve reciprocal obligations, with the port authority guaranteeing not only the services which it produces directly, but also those which it may be led to delegate to other entities operating within the port complex.

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The involvement of private companies in port management leads to the introduction of a complex, multi-dimensional partnership with the port authority. This requires the establishment of a clearly defined, stable contractual framework, which enables the operator to quantify and carry the risks with which it will be confronted, and which is based on legal procedures and techniques developed and practised in the United Kingdom and North America. However, under no circumstances does the contract provide for all eventualities, and the validity of any indexing system is limited in time. It is therefore necessary to include clauses which define the conditions and procedures for periodic negotiation for the purpose of making necessary adjustments. Apart from this renegotiation process, the option of issuing new calls for tender at periodic intervals during the lifetime of the project can be of interest, despite practical problems of implementation. In certain cases, separation of management procedures for infrastructures and equipment on the one hand, and operation on the other, can prove desirable.

1. INTRODUCTION

We are witnessing a vast movement towards the privatisation or dedicated management of public services throughout the world, in particular in the developing countries, and at the instigation of the major, institutional donors in particular. This trend is specially marked in the port sector, where recourse to calls for tender, aimed at introducing private management of ports previously under the control the State or a public entity, has increased substantially in the last few years.

This has consequently opened a market to companies from the industrialised countries, concerning "port franchisee" or more generally, port operator assignments, in which the main French companies have so far played a limited part. Projects of this type, which are frequently set up on a "project funding" basis, lead to major risk carrying by the various parties involved (private sector, investors and lenders), in the developing countries more than their industrialised counterparts.

This trend also involves the need for the public authorities to learn a new business, that of "franchisor" or regulating authority. Indeed, far from casting any doubt on the legitimacy of public intervention in the port domain, these changes are aimed at concentrating the public authority on its essential tasks of economic, social, spatial and temporal regulation, in order to achieve the best compromise between the interests and demands of the various economic units and the interests of the general public at large.

Numerous views have been expressed in the specialist press concerning the most appropriate forms of port management. These views are generally based on an institutional approach, normally making a distinction between the following:

- **"port authority"** functions, the public dimension of which is usually emphasised (even if certain examples contradict this approach, in Great Britain and New Zealand in particular), and which include the implementation of semi-governmental duties (police, security, protection of the environment, etc.), regulating tasks, and to a greater or lesser degree, land ownership (maritime and land domain, public or private) and infrastructural functions. The term "landlord port" is used where the functions incumbent on the port authority are limited to those mentioned above;
- **"industrial and commercial"** functions, the most important of which are the handling and storage of goods transiting via the port. Where the port authority provides the facilities required for these industrial and commercial functions, in addition to those mentioned above, the term "tool port" is used. Where the port authority executes these functions itself, it is described as an "operating port".

Nevertheless, it is frequently advisable to delegate these industrial and commercial functions to private companies. This approach makes it possible:

- to attract private funding, and thus minimise the impact of essential port development on public budgets, and thus concentrate public investment on those sectors where it continues to be essential;
- to enlist the dynamism of the company in favour of general public interest, taking advantage of the flexibility and efficiency of the private sector insofar as management and innovation are concerned.

For the purpose of this report, we have taken the most conventional example of a "landlord port" with a public port authority, for which it has been decided to place a terminal in the hands of a private operator, involving, to a greater or lesser degree of integration, both

design, construction and operating functions for the infrastructures and/or superstructures necessary for the operator's activity.

In this context, the partnership established between the port authority and operator can take a number of different forms. These are difficult to describe accurately by means of a simple topology as the differences between one contract and another are substantial. Apart from the usual distinctions in terms of the actual content of the delegated services, ownership of the facilities or the point in time at which the operator intervenes during the lifetime of the project (operation and maintenance contracts, lease contracts, franchise, BOT or BOO agreement, etc.), we shall pay particular attention to the problem of risk sharing between the port authority and the operator. Irrespective of the actual description adopted, any public-private partnership is set up within the framework of an *ad hoc* contract, the content of which must be adapted according to the characteristics of the particular project, and reflect the commitments of the parties, naturally in terms of content, but also, and above all, in terms of risk sharing.

One of the essential conditions for the success of such projects is a capacity to identify risks, in order to determine optimum risk sharing between the various participants, according both to their respective capacity for risk management and their desire to carry these risks. We shall therefore address the question of risk sharing analysis in greater depth, by means of a pragmatic examination of what this signifies from the point of view of the terminal operator, and with the dual objective of proposing:

- firstly, a set of equitable principles, which are therefore mutually acceptable by the parties, for risk allocation and sharing in various situations, thus constituting a form of "code of good practice". On this basis, the ultimate objective is to move away from an attitude of mutual distrust and emphasise the notion of partnership;
- an assessment grid, which can be used to form a quick assessment of the main risks of a project, and analyse the ability of candidate operator to manage these risks, thus creating a tool for assisting in the decision to respond to an international call for tenders (see checklist in appendix).

The terms "franchisor" and "franchisee" are sometimes used – incorrectly – to describe the port authority and terminal operator, even where the contract concluded between the parties is not a genuine franchise agreement under the terms of French law.

2. CHARACTERISTICS OF THE PORT OPERATOR

As pointed out in the introduction, in the majority of cases private sector participation in port operations comprises industrial and commercial activities, the first and foremost of which are the handling and storage of merchandise passing through the port. **The implementation of these lines of port business involves both basic aspects, common to all companies, and also aspects which are highly specific to the port sector,** leading not so much to excessive complexity of the business or projects, but rather to a multiplicity of the players concerned, the "public service" dimension which the authorities involved frequently attach to the activity, and the eventual capitalistic character of this activity which frequently assumes long-term commitment.

Our intention is to characterise the port operator through a description of these basic and specific aspects, and to establish an initial classification of the risk which the operator can encounter. This approach deliberately side-steps the very definition of the "port" concept, in order to demonstrate the complexity of the environment of the port operator, the activity of which is situated at the same time in a port community, a transport chain and a national or international environment, while nevertheless preserving the principal characteristics of an ordinary company.

2.1. BASIC ASPECTS

2.1.1. National environment

In common with any other private company, a port operator is subject to the global environment of the country in which it is conducting its activity. This national environment possess both legal, economic, social and political dimensions.

The legal and statutory environment incorporates the applicable common law rules and regulations, whether stemming from national legislation or international agreements of which the country is a signatory. These include company law, rules of fair competition, tax law, exchange control, regulations governing transfer prices and tax withholding on the payment of dividends, labour laws, laws relating to the protection of the environment, police, franchise and property ownership regulations, customs restrictions, etc.

This environment also embodies specific measures applicable to ports, such as those concerning their legal status, rules regarding police and security aspects, and even special measures relating to property ownership, labour laws (as specific to dockers), taxation, etc.

The economic environment is defined by the relevant essential macro-economic data (growth, inflation, exchange laws, debts, etc.), as also wage and salary levels, the level of training and skill of available local human resources, price levels, etc.

In its broadest sense, **the political and social environment** is based on the prevailing geopolitical environment, the stability of the existing local or regional government, the possible risk of armed conflict, labour climate, etc.

The port operator is thus subject to this national environment, which determines a more or less stable context which must be analysed in detail, as a number of risks, habitually grouped under the designation "**country risks**" are generated by this context.

2.1.2. Industrial and commercial dimension

A port operator is in fact a service provider, although with a substantial industrial and commercial dimension. This is one of the reasons behind the introduction of private management in ports. It is generally admitted that a private company has a degree of flexibility and an ability to react quickly which enable it to achieve greater efficiency than a public entity.

Firstly, the **industrial** dimension. In the course of its activity, the operator must finance, install, operate and maintain the necessary infrastructures and equipment. In common with any other company, the operator is consequently obliged to apply its own know-how and resources, while also implementing its contractual relations with various equipment suppliers or service providers (construction contracts, purchase of tooling, purchase of water and electricity, etc.), employing sub-contractors for specific operations (maintenance, security, or even operation proper), and with the banking sector for the financial package on which the operation is based. This industrial dimension of its activity means that the operator must carry "**project risks**".

Secondly, the **commercial** dimension. The port operator is in direct contact with its customers, whether ship-owners or shippers, which are obviously sensitive to the quality of service supplied and the rates charged. This sensitivity naturally depends on the degree of captivity of the customer, demonstrating another important commercial dimension of port activities, namely the existence or absence of competition. This relationship with customers, on which the level of activity is largely dependent, generates a "**commercial risk**" or "**traffic risk**" for the operator.

2.2. SPECIFIC ASPECTS PARTICULAR TO THE PORT SECTOR

2.2.1 "Vertical" partnership with the franchisor

Apart from the legal environment as described above (common law and sector-related rules), the port authority imposes a set of measures on the operator, in contractual form, for the purpose of defining, directing, regulating or simply authorising the latter's activity over a given period. This form of relationship between the port authority and the operator is described here as a "vertical partnership".

The existence of this vertical partnership reflects the relatively pronounced "delegated public service management" nature which the activity of the port operator can assume. This intervention by the public sector is justified for a number of reasons:

- i) the port activity involves **public issues**. These include issues relating to national development on the one hand, through the structuring effects which port activities have on the industrial fabric, or their impact on urban development, and issues relating to the handling of external trade on the other;
- ii) the tasks undertaken by the operator can possess the characteristics of a **public service**. It is then necessary to impose the obligations inherent in the notion of public service (including equality and continuity in particular) on the operator;
- iii) the nature of the activity can lead to the development of **de facto monopoly** situations, with substantial entry barriers (rarity of sites, need for public investment, insufficient level of activity for more than one operator, etc.). This type of situation makes the intervention of a regulating authority necessary, in order to protect users from abusive advantage being taken of a dominant position. However, this should not cast doubt on the principle

of legal security, and on the contrary, should avoid any malpractice whereby the port operator could be subjected to arbitrary decisions;

- iv) the activity of the port operator can require **public investment** in addition to private investment. The investment necessary for the operator's activity can produce a return on invested capital which is satisfactory for the municipality, but not for the investor. This is the case where the project embodies positive external factors, where it is not possible to obtain a direct contribution from all the indirect beneficiaries of these external effects. Essential recourse to public funds also stems from the lifetime of port facilities, which makes it necessary to obtain a return from the latter over periods which substantially exceed the lifetime of loans available on the financial markets;
- v) an additional factor is that the shoreline forms part of the **public domain** in many countries. This means that, at the least, express authorisation (unilateral or contractual) is required to exercise an activity in this part of the public domain.

It is the integration of these constraints by the public authority which makes a vertical partnership essential, the degree of regulation varying widely according to analysis of the project. This has substantial consequences for the port operator as regards analysis of the risk incurred, and its ability to manage this risk:

- firstly, this regulation can lead the franchisor to impose constraints as to the definition of the operator's industrial project, resulting in cost increases;
- secondly, regulation imposed by the franchisor limits the ability of the operator to manage the commercial risk. This frequently leads to sharing of this risk;
- furthermore, the very principle of vertical partnership leads naturally to the notion of a "**contractual risk**" for the operator, as the partnership with the port authority is based on a contractual relationship.

2.2.2. "Horizontal" partnership with numerous players

Another noteworthy specific characteristic of the port operator's activity is that the **service which it provides to its customer**, whether ship-owner or shipper, **inevitably forms part of a more global service** of which the operator only provides part. However, it is frequently the analysis of the global service which is relevant for the customer. The operator is thus in a *de facto* partnership situation with the service providers handling the other components of this global service. This is referred to as a "horizontal partnership" situation. This type of partnership exists with the port authority, as with the other players of widely differing types involved. It can also be an imposed partnership, not formalised by direct contractual links between the parties concerned.

The extent of this partnership, as also identification of the partners, depends on the legal position of the customer and its activity. We will attempt to put forward two approaches to this "global service" expected by the customer, in schematic and necessarily incomplete form:

- **For a ship-owner**, the global service expected covers all operations required for the ship's call. The services provided by the terminal operator (handling and storage) represent the most sensitive and costly part of the call, although an efficient call service also requires suitable maritime access, operational buoying, properly maintained basins protected from the swell, efficient ship services (pilot, tugs, in-shore pilot), and modern EDI and VTS traffic control systems, etc. Above and beyond the terminal operator service, this means that the ship-owner is sensitive to all component factors of the competitiveness of the port, including time schedules, charges and the level and reliability of the services provided in the port zone. This identifies a first level of horizontal partnership within the port community, where the partners can be other public or private companies, and the port authority itself. Procedures for implementation of this partnership are formalised, on a bilateral basis, by contracts concluded between the port authority and the companies operating in the port zone, or multilaterally via police and operating rules and regulations.
- **For a shipper**, the relevant service is the end-to-end transport service, using a transport chain in which transit via the port is merely one link, or more precisely a node. This means that the shipper is sensitive to the existence and competitiveness of the land transport modes serving the port, as also the coordination of these services with the port services. This depends on a multitude of factors – controlled by numerous players – including the quality of road, rail or inland waterway transport infrastructures, services provided by the operators for the different modes of transport, various regulatory measures (flag restriction, charges, etc.) and so on. This leads to a second level of horizontal partnership, where the partners are of varying types and frequently remote from port activities proper. This situation leads a number of companies to seek the integration of port operator and land carrier business, in order to achieve more efficient control of the complete transport chain.

While it is perhaps wrong to speak of partnership in this case, it is clear that the ways in which the State departments implement their control responsibilities in a port (customs, veterinary and phytosanitary departments, frontier police, etc.) represent another aspect taken into account by customers when assessing the competitiveness of a particular port. In this context, the European Union recognises that the conditions under which customs control is exercised can distort the competitive situation ("Douane 2000" programme). A number of countries, including African countries in particular, have taken this danger into account and have got together to harmonise their customs rules and practices (Central African States Customs Union) [24].

It is therefore apparent that the port operator does not control all components of the global service expected by its customer. The customer's decision to use the operator's services depends on factors external to the operator, these factors being controlled by numerous players with which the operator is not necessarily in direct contact. This situation creates a commercial risk for, and complicates the management task of the port operator.

2.2.3. Long-term commitment

The port operator is a business corporation, and consequently, logically, seeks to maximise profit, although its primary objective is to achieve a minimum acceptable level of return for the operation, in order to be able to remunerate its lenders and sponsors. However, the investments which the operator must make can involve specific characteristics, in particular in the case where the operator has to fund and build infrastructures:

- substantial investments with very extended lifetimes, which can only be depreciated and yield a proper return over periods frequently exceeding 20 years;
- investments which are "non-recoverable", either because they cannot be physically dismantled (coffer dam, etc.), or because the franchisee is not the owner (in France, repossessable assets incorporated in a franchise become the property of the franchisor immediately after their construction or installation).

The justifiable demand of the operator for a proper return on its investment necessarily relates to an extended period of time, and the above-mentioned characteristics generally mean that an early withdraw would have substantial consequences. This long-term commitment by the operator is also a source of major concern to the franchisor in many cases. It is therefore appropriate and logical, in the interests of both parties, to seek a secure legal position by the following means:

- satisfactory adequation of the contract period (franchise, authorisation, etc.) with the characteristics of the project;
- attribution of genuine rights of ownership to the operator for facilities installed in the public domain;
- equitable cancellation procedures (causes and indemnification) clearly defined in the contract; and
- in general terms, rules of the game which both reduce uncertainty and ensure proper visibility.

2.2.4. Conclusion

The port operator is never totally independent in the exercise of its activity, and is invariably involved in a multi-faceted partnership with the port authority [17]. This means that the primary issue involved in implementation of the project is the establishment of an equitable form for this partnership, so that the objectives of both parties are respected and reflected satisfactorily in contractual terms. The success of the operation demands mutual comprehension of the mandatory issues for each partner. This success also requires clear definition of the project environment, and in particular, of a clearly identified and formulated set of constraints, ensuring compliance with public issues while establishing a stable framework in which the franchisee will be able to carry and manage the risks involved.

3. RISK MANAGEMENT

3.1. PRINCIPLES

The method of risk management adopted by the terminal operator naturally involves the following phases, based on the analytical logic adopted by banks for funding projects with limited or no recourse [1]:

- i) risk identification;
- ii) sharing of the risk with the port authority, and the State or another public authority where this is justified or possible;
- iii) sharing of risks with partners (sponsors, customers, suppliers, sub-contractors, etc.);
- iv) reduction of exposure to residual risk (or the probability of its occurrence);
- v) reduction or limitation of the consequences of residual risks (insurance, accruals, etc.);
- vi) adjustment of the expected rate of return according to perception of the residual risk.

The two following principles, which are valid in a situation where the activity of the operator can be regarded as corresponding to delegated management of a public service, can be deduced from this approach:

- Reduction of the global project risk (and consequently of project cost) depends on the identification of optimum risk allocation. Risk sharing between the franchisor and franchisee on the one hand, and the various sponsor and lenders on the other, must consequently be based on analyses designed to identify and allocate risks to those parties which can carry them.
- Any risk identified by the operator is reflected in a profitability requirement, in terms of level or duration, with a resultant increase in the cost of the service provided. It is consequently in the interests of the franchisor to restrict, as far as possible, the unnecessary imposition of risks on the operator where the latter is not in a position to manage these risks. In other words, it is undesirable to make the operator carry risks which the public sector is able to carry itself at a lower cost.

This chapter addresses the question of the operator's risk approach for the various risk categories previously identified, and applies the principles set out above for the purpose of proposing equitable systems for risk sharing between franchisor and franchisee, where this is relevant.

3.2. COUNTRY RISKS

This section deals with risks, where the origins of their various components are to be found in the national and international environment.

3.2.1. *Legal risk*

The legal risk relates to all parameters concerning the lack of precision in, and frequent reappraisal of the authoritative literature in force. It must be assumed that this set of rules is pre-existent when the project is initiated. This means that the risk for the operator has two main components:

- **the risk of insufficient precision in authoritative literature concerning internal law** is in some cases extremely complex, not only as regards applicable laws and regulations by reason of their variable clarity of interpretation, but also in terms of jurisprudence. Furthermore, common practice frequently constitutes a number of mandatory rules in terms of port operation ("FOB Dunkirk, Antwerp "pierre bleue", etc.). A thorough legal study is naturally an essential preliminary to implementation of the project. The best solution is probably to call on the services of local legal advisors specialised in the various disciplines involved in the project, in order to reduce the contingent situations liable to delay project implementation. The risk of non-compliance by the operator with legislation or regulations currently in force through ignorance, is obviously carried by the operator;
- **the risk of changes in legislation or regulations** stems from the fact that these factors, which are subservient to the national sovereignty of the country concerned, are liable to change at a later date. In line with the principles put forward at the beginning of this chapter, one can take the view that the operator is justified in calling for guarantees as regards the stability of its legal environment, equivalent to the theory of improvidence, as this risk is dependent on decisions taken in the public sector, over which the operator has no control. Nevertheless, any such degree of legal security must not induce any distortion of fair competition with regard to other companies in the country concerned, insofar as normal operation of the public service is not placed in doubt. On the other hand, in the case of a delegated management situation, the delegatee is not in an ordinary company situation. Firstly because the permanency of its activity is essential to ensure continuity of the public service and secondly because the degree of regulation imposed on the operator may well prevent the latter from adapting as would be essential to cater for such changes to its environment. It consequently appears desirable either to guarantee stability, or to provide for a contract revision clause, to cater for a situation where such changes could place the financial viability of the project in doubt.
- **the risk of changes in legislation relating to environmental questions:** prior to any decision concerning privatisation, the franchisor must undertake an environmental study of the project. Conventionally, distinction is made in the environmental study context between:
 - the impact of the construction of marine infrastructures on the existing marine environment (Impact of Marine Structures),
 - management of pollution risks of a maritime origin (Ship Waste Management),
 - management of dredging-induced contamination risks (Dredging Activities), and
 - management of accidental pollution (Accidental Pollution).

In general terms of environmental risk management, those aspects specific to environment-related regulations should be established a priori, and negotiated at the time of signature of the franchise contract. Any excess construction costs induced by legislative changes during the period of the concession should be the subject of renegotiations between the two parties, in order to define the amount of and procedures for indemnification of the operator by the franchisor. The environmental risk can materialise during the construction and/or operational phase.

3.2.2. Monetary risk

In a country where the national economy is unstable, macro-economic problems, or rules imposed by the economic authorities of the host country, induce the risk, for both shareholders and lenders alike, that the project may be unable to generate sufficient income in strong currencies. The main monetary risks which can induce this situation are as follows:

- risk of exchange rate fluctuations,
- risk of non-convertibility of the local currency into foreign currencies, and
- risk of non-transferability (funds cannot be exported from the host country).

Where the project can generate foreign currency income, which is frequently the case with services invoiced to foreign ship-owners or shippers, foreign exchange and convertibility problems are overcome. The best way of hedging the transferability risk is for the operator to be paid via an account opened outside the host country (offshore account). Operation of such accounts frequently requires approval by the local authorities. In this case, exchange control or prohibition of the export of foreign currency from the host country has no impact on the economics of the project. The monetary risk is not hedged but merely eliminated.

In the contrary case, appropriate measures must be considered. The franchisee must seek convertibility and transferability guarantees from the government or central bank, which means that the monetary risk becomes a political risk.

As for the exchange risk, this can be partially hedged by ensuring that the majority of expenses are paid in local currency, for example by raising part of the debt in the currency of the host country. However, this is not sufficient. Firstly, it is rarely possible to raise the funding required locally, and secondly foreign investors must be remunerated in foreign currency, this applying also to a proportion of purchases and personnel expenses (expatriate personnel). Where conditions allow, hedging products (exchange rate swaps, etc.) can be used to restrict this exchange risk. If on the contrary such products do not exist, due to the instability or weakness of the host country currency, the exchange risk can represent a major problem which can only be carried by the shareholders and/or lenders, unless an exchange rate guarantee can be obtained from the central bank of the host country. Obviously this can only be envisaged where the project is of primordial importance for the host country, in which case the exchange risk also becomes a political risk.

3.2.3. Economic risk

Port activities form part of a national or international transport service, which is first and foremost a vehicle for trade. The volume of this trade frequently depends to a very large extent on macro-economic data, namely population, consumption, production, exports, exchange, etc. The macro-economic context and its evolution consequently have a very large impact on the level of activity in a port, and it is essential to take this level into account in the market survey undertaken for the purpose of estimating the traffic risk. The principles of traffic risk sharing are analysed in the chapter devoted to this subject.

3.2.4. Force majeure

The notion of force majeure generally covers all events outside the control of the company, and events which cannot be reasonably predicted, or against which preventive measures cannot be taken at the time of signature of the contract, and which prevent the operator

from meeting its contractual obligations. Apart from this general definition, cases of force majeure are generally stipulated clearly in the contract. These include:

- natural risks: climatic phenomena (cyclones and exceptionally heavy rainfall), earthquake, tidal wave, volcanic eruption, etc.,
- industrial risks: fire, nuclear accident, etc.,
- internal socio-political risks: strike, riot, civil war, guerrilla or terrorist activity, etc.,
- risks of war or armed conflict, etc.

It should be noted that in certain contracts, unilateral decisions by the local authorities can be included in the list of cases of force majeure, in particular where such decisions are of a discriminatory nature with respect to the operator.

These risks are included under the denomination of country risks, as it is the national context which conditions the probability of their occurrence, although they are treated in contractual terms. It seems equitable that any such event should at least suspend the reciprocal obligations of the parties involved, with a resultant limitation, but not elimination of their consequences. The contract can also include procedures for sharing the consequences of such events between the parties, in particular where the project embodies the characteristics of delegated public service management.

3.2.5. "Interference" or "restraint of princes" risk

This category covers risks relating to specific intervention in management of the project by the public authorities.

Franchise constraints are normally defined in the specifications, and the franchisor should not, in principle, interfere in any way during the construction or operating phases, provided the franchisee complies with these specifications. However, it frequently occurs that the franchisor authority does intervene, in the name of public service or user protection, for reasons of security or relating to the protection of the environment, or simply on the basis of the "restraint of princes" notion, imposing adaptations, additional investment or new constraints, the result of which is to increase operating costs or reduce revenue (charge-related constraints in particular).

Such intervention can be well-founded, but in this case it is legitimate for the franchisor to provide the franchisee with strict compensation for the constraints thus imposed on the latter, in order to indemnify losses resulting from these decisions.

The best way of attenuating the interference risk is certainly to have a contract which not only recapitulates the objectives of the parties, but which also specifies the maximum range of possible situations, and defines their consequences for the two parties: price escalation clauses, obligation to increase capacity above a certain traffic level, etc.

Nevertheless, it is clearly impossible to foresee everything in advance, and all agree that the validity of an escalation clause rarely exceeds a few years. Hence the interest of including clauses which call for periodic meetings, for the purpose of renegotiating the contract and which are aimed at adjusting the conditions of the franchise to cater for changes observed.

3.2.6. Political risk

By definition, the operator cannot control the risks inherent in decisions taken by the public authorities. The operator naturally seeks corresponding protection through the clauses of the contract, by transferring this risk to the franchisor. This is not sufficient however, as non-compliance with the terms of the contract by the franchisor or the State is just one of the risks carried by the operator. Likewise, the acquisition of contracts or authorisations from the administrative authorities can come up against administrative inefficiency to a greater or lesser degree, this being the cause of delays or excess costs for the operator. Furthermore, the risk of expropriation or nationalisation is ever-present in the developing countries. The risks of non-compliance or inefficiency are grouped under the designation of **political risk**.

Apart from the detailed analysis of contractual commitments, there is also the problem of the credibility of the applicable legal system. The effectiveness of contractual commitments depends initially on the mechanisms available for settling disputes. Recourse to international arbitration is desirable, involving a neutral jurisdiction applying recognised international rules, such as those of the International Chamber of Commerce for example. Likewise, the applicable contract law can be that of a mutually acceptable third party country.

This purely contractual approach, while necessary, is frequently largely inadequate for acceptable management of the political risk. In practice, the arbitration procedure phase is rarely reached, but when this is the case, it reflects degradation of relations to such an extent that the future of the project is very often threatened.

There are therefore other strategies for protection against this political risk:

Firstly, the inclusion of multilateral organisations, such as the SFI or BERD, among the shareholders or lenders, represents a form of protection for the operator. The presence of these entities is not a formal guarantee, but it is recognised that the governments of developing countries generally seek to avoid antagonising these multilateral institutions by discriminatory fiscal or legal measures, which are of a nature to disrupt, unfairly, the equilibrium of a project in which they are involved. Similarly, the financial involvement of sponsors or lenders from the host country can also serve to limit the political risk.

A second approach involves recourse to the export credit agencies, such as COFACE in France, which act as guarantors for the political risk during the loan period.

Actual insurance cover can also be obtained to hedge certain specific risks. Such policies can be subscribed with both public insurers such as MIGA (World Bank Group), and private insurance companies.

Quantification of the political risk is always a delicate matter, and there are no reduction or hedging methods which make it possible to eliminate the political risk entirely. Analysis of the political risk can therefore ultimately lead the operator to abandon the project.

3.2.7. Conclusion

The country risks described in this chapter have wide-ranging characteristics, and include:

- risks resulting from decisions by or the behaviour of the public authorities in the country concerned. These risks cannot be controlled by the operator, other than by the signature of contractual commitments with said authorities. According to the degree of confidence which the public institutions or the past record of the operator in the country inspire on

the one hand, and the predictable consequences of pre-identified events for the project on the other, guarantees by the public authorities can be an essential condition for participation by the operator in the project in question. This approach does not lead to sharing of the risk with, or its transfer to the public authority, but to restriction or even elimination of the risk, as it is the public authority which is at its origin;

- risks resulting from random factors or uncertainties, the occurrence of which does not depend directly on decisions taken by local authorities. Where these risks cannot be placed under the control of the operator, or where they are considered unacceptable, a corresponding contractual disengagement can be introduced. This makes it possible to transfer the risks to, or share the consequences with the local authorities.

Guarantees obtained from the public authority, or risk sharing with the latter, are all the more justified as the activity of the operator relates to a public service. The topology presented in section 3.4.2. demonstrates that this is not always the case, and it can appear equitable under certain circumstances for the total country risk to be carried by the operator.

3.3. PROJECT RISKS

This covers all risks associated with operation of the resources required for execution of its assignment by the operator, as defined in the agreement authorising or delegating corresponding authority to the operator. The majority of these risks are therefore transferred to, and carried by the operator, which consequently manages and assumes the consequences of the risks.

On the other hand, any modification of the demands of the local authorities, with respect to the initial measures defined, and leading in turn to modification of project content, or any action of a nature to perturb implementation of the project, generates a risk of a different type. In the proposed approach, these risks are included under "country risks", as described in the previous section, rather than in the project risk category.

Project risks consequently cover the following main factors:

3.3.1. Construction risks

Risks associated with construction of the project are analysed principally in terms of excess cost or completion date. It should also be noted that a construction delay induces an excess cost, principally for the operator, in one of several forms;

- penalties which the operator may have to pay to the franchisor or its customers, according to its contractual commitments;
- delays in start-up with the operational phase of the project, putting back initial operating revenue and causing a loss of earnings;
- increased interim interest (interest due during the construction phase, this cost being capitalised).

It should be remembered that when excess costs or delays are caused by the government or franchisor, they are regarded here as country risks (political, restraint of princes or legal), rather than project risks. This is the case in particular with modification of the functional definition of the project, or the introduction of constraints concerning the choice of technical solutions subsequent to signature of the contract, changes in applicable standards relating to safety or protection of the environment, delays with approval procedures, delays with authorisation or the availability of land, or again customs-related problems preventing or delaying the import of equipment or materials required for the project. The operator has no

control over these events, and can be justified in demanding compensation (see country risk).

Likewise, where delays are due to cases of force majeure duly identified in the contracts, the operator is exempted from payment of penalties for lateness, and can claim compensation in certain cases, according to the provisions of its contract.

Apart from the situations mentioned above, it forms a sound basis if the operator is (at least partial) employer for the work for which it bears the cost, also carrying the risks of excess cost or delayed completion during the construction phase. The principle causes of excess costs or delays can then be:

- design errors leading to underestimation of the cost of equipment or work, or the time required to complete the job;
- defective assessment of local conditions (terrain in particular), which can lead to modification of the technical solution applied;
- poor management of the jobsite, poor coordination of the parties involved or the bankruptcy of a supplier or sub-contractor.

These risks are clearly under the control of the operator, which justifies their being carried by the latter. It is then desirable for the operator to be associated with the project as from the design phase, in order to take over full responsibility. In this case, the operator can conclude a "design and build" type contract with the construction company. In the contrary case, the operator must analyse and accept imposed specifications (e.g. basis of design), proposing alternative solutions or refusing certain aspects which it considers unacceptable, but must ultimately accept the project and bear the consequences.

It should be noted that technical information concerning survey campaigns, where this is included in the tender documents, is generally provided for guidance purposes and does not represent a commitment on the part of the local authorities. The risks inherent in the quality of this information must therefore be carried by the operator.

Hedging for excess cost and completion delay risks by the operator are generally simultaneous, and the method employed is based on transfer of this risk to the construction company or equipment supplier.

- Firstly, where the project includes a major construction phase, the financial package generally leads to inclusion of a construction company in the project company sponsor "tour de table".
- Secondly, the construction risk (and design risk where possible) is allocated to the construction company shareholder, enabling the non-construction company shareholders to avoid carrying a risk of which they do not control the components. Transfer of the risk to the construction company shareholder is achieved via the construction contract, or better still the design and build contract indicated above. The objective then is a lump-sum design and build turnkey contract, incorporating a performance guarantee and appropriate penalty clauses. This makes it possible to convert the construction risk into a credit risk with respect to the construction company.

The technical expertise and financial soundness of the construction company associated with the project, then make it possible to reduce both construction and credit risks (through the capacity of the construction company to honour its contractual, technical and financial commitments).

It should also be noted that the sponsors (future shareholders) and lenders do not always carry the construction risk in the same way, as the latter call on the former for a credit guarantee covering the construction phase, the loan only being subject to limited recourse for the operating period.

3.3.2. Hand-over risks

This refers to the situation, frequently encountered in the port sector, where the operator is not faced with a green field project situation, but is required to take over management of existing infrastructures and facilities, undertaking operation and maintenance, and in some cases prior rehabilitation. The general rule is that the operator takes over the equipment at its risk and peril. The operator is authorised to carry out prior inspection of the installations, in order to assess their condition, and estimate the rehabilitation and maintenance costs to which it will be exposed.

It is nevertheless desirable to include a clause in the franchise contract, which guarantees the franchisee against recourse relating to events prior to the validity of the contract, and exempts the operator from foregoing liabilities.

3.3.3. Operating risks

The basic principle is that the operator undertakes to work the facilities at its cost, risk and peril. The operating risk is consequently, by definition, a risk entirely allocated to the operator, at least insofar as its endogenous part is concerned, namely excluding country risks shared with the port authority under the terms of the contract (force majeure, changes in legislation or regulations, restraint of princes, etc.). Other exogenous factors can induce operating risks, such as the procurement risk for example (see below).

The endogenous operating risk principally comprises:

- **a non-performance risk**, which can lead to payment of penalties to the franchisor authority on the one hand, and induce commercial consequences (traffic level below that expected) and consequent financial consequences for the operator on the other;
- **a risk of operating cost overrange**, stemming from an error in the quantification of operating costs on submission of the tender (omission of a cost category or defective calculation), or inefficient management of the project by the operator;
- **a risk of loss of income not associated with a drop in traffic level:** non-collection of revenue, fraud or theft in a case where the operator has not complied with the procedures demanded by the insurers, claims by customers or frontage residents, etc.

The non-performance risk can frequently be cleared by selecting an operator company, the experience of which is recognised in the port terminal management domain. The cost overrange and loss of income risks can then be transferred to the operator, provided that the contract concluded between the franchisee and operator is on a fixed-price basis (subject to escalation by application of an indexing formula), with the possible inclusion of a variable part designed to encourage a commercial approach, but not involving cost + fee type remuneration as there is no transfer of risk with the latter type of contract.

In a similar way to the construction company, the operator is then frequently one of the project promoters. This makes it possible to associate the operator at the outset with definition of the operating system, as also cost estimation, thus making the operator fully responsible for these aspects of the project for which it will subsequently carry the risks.

Naturally, such measures do not eliminate the operating risk completely. Firstly, the responsibility of the operator is necessarily capped. Furthermore, this approach in fact converts the operating risk into a credit risk on the operating company. The latter generally has limited capital, and its initial capital goes no higher than its working capital requirement as it has no investment expense. The responsibility of the operating company can then be covered by shareholder guarantees or a bond system. At all events, the project cannot function satisfactorily if the operating system is permanently defective.

In any case, the franchisee has the resources to manage this endogenous operating risk, and it is therefore logical for the risk to be allocated to the franchisee in full. It should be noted that the financial package enabling the operator to manage this operating risk assumes that the main contract authorises the franchisee to conclude operating sub-contracts.

3.3.4. Procurement risks

The procurement risk concerns both the risk of non-availability, and the risk of changes in the cost of external resources necessary for the project during the operating phase. This risk is all the more important as port projects nearly always depend on public suppliers in monopolistic situations, for example for the supply of water or electricity in particular.

Two approaches can enable the operator to reduce or eliminate this risk.

- Firstly, **the operator can chose to produce the resource in question itself.** In the case of refrigeration plant (refrigerated container park, refrigerated warehouses, etc.), the installation of a dedicated generator as part of the project makes it possible, if not to reduce the cost of the resource (which can be the case), at least to limit the risk of power cuts (which in addition to simple interruption of the service, can cause damage to the merchandise). The implementation of a solution of this type nevertheless frequently requires authorisation from the local authorities. Furthermore, this integration logic is not always possible, or economically acceptable for the operator.
- Secondly, **the operator can sign a long-term purchase contract** with the producer of the resource. This makes it possible to set the purchase cost with a pre-determined price escalation formula, and to restrict the risk of a unilateral decision concerning price changes. This in turn generates the problem of an indexation risk (see contractual risk). Furthermore, the contract can include an indemnity clause in favour of the operator, for losses incurred in the event of interrupted supply. This is referred to as a "put or pay" type contract. This approach in fact transforms the procurement risk into a credit risk on the supplier concerned, or a political risk.

The assistance of the franchisor or the government may be necessary for the conclusion of a contract of this type with the public bodies concerned. This can be justified, in the interests of the project, in particular in a case where the project has a substantial public service dimension.

Where the procurement of imported supplies is concerned, the procurement risk can stem from customs-related problems, and thus form part of the country risk. According to the circumstances, the risk can be borne partially by the franchisor.

3.3.5. Financial risks

It goes without saying that the operator carries all risks associated with the **raising of shareholders' equity and loans** required for funding the project, and likewise all risks associated with formation of the project company. The corresponding measures are defined in the contractual documents between the various private players involved in the project (shareholders' pact, loan agreement, etc.). Apart from raising shareholders' equity and loans initially scheduled, the establishment of standby credit loans also makes it possible to fund any excess costs with which the project company may be confronted (see construction risk).

Likewise, the **interest rate fluctuation risk** is carried exclusively by the operator. This risk originates from the fact that loans raised to fund the project are usually based on floating rates (Euribor plus margin, for example). An increase in the reference rate consequently increases the amount of interest paid, and therefore project costs. This risk can be hedged by means of appropriate financial instruments (rate capping or establishment of a ceiling for a variable rate, or a rate swap, which can be used to exchange a floating rate for a fixed rate, etc.).

There remains the subsidy realisation risk. This risk is relatively small insofar as investment subsidies are concerned, as the construction phase covers a relatively short period. However, international agreements (for example the Marrakech Accords), or the dictates of internal law can limit the possibilities of receiving subsidies. On the other hand, where the contractual documents provide for operating subsidies, the corresponding financial risk can be analysed in this case as a credit risk on the franchisor, or any other authority supposed to pay subsidies, or as a political risk.

3.3.6. Social risk

The social risk relating the operator's own staff is logically borne by the operator. Symmetrically, the risks of strike or riot in the host country are frequently qualified as cases of force majeure (see country risk). This means that they are often only partially covered by the contract, although corresponding insurance cover can be obtained.

A specific difficulty encountered in the port sector originates from the fact that:

- firstly, dockers can be covered not by common law, but by a special status leading to reduced responsibilities, according to legislation in force in the country concerned, with the operator only being the actual employer of labour which it hires. This situation is tending to disappear, but where it still exists it is the source of risk and excess cost for the operator, both in developing and industrialised countries (including France);
- furthermore, port terminal franchise operations, while they frequently require the operator to take on a proportion of existing personnel on a priority basis, are always accompanied by a very substantial reduction in the global numbers of port workers (reductions of the order of 50 to 70% are far from rare). In this context, a contractual disengagement relating to management of residual personnel vis à vis the port authority or government, is not sufficient to cover the social risk. The operator must therefore check that the local authorities are in a position to manage this situation, if possible with the assistance of development banks, for setting up the usual measures (retraining, early retirement, relocation allowance, etc.);
- in addition, apart from the social risk relating to dockers, the presence of other categories of personnel with special status (seamen, customs officers, port authority personnel in certain cases, etc.) in the ports, can amplify the social risks. The present situation in French ports demonstrates the major problems which can arise from differences

between the terms of the dockers' union contract and that of independent port authority personnel.

3.3.7. Conclusion

It appears normal that the majority of the project risks, as defined above, continue to be carried by the operator. Nevertheless, this assumes clear, prior definition of the project contour and applicable rules, thus avoiding mixed intervention by the parties involved so as to prevent any resultant dilution of responsibilities. Technical regulation leading to the imposition of constraints and excess costs on the project can be justified (see below), although the corresponding ways and means must be defined beforehand, thus enabling the operator to carry the risks linked to implementation of the project.

Care should also be taken to ensure that the terms of the contract do not revert to the principle of allocating the risk to the operator, in particular by introducing economic regulation measures or inadequate guarantees. Thus, the terms of the contract by which the State or franchisor guarantees a certain minimum rate of return could be avoided. Such measures in fact exonerate the franchisee from all project risks, and consequently remove any encouragement for the franchisee to reduce costs.

3.4. COMMERCIAL OR TRAFFIC RISK

The two components of the commercial risk are traffic and charges. The traffic risk is a major risk in this type of project, due to the high degree of uncertainty which always surrounds medium- or long-term port activity projections. This risk is affected, among other factors, by charge rate policy (elasticity of demand), and consequently by the regulation imposed. Apart from its impact on the traffic risk, charge rate regulation has an obvious influence on the revenue risk.

The existence of a double, "vertical" and "horizontal" partnership between the operator and the port authority (see section 2.2.) leads, in practically every case, to sharing of this risk, both in terms of responsibility and consequences. The ways and means for sharing this risk then constitute a core element in preparation of the specifications. However, the two parties generally have a natural tendency to adopt different approaches to the question of vertical partnership content:

- **an entrepreneurial approach** designed to limit the scope of the vertical partnership: the franchisee generally takes the view that its activity should be regulated by market conditions, consequently seeking greater freedom of action in the management of its project, in order to be in the strongest possible position to manage this risk;
- **the approach of the franchisor**, which is concerned with protecting the user, integration of the general interest, and fearing the introduction of situation rents, consequently seeks to restrict the operator's freedom of action through technical or economic regulatory measures.

The search for a fair balance between regulation imposed by the franchisor and regulation dictated by the market, is complex and conditions actual sharing of the commercial risk.

Action by the franchisor as regulator of the port activity, while it may prove essential, is not always necessary to the same degree of involvement. However, **regulation** which principally consists in imposing constraints, providing guarantees and sharing risks or profits, **induces excess costs**, namely excess costs for the franchisor in the shape of compensation which it may have to pay, but also simply as a result of the direct cost of

inspection. This also means excess costs for the franchisee which carries greater risks and, having less freedom of action, will expect remuneration of this higher risk level. The excess costs are ultimately borne by the port users, or by the tax payer. Efforts should therefore be made to reduce them to the minimum, namely by **only regulating the activity when, and only when necessary**.

The objective is therefore to adjust regulation, and the guarantees and compensation allowed, in order to achieve equitable sharing of risks, and a situation which is acceptable to both parties. Risk sharing can only result from close analysis of the situation, and it would be illusory to put forward a rule applicable under all circumstances. The aim here is first of all to analyse the different regulation tools available to the port authority. We shall then suggest a topology for port terminals, analysing the legitimacy of the regulation and compensation system to be applied, for each situation so identified.

3.4.1. Regulation tools

The need for regulation leads to the establishment of a number of constraints, accompanied by technical and financial measures, in the franchise specifications. These elements, the principle of which must be defined by the franchisor, can either be:

- set by the franchisor prior to initiation of the selection procedure; or
- defined in principle, and detailed by the candidates in their tenders (maximum charge rates, fee, subsidy, etc.). These elements then serve as a means for comparing the tenders submitted, and their analysis forms part of the selection process.

The regulation tools available to the franchisor can be classified in two main categories, according to whether they are of a technical or economic nature.

3.4.1.1. Technical regulation

Technical regulation covers all measures which the port authority imposes on the operator as regards definition of the project. Technical regulation contributes to defining a framework of constraints which the operator must accept, and within which it will be able to manage the project risks as defined in the previous chapter.

i) Regulation of investments

The question of regulation of investments obviously only arises where the operator is itself responsible for executing the project. The port authority can then be obliged, to a greater or lesser extent according to the circumstances, to impose:

- a functional definition in terms of capacity, or thresholds according to changes in traffic levels where appropriate, in order to ensure a minimum level of service in a situation where market conditions could lead to under-capacity;
- construction standards to be observed, in order to ensure that the work is executed in accordance with the rules of the art;
- constraints in terms of security or protection of the environment, or special specifications where appropriate.

It is not considered desirable to go further with the definition of the set of constraints imposed on the operator. Control by the franchisor is then limited to verification of compliance with the measures so defined, but does not relate to the technical solutions applied insofar as they conform with these measures. Any obligation imposed on the operator to obtain approval of the project by the port authority, above and beyond these

pre-defined standards, effectively leads to the risk of a "restraint of princes" situation as described in the chapter concerning political risks. The operator is then unable to estimate forecast costs for its industrial project.

Nevertheless, while the principles set out above appear the most appropriate by reason of their coherence as regards the allocation of risks, it can be that the port authority only calls on the operator after having itself examined the project, and defined precise specifications. This leads to completion of the set of constraints imposed at the origin of the project, but does not challenge the principle already discussed.

We can note at this point that the introduction of measures aimed at imposing a minimum investment amount, or at judging tenders on the basis of the amount proposed by the candidate is not desirable. Indeed, maximisation of the amount invested is not an end in itself (except perhaps for the construction company). Such measures consequently have obvious adverse effects, by encouraging excessive investment which is not necessarily relevant from an economic point of view. It is therefore preferable to impose functional obligations on the operator.

ii) Regulation of maintenance

The risks induced by defective maintenance of port facilities are of three types:

- firstly, a commercial risk for the operator, as a consequence of a deterioration in the level of service offered to customers;
- secondly, the risk of default by the operator in relation to its public service obligations; and
- finally, a risk of deterioration of assets during the period of the contract.

The commercial risk is sanctioned by the market. No regulation by the franchisor authority is therefore required.

The public service obligation, and in particular the obligation of continuity of service, where this is imposed as indicated below (economic and financial regulation) indeed leads to application of a performance obligation on the operator. Any interruption of service resulting from a maintenance fault can then give rise to penalties, and technical regulation designed to impose an obligation relating to resources does not seem necessary.

In the case of a franchise with hand-over of assets to the port authority on termination of the contract, the need for regulation can go beyond these functional obligations. It is indeed normal for the franchisor to ensure that repair and maintenance work is carried out correctly, in order to ensure that the installations are handed over in good operating condition at the end of the franchise period. The franchisor can then impose compliance with specific standards, in order to ensure the satisfactory preservation of its assets.

iii) Performance standards

Finally, where the franchisor considers that the lack or absence of competition is liable to discourage the operator from providing an adequate level of service, and that this situation is prejudicial for users, it can impose performance standards, for example in terms of a minimum level of productivity. While sometimes necessary, this type of approach comes up against three major difficulties:

- it assumes that the franchisor is in a position to define and codify a level of service, whereas the content of the service and the normal level of requirement can change over the years;

- this also assumes that the franchisor is capable of checking compliance with these standards by the operator; and
- finally, this assumes that the franchisor introduces and applies an incentive or financial sanction system, for use when the objectives thus defined are exceeded or not achieved.

Furthermore, above and beyond productivity criteria, performance standards can relate to a minimum capacity for the port terminal. It is then desirable for this capacity to be defined in terms of performance obligation. The operator can frequently arbitrate between various alternative solutions for meeting these obligations, which can relate to investment or operating procedures (extension of yard space against the purchase of more efficient equipment, enhancing the storage capacity of a container terminal for example).

3.4.1.2. Economic and financial regulation

i) Franchise purpose: limitation of the scope of the authorised activity

The first level of economic regulation relates to definition of the activities which the operator is authorised to conduct in the zone defined by the contract. The port authority is responsible for management of the port domain and its development, and can be led to restrict the scope of the activities authorised. For example, this limitation can prohibit the operator from engaging in any activities other than the handling and storage of merchandise in the project domain, or define the types of traffic which the operator will be authorised to handle, to the exclusion of all others. In the latter case, such limitation can be justified quite simply by an exclusivity guarantee which the port authority has previously granted to another operator present in the port complex.

In this way, the port authority increases the commercial risk for the operator, as it limits the latter's capacity for adaptation or diversification of its activity in response to subsequent market changes.

On the other hand, the port authority can authorise the exploitation of land with considerable freedom of initiative and action, in return for a public service obligation relating to an activity which is not profitable for the operator.

ii) Public service obligations

The port authority can be led to require the operator to comply with principles governing the provision of a public service. This principally leads to imposing:

- continuity of service, and consequently penalties, or even early termination of the contract in a case where the service is interrupted for reasons for which the operator is responsible;
- equality of access and treatment for users, to avoid any risk of discrimination (charge rates, priorities, level of service, etc.).

Under these circumstances, it is sometimes impossible to avoid all discrimination by an operator with respect to its customers, for example obliging an operator company which is a subsidiary of a ship-owner, to serve other, competitor ship-owners under the same conditions as its shareholder, irrespective of contractual stipulations. The very personality of the candidate, and its independence with respect to port customers, are elements which must be taken into account when awarding the contract.

The principle of equal treatment for users does not prohibit in any way however, and transparent "commercial" management of the activity, including charge rate discriminations

provided these are founded on objective criteria, such as annual traffic volume, the period of commitment of the parties or the characteristics of call or vessel, and provided they are applied uniformly to all users.

iii) Guarantees of non-competition

The need to set up strict regulation of the operator's activity by the port authority is frequently the result of the absence of any market-induced regulation, and therefore insufficient competition.

Under these circumstances it can appear equitable to grant the franchisee a guarantee of non-competition in compensation for this strict regulation, since the franchisee is deprived of the normal means for a company to position in a competitive market. This type of guarantee is generally limited in time, and terminates at the end of a pre-defined period, or when the level of traffic reaches an also pre-defined threshold.

However, the creation of *de jure* monopolies should not be recommended where this is not essential. A more relevant solution therefore is to provide for renegotiation of the contract in the event of changes in the competitive situation, including a review of the regulation clauses, in order to adapt the latter to new market conditions. In certain cases, this can legitimately lead to indemnification of the operator where the new situation calls into question the viability of the project.

iv) Charge rate control

The procedures for setting charge rates represents a core element of the system. These condition both the level of traffic for the terminal concerned, the profitability of the operation for the franchisee and the price of the service provided for the user. It is legitimate to protect this price against unfair advantage being taken of a position of superiority where a public service is involved. Regulation of charge rates by the public authority concerns two levels of freedom for the operator:

- firstly, freedom to negotiate conditions for the service provided with the customer on a case by case basis, or on the contrary, the obligation to publish a list of charges applicable to all users; and
- secondly, the freedom to set the level of charges in the case of a published list.

Freedom to set charge rates is desirable:

- *either when the market is regulated by competition.* Competition can come from another terminal in the port, another port, or another means of transport in certain cases (air, or land or coastal traffic). Estimation of the true level of competition is therefore a delicate matter in some cases, although the objective is still quantification of the risks of abusive use of a position of superiority. As indicated above, this freedom to set charge rates can be accompanied by an obligation to treat all users on an equal basis, thus prohibiting case by case negotiation, and imposing the publication of a list of public service charges;
- *or the activity does not constitute a public service.* This is the case where the operator only conducts its activity for its own account or on behalf of its shareholders. This is also the case where the port customers are not national economic units (transit traffic or transshipment activity). The operator can then be free to negotiate charges with its customers on a case by case basis.

Charge regulation is necessary in other cases, namely where the operator provides a public service, and is in a monopolistic or insufficiently competitive situation. Apart from the obligation of equal treatment of users, and the publication of prices, the administrative authority thus intervenes in this case in the establishment of a maximum charge (price cap).

This maximum charge can be set initially by the market, at the time of the call for tenders issued to terminal operator candidates. These conditions are generally accompanied by price escalation formulas indexed to a set of appropriate indicators. However, these escalation formulas are generally only relevant for a short term, over a period of the order of five years. Subsequent periodic renegotiation of these conditions is required, generating the problem of renegotiation procedures and the nature and powers of the regulator.

The problem is indeed to adjust charge rates in such a way that users pay prices which cover costs in a "reasonable" manner. Basing negotiations on the operator's *a posteriori* costs is not a good solution, as this ultimately leads to guaranteeing the operator a level of return irrespective of project management quality, and does not consequently encourage the operator to reduce its costs. Furthermore, such conditions require detailed financial analysis of the franchisee's accounts, something which the franchisor is never in a position to do correctly, and can lead to manipulation of the accounts. This regulation model, using profit margin as an instrument of control for companies, and employed in the USA for regulating public monopolies (rate cap) is consequently not satisfactory.

The British model, which consists, in broad terms, in creating an independent regulator authority with which users can be associated, provides a less than perfect mechanism for arbitrating between the (opposing) interests of users and the shareholders of the operator company. This situation leads the regulator to intervene in the management of the operator company, and clearly comes up against a problem of asymmetric information. Furthermore, the difficulty of setting up regulation authorities which play an equitable role and are therefore acceptable to the operator, is obvious.

Other regulation solutions are recommended in certain cases. These include institutionalisation of an "equalising authority" comprising users or customers, and/or recourse to general legislation relating to competition, defining and sanctioning abusive use of a position of superiority, among other misdemeanours.

The problem of regulating public monopolies continues to be a subject of concern in the industrialised countries, to which no clear and fully satisfactory response has so far been produced [12]. The problem is even more acute in the developing countries.

A radical method is to issue fresh calls for tender for the complete franchise at periodic intervals, also setting new charge rates according to market conditions. Obviously however this cannot be envisaged every five years! This also assumes prior provision of equitable withdrawal conditions for the franchisee, hence the problem of drafting franchise repurchase clauses. These are generally based on the discounted value, at time of repurchase, of anticipated profits from the concession up to the termination date initially set. The amount consequently depends directly on charge rate assumptions for the residual period.

Furthermore, the choice of a single integrated terminal operator is not perhaps the best solution in this case. Other solutions can be considered, in order to reintroduce a competitive situation for part of the service, such as for example:

- a work franchise for the infrastructure, or even a simple work contract, with the port authority continuing as the employer;
- an economic interest group incorporating the handling companies for the facility, which continues to be pooled;
- a number of competing handling operators, which nevertheless use the same resources.

Port Réunion: a single container terminal but several handling contractors

In common with the majority of island economies, Réunion does not generate sufficient traffic to justify more than one container terminal. The majority of the containers are consequently handled by the single container terminal. However, the containers are handled by a number of competing lighterage contractors. This has not prevented recourse however to private investment or management, and the resources required for these operations have been grouped, in particular under the aegis of an economic interest group, comprising the handling contractors and other partners (CCI), yard equipment (GPA), land storage management (TCR) and even gantries.

v) Fee or subsidy

Vertical partnership also involves the injection of cash transactions between franchisor and franchisee, in the form of fees or subsidies. This constitutes another form of regulation, as the level of the fees or subsidies is closely linked to charge rate policy. These mechanisms, which are based on the same logic, make it possible to adjust the conditions for acceptance of the project by both parties (fixed annual part or up-front fee), and sharing of the commercial risk or profit (variable part).

Fixed part, the adjustment tool:

- for a fee paid by the operator to the port authority, the fixed part is used to pay for occupation of public land, and the provision of facilities constructed by the public sector. This also makes it possible to share profit where the franchise configuration leads to a structural surplus situation: the fee then remunerates the opportunity provided by the franchisor for profit to be generated by operation of the terminal (goodwill);
- conversely, the fixed part of a subsidy makes it possible to establish conditions which are acceptable to the operator, where the franchise configuration leads to a structural deficit situation (return on invested capital but not financial return). This is a way of providing compensation for public service obligations which lead to the non-profitability of their activity.

Variable part, the means to share:

- payment by the operator, in addition to the fixed part, of a variable fee based on the level of activity, makes it possible to share profit between the parties. This is in fact an alternative solution to a charge rate reduction, in particular where the port authority wishes to apply a situation charge to the detriment of the customers, and obtain a profit by this means;
- symmetrically, the introduction of a variable subsidy indexed on traffic level, with the possible inclusion of a threshold effect, can be used to share the traffic risk and indemnify the operator if the level is below a predefined threshold. This logic, which can be extended to a minimum traffic level guaranteed by the port authority, can be justified by correspondingly tight technical and charge rate regulation, in particular where the assessment of potential traffic by the parties differs.

At all events, it appears desirable that fee and subsidy calculation procedures, accompanied by escalation clauses, should be set *a priori*, and based on traffic level rather than the degree of profitability for the operator.

Setting of initial levels for the fixed and variable parts of subsidies or fees can be imposed by the port authority, but in fact represents the financial criterion most frequently adopted for judging candidates.

3.4.1.3. Golden share or blocking minority

Over and above the contractual conditions included in the specifications, the franchisor can retain a "right to know" concerning decisions taken by the franchisee, by holding an interest in the capital of the project company, and holding a golden share or blocking minority. This enables the franchisor to impose a very strict form of regulation, but also leads to substantial invalidation of all the risk sharing and management principles set out in this report, by introducing the notion of "legal interference" by the franchisor in management of the franchisee company.

It should be noted that in over one-third of privatised port terminals worldwide, the port or municipal authority owning the port also has an interest in the terminal operator company. In the case of Hamburg, the port (owned by the Hamburg "Land" regional government) has a majority interest in the operator company.

Despite the evident resultant conflict of interests between shareholder and franchisor, this arrangement can provide the means to settle the problem of the status of the various types of personnel employed in the port (see Dunkirk Independent Port Authority QPO). It can also generate advantages in financial package or taxation terms.

3.4.2. Port terminal typology

Apart from the conventional distinction between monopolistic and competitive situations, a number of different configurations can be encountered in the port domain. We shall now analyse the differences, and the resultant implications as regarding the need to regulate the activity of the terminal operator. A number of distinctions must be made, as between national and transit traffic, whether the operator is in business for its own account or on behalf of a third party, and different levels of competition. Four different examples have been identified.

National traffic

1. Operator in business for its own account – This configuration is frequently encountered in the case of a terminal handling industrial bulk production (ore or oil terminal, etc.), but also miscellaneous merchandise (wood, fruit, etc.). This is also the case for example with the Spanish port of Algeciras, which has dedicated terminals for a regular line ship-owner (container or RORO). Under these circumstances, it is frequently the shipper (or a group of several shippers), or the ship-owner itself, which takes over management of the terminal.

In this case, the activity does not necessarily correspond to a public service, and does not therefore require systematic regulation by the port authority. However, standards governing the maintenance of the facilities can nevertheless be imposed (preservation of assets provided).

The administrative document formalising the contractual relationship between port authority and operator in this case need merely authorise execution of the activity and occupation of the site. A fixed fee is paid for occupation of public land, and where appropriate, the provision of infrastructures or equipment by the public sector. It should be noted that port dues billed directly to users (ship-owners and shippers) by the port authority, already generate remuneration for utilisation of "general" infrastructures.

The operator carries all the risks and bears the consequences, and there is no need for a variable fee.

In this case, the port authority has discretionary powers to authorise occupation of public land, covering choice of candidate, period of authorisation and fee amount.

Owendo ore terminal in Gabon

The Owendo ore port was built in 1987, to provide for the export of manganese ore mined in the Moanda province. A number of agreements were signed at the time. These included an agreement for construction of the port, and another for occupation of public land and installation and operation of private facilities. Without going into details of the financial package, joint examination of these agreements indicates a situation similar to that of the franchise agreement with Comilog, the company operating the terminal. Redefinition of attributions shared with OPRAG, the port authority, should lead to transfer of responsibility to the operator for maintenance of the facilities and dredging along the wharf, offset by a reduction of the fee, thus making the operator responsible for all maintenance and management of the terminal which it uses.

2. Operator acting on behalf of a third party in a competitive situation:

In this case, it is desirable for the traffic risk to be carried in full by the franchisee. In return, this situation means that the franchisee must be able to manage this risk by controlling the parameters of its competitive position. This assumes substantial freedom for the franchisee in terms of investment, level of service and even charge rates, although a "light" form of regulation may still be necessary:

- public service obligations, including continuity, equal treatment and publication of prices;
- technical regulation, in order to ensure preservation of public assets, and maintenance of minimum capacity if the market situation could lead to globally sub-normal capacity usage, such as would be prejudicial to the user.

On the other hand, the setting of charges can be left free, as the market is regulated by competition. The amount of the fee (or subsidy) is then proposed by the candidates in their tenders, and the contract is awarded to the candidate proposing the highest fee or lowest subsidy.

North European range container terminals

The current situation in Northern Europe provides a typical example of genuine competition between different terminals in the same ports, and the different ports of the Le Havre-Hamburg range. The high level of traffic, the opening of European frontiers and the quality of available land services justifies the existence of numerous container terminals, while providing shipper and ship-owners with a genuine choice of operators. This situation allows the coexistence of public and ship-owner-dedicated terminals. Unfortunately, the situation is frequently very different in Africa, and in particular on the West African coast.

3. Operator acting for a third party in a monopolistic situation:

This situation is relatively frequent in the developing countries, in particular in African and insular countries. The existence of a natural monopoly for a port terminal management activity undeniably introduces a public service dimension, requiring "strong" regulation.

Under these circumstances, technical regulation can be applied to all the aspects discussed in the previous chapter. Economic regulation is also necessary. This can involve the setting of charges and award of the franchise to the candidate proposing the highest fee (or lowest subsidy), or setting the amount of the fee (or subsidy), and awarding the franchise to the candidate proposing the lowest weighted mean charge rates. Price escalation and indexing clauses are essential in both cases.

Furthermore, traffic risk and profit can be shared in proportions which vary according to the assessment of the parties, and sharing procedures can be based on the following points:

- **Guarantee of non-competition** or clauses providing for modification of the regulation system should the monopoly disappear, or even indemnification of the franchisee;
- **traffic level guaranteed by the franchisor**, with limitation or sharing of the traffic risk if the volume of traffic expected by the franchisor is regarded as uncertain by the franchisee. It is then possible to limit the amount of the fixed part of the fee, introducing a variable part (reduction) below a certain traffic threshold, in order to cover the loss of earnings by the operator partially or in full;
- **sharing of profit** above a certain traffic threshold (alternative to reduction of charge rates).

ECT – Container terminal operator in the port of Klaipeda

The port of Klaipeda in Lithuania has a new container terminal, the dual objective of which is to serve the country and handle a high level of (competitive) transit traffic between the European countries and the Baltic States and Russia. Although the terminal was financed from public development aid funds (BEI), an operating franchise was awarded to the Dutch operator ECT, in association with local partners.

4. Transit or transit or transshipment traffic

Transit traffic concerns merchandise the land origin or destination of which is located in a country other than that of the port. Transshipment is a service provided for ship-owners, involving offloading of merchandise from one ship for subsequent reloading on board another vessel. Both activities have a positive impact on the economy of the country, generating value added, jobs, and consequently national wealth.

Where the customer is not an economic unit in the country of the port, the public authority does not have to protect the customer, in the absence of any special agreement, against the risks of unfair advantage being taken of a position of superiority.

It is in fact the country which can benefit from a relatively high situation revenue, which is more or less durable according to the very existence of alternative transport systems (transit), the capacity of the ports in the region to compete with the activity (transshipment) or the degree of international competition. The port authority then seeks to obtain maximum profit from this favourable situation, which can be assimilated to a natural resource. In this case the port authority charges an appointee with management of this "natural resource", with the objective of maximising spin-off for the country.

Under these circumstances, regulation of the activity is not required, apart from actual authorisation and an obligation to preserve existing assets where appropriate. There is no need to subsidise the activity, nor to share commercial risks, these being carried fully by the operator. On the other hand, the port authority seeks to maximise its profit, awarding the franchise to the highest bidder, namely the candidate proposing the most favourable profit-sharing arrangement (fixed and variable fee) for the authority.

Independent international port of Djibouti: Transit and transhipment

The independence of Erythrea has deprived Ethiopia of its maritime access (ports of Assab and Massawa). Ethiopia is now land-locked. The recent conflicts between the two countries have made Ethiopia substantially dependent on the port of Djibouti for its maritime trade. A lack of budgetary resources has led the Djiboutian authorities to call on private funding for the necessary development project (cereal terminal in particular). This project, based on a situation rent, should achieve a fair yield for the investors. It will generate new revenue for the independent international port of Djibouti, and economic activity for the country.

The port of Djibouti has long enjoyed a strategic situation in the container transhipment domain, this activity representing a significant proportion of its traffic and resources. The Djibouti container terminal is managed by the port authority.

Mixed situations

In reality, the situation frequently encountered corresponds to a mixture of the configurations described above, further complicating definition of the procedures to be adopted. This should lead to a mixed approach, combining compensation systems, implementation of a situation rent or a highly profitable activity, capable of funding a public service otherwise generating a loss in structural terms.

Djibouti fishing port: Public service and semi-industrial activity

The Republic of Djibouti has constructed a fishing port, the intention being to encourage the development of small-scale fishing activities, thus providing the country with new sources of animal protein for human consumption. Financed by public development aid funds (franchise loan from the African Development Bank), this activity, which presents a return on invested capital for the country cannot however be financially profitable on the basis of this small-scale activity alone. On the other hand, the fishery resources of the region, combined with certain advantages granted to the country (Lomé 4), make it possible to look towards the development of an export-oriented semi-industrial fishing activity. Furthermore, this project has led to the preparation of reclaimed, back-filled sites, the privileged location of which will provide for the development of various activities. Placing of the complete entity under franchise should enable the franchisee to make a profit from the operation, while meeting its public service obligations as regards small-scale fishing activities.

3.4.3. Other franchisor guarantees

The existence of a horizontal partnership between the various players in the port community on the one hand, and the transport chain on the other, has already been emphasised (section 2.2.2). The operator will naturally be led to seek integration of the various services required by its customer in its global activity, or alternatively, contractual guarantees as to the level of service provided in these various domains.

It is logical for the port authority to provide the operator with guarantees concerning standards of performance for services provided in the port (depth of access, buoying, operating hours, ship services, etc.), whether provided directly by the port authority itself, or delegated to other operators within the framework of a vertical partnership. These commitments, frequently grouped in a clause headed "franchisor's obligations", can provide for financial compensation in the event of failure to meet these obligations.

The resultant commercial risk is then transformed, theoretically, into a credit risk on the port authority. In more pragmatic terms, analysis of operation of the complete port community, and its reputation, is an aspect which the operator must take into account before committing itself to the project. Irrespective of the clauses included in its contract, the operator will inevitably suffer the consequences of any defective operation of the port.

Likewise, while it can be useful to include guarantees regarding land transport modes (non-restriction of daytime or land transport flags, creation of new infrastructures, privatisation of this or that operator, maximum charge or minimum capacity for a rail service, etc.), the quality of the land service for the port forms part of the project environment, which should be analysed, and frequently included in any analysis of the commercial positioning of the port.

Port of Maputo in Mozambique

***Partnership in the port context:** the public port authority has awarded a franchise for the Matola terminal to a private operator, with the aim of developing transit traffic for the export of coal from South Africa. As the admissible draught of vessels is a major strategic element for the operator, the contract stipulated a minimum access channel depth guaranteed by the port authority. Non-compliance with this commitment has been claimed by the franchisee, for exemption from payment of the scheduled fee.*

***Partnership in the transport chain context:** formerly managed by a public authority, the port itself and the railway which serve the port, are in the process of privatisation. Financial analysis has demonstrated that the charges practised led to substantial profitability for the port, and a major deficit for the railway. Separate privatisation requires adjustments, in order to balance the two franchises without raising doubts as to the global cost of the transport chain for customers, the basis of corresponding market surveys. A solution under consideration involves the creation of a joint price regulation authority for the port and railway franchises.*

3.4.4. Management of the commercial risk by the operator

Once the principles of regulation and guarantee as described above have been defined and accepted, the operator is finally face to face with its customers. Even in a monopolistic situation, the quality and price of the services provided by the operator have a direct impact on port demand. This is eminently desirable. The operator consequently extends its marketing or commercial actions.

Where the franchise customers are limited in numbers, or where a small number of customers represent a major share of the activity, the franchisee can protect itself against the traffic risk by means of a "take or pay" type contract, namely a long-term contract under the terms of which the customer undertakes to provide a minimum level of traffic, for which it pays a given sum whether the service is used or not.

These main customers, regular line ship-owners or large shipping companies, are frequently project sponsors under these circumstances, following a policy similar to that highlighted for construction companies or operators. It is then the customer-shareholder which carries part of the customer risk.

However, this approach has a number of limitations, already mentioned, with the risk of discrimination against non-shareholder customers. In such a case, a satisfactory solution is provided by the signature of "take or pay" contracts between an independent terminal operator and its customers.

Richard's Bay coal terminal: A wholly private terminal

South Africa is one of the leading world exporters of coal. The seven most important mine operators in the country have funded, built and now operate a huge coal terminal, with exceptional rail access facilities, to serve their export business. The terminal has no public service obligation, and serves its shareholder customer traffic on a priority basis, placing the small producers in a situation of dependence. This means the latter are obliged to sell their production to large operators, or use other, less competitive and more expensive ports (Durban or Maputo).

3.4.5. Conclusion

The principles of sharing the commercial risk between the franchisor and franchisee are complex, depending principally on the level of regulation imposed on the franchisee by the franchisor, and can only be determined by detailed analysis on a case by case basis.

As a general rule, it appears desirable to leave the commercial risk with the franchisee, the positioning of its service with respect to competition on the one hand, and the expectations of the market on the other, being an essential component of the management policy of a company, while providing an incentive to reduce costs. Where regulation is required, the constraints are defined in advance, and formalised in the form of a specification, so that the context in which the operator acts freely, although at its risk and peril, is clearly identified.

In the case of a public service monopoly situation, the level of regulation required nevertheless leads to the introduction of strict rules which restrict the freedom of action of the operator, as regards its commercial positioning and consequently its capacity to manage the commercial risk. It may then be necessary for the commercial risk to be limited, or shared with the franchisor. It is desirable to include contract clauses providing for periodic revision of franchise conditions, applying procedures to be defined, in order to adapt to contextual changes.

Furthermore, the port authority influences the competitiveness of the port, through the services which it provides directly or which it controls. In this respect, the port authority is a partner for the operator like any other. This justifies commitment of the port authority as regards the level of its services, in the same way as an ordinary operator.

3.5. CONTRACTUAL RISKS

Partnerships between the port authority and franchisee on the one hand, and the franchisee and its suppliers, lenders, customers and sub-contractors on the other, are expressed in the form of varying types of contract. The objective of this final part of the report is not to revert in detail to the content of these contracts, but to highlight the principal risks involved in the contractual approach.

3.5.1. Contract management

Apart from the clauses setting out the procedures for implementation of the partnership, the contract concluded between the port authority and the operator must also define the principles government management of the contract, principles which also represent a risk area for the parties involved. The main aspects concern:

- **revision clauses:** we have frequently emphasised the impossibility, at the outset of the project, of foreseeing all the measures which will subsequently apply over a period of several decades. This means that revisions will be required to adjust the terms of the contract to changing situations. The conditions and procedures for these revisions must be defined: periodic revision at pre-defined intervals, revision scheduled for key project dates, revision triggered when a particular traffic level is reached, revision at the request of one or other of the parties, etc.;
- **contract termination or renewal clauses:** the contract period initially planned is obviously a major risk aspect for the operator. Possibilities for renewal or eventual prolongation must be defined, as also procedures for take-over or repurchase of the various project assets on termination of the contract;

- **early termination clauses:** these clauses define the causes of cancellation or early termination at the request of one or other party, and the applicable procedures relating to penalties or compensation. These clauses must also be coherent with loan contracts, where the latter provide for a lender's right of substitution in the event of the bankruptcy of the operator;
- **procedures for settlement of disputes:** this aspect was addressed in the section on political risk management. These procedures cover settlement out of court, the eventual intervention of independent experts subject to prior acceptance by the parties, and naturally arbitration clauses (place, applicable law, arbitrator, expenses, etc.).

3.5.2. Indexation risk

The inclusion of indexation formulas has been mentioned on a number of occasions, in connection with changes in charge rates, long-term contracts with customers or suppliers, operating contracts, etc. This method, designed to enable the operator to cover or reduce certain risks, including the inflation risk in particular, itself induces other risks:

- risk of deviation of the indexation formula from the realities of the situation over a certain period;
- risk of divergence between the indexing conditions of different contracts (procurement, operation and sale).

The risk for the operator is that the indexing formulas can lead to an increase in costs which exceeds the increase in revenue, and for the franchisor, that prices rise too high when competition is inadequate.

3.5.3. Credit risk - bonds

The methods for sharing or postponing the risks mentioned in this report frequently lead to the definition of contractual obligations, and provision for financial sanctions if these obligations are not met, namely their conversion into financial obligations (payment of penalties). This in turn generates the risk of the partner being unable to meet its financial obligations. This is the credit risk.

The most efficient method of ensuring that the partners honour their financial commitments is to set up bank bonds. These are frequently demanded of the franchisee by the franchisor, or of its private partners by the operator. The amounts and call conditions for these bonds must then be adjusted so as to reflect, accurately, the commitments of the parties. On the other hand, the operator's credit risk on the franchisor cannot be covered in this way, and generally remains a political risk.

4. APPROACH OF THE DIFFERENT PARTNERS

This report has been largely devoted to analysing the principles of risk sharing between the public port authority and the private franchisee. This section takes a quick look at another aspect, without going into great detail, namely the fact that each party carries other risks which are particular to it, and that the various protagonists of the financial package for the project company do not share the risks which they carry to an equal degree.

4.1. FRANCHISOR

The primary issue for the port authority is to identify a balanced set of measures, the port authority being responsible for defining this essential state of balance. This requires expertise in numerous areas, and can involve recourse to the services of specialist consultants. Above and beyond the terms of the contract concluded with the operator, which defines risk sharing, the very personality of the sponsors induces major issues for the port authority, in terms of:

- the capacity of the operator to comply with the terms of the contract;
- the continued commitment of the various shareholders;
- the commercial positioning of the operator, with particular reference to the equal treatment of users or customers; and
- the transfer of technology, or the participation of national players in the project.

This means that the selection process for the partner is a matter of prime importance for the public authority. Apart from financial objectives (restriction of charge rates and subsidies to the minimum, and maximisation of the fee), the port authority must be able to select a reliable partner, one capable of managing and carrying all the risks allocated to the partner under the terms of the contract, and which will not be liable to adopt discriminatory behaviour towards users. Recommendations relating to the management of calls for tender are published by the principal sponsors [10], [11], [13], [14] and [22]. These documents describe the most relevant selection criteria and methods for achieving the satisfactory selection of candidates, in detail. The involvement of the institutional sponsors in these privatisation operations also includes the provision of assistance to the local authorities. The sponsors thus play the dual role of lenders and advisors vis à vis the franchisor.

Apart from the question of partner selection, there is also the problem of the continued commitment of the shareholders, with the particular risk of the initial shareholders disposing of their interests in the project company to third parties the characteristics of which do not meet the expectations of the franchisor (problem of commercial discrimination in particular). This risk must be covered by appropriate contractual clauses.

African west coast operators

The ports of Dakar, Abidjan, Cotonou, Lomé, etc. on the west coast of Africa are faced with similar difficulties. A public monopoly management situation has long resulted in high costs, these being reflected in extremely high prices despite frequently mediocre performance. However, the introduction of private management is leading to a power struggle between the two main competing ship-owners serving the region (more through the leasing of the most favourably located sites or exception to the public monopoly of handling activities, rather than by the granting of real franchises). This situation places doubts on the implementation of BOT arrangements for the creation of new terminals, or the extension of existing terminals. There is also the risk of continuation of an oligopolistic situation, making it difficult for other ship-owners to enter the market.

4.2. SPONSORS

Having first analysed the risks of the project, the shareholders initially seek adequation of the level of risk involved with the expected return on the operation. Their involvement consequently depends on their *a priori* assessment of indicators such as the project IRR, investment coverage ratio or return on equity.

However, apart from this positioning, which is that of an investor pure and simple who is looking for dividends, each sponsor generally adopts its own particular approach according to its own issues, enabling it to reduce this risk/shareholder return profile. For example:

- **a constructor or equipment supplier** seeks to maximise its margin for the construction phase, through the upstream services which it provides;
- **an operator** seeks a return on the facility management services which it provides;
- **a customer, shipper or ship-owner** is looking for a high quality of service and reasonable charge rates for the long term [19];
- **a "pure" investor** is primarily looking for the permanency of the project throughout the investment return period.

The issues as seen by the various sponsors can lead to different expectations in terms of franchisee policy. This situation also induces major differences in risk carrying, or real investment return period time scale terms. These distortions must be managed by the franchisee consortium, but also concern the franchisor. This is because they can lead to situations which are prejudicial to the general interest as regards continuity of service for example.

4.3. LENDERS

The lenders are primarily looking for a project having the capacity to repay its debts. They consequently adjust the amount of the debt and the repayment profile according to the annual and actuarial debt coverage ratios.

Apart from these safety ratios, the lenders frequently impose other constraints on the sponsors, in order to ensure their continued commitment throughout the known repayment period. This demand stems partly from the fact that the loans are not (or only partially) guaranteed by the project assets, which are not realisable, but principally from the forecast cash flows for the period of the loan.

The lenders therefore call firstly for a minimum equity investment on the part of the sponsors. From this point of view, the lenders consider the replacement of this involvement by a subordinate debt, which presents the same advantages, as acceptable. Furthermore, reserves can be set up for the purpose of blocking eventual project cash flow surpluses, and prevent the shareholders from recovering their equity contributions before borrowing has been repaid. It is also rare for loans obtained to be genuinely without recourse, and the lenders frequently impose guarantees on the part of the sponsors, in particular during the construction period [1], [9].

The techniques adopted by the lenders to restrict their risk also include various other measures including comfort letters or commitments by the franchisor, domiciliation of revenue or debt, assignment of debt, technical and financial performance bond, etc.

5. GENERAL CONCLUSION

It is not an easy matter to propose universal principles for risk sharing, in view of the widely varying characteristics and environment of port projects.

The public service dimension with which the public authority assigns to the activity is, as emphasised repeatedly in this report, a core element in the definition of risk sharing procedures. However, this notion of public service is by no means universal. While some principles are constant, the definition of public service varies from one country to another, and is not even constant in time [4] in a given country.

This is consequently a major aspect to be taken into account in preliminary thinking on the subject of the introduction of private management for ports. This aspect is all the more delicate as the initial situation is frequently one of a stagnant public sector, incapable of clear identification of those of its responsibilities which fall within the public service domain.

The activity of a port terminal operator cannot be qualified as a public service in all cases, and is more akin to a purely industrial activity in certain instances. Even in the latter case however, the activity of the port terminal operator cannot be fully assimilated to that of a conventional company, as the notion of partnership with the port authority is still present, although the levels of regulation and guarantee required are considerably reduced.

However, in a case where the public authority assigns this public service dimension to the activity, it is legitimate for said authority to retain control of the activity, while being free to delegate actual implementation. Regulation of the activity of the delegatee to a greater or lesser degree is then required, and the delegatee must reconcile integration of the right of fair competition with protection of the interests of users (or customers). This has complex implications as regards risk sharing, the procedures for which must be very carefully adjusted so as to achieve a fair state of balance, one which respects the constraints of the parties involved. The main objective of this report to ensure that the lines of approach which it proposes can be of assistance to the protagonists involved in port projects in achieving this state of fair balance.

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APPENDIX

**QUALITATIVE ANALYSIS
OF MAIN RISKS INVOLVED IN A PORT PROJECT
(CHECKLIST)**

I. COUNTRY RISK

Government / administration

Stability

Reputation (negotiations, administrative inefficiency)

Links established

Franchisor

Reputation (negotiations, administrative inefficiency)

Links established

=> **Political risk: low, medium, high**

Currency

Revenue in foreign currency?

Revenue in local currency?

Stability of local currency over last few years

Convertibility of local currency

=> **Exchange risk: low, medium, high**

Social

Does the operation induce a major reduction in personnel?

If so, is a redundancy scheme planned?, funded?, by whom?

Must a proportion of local personnel be taken on?

Qualification of local labour?

=> **Social risk: low, medium, high**

Taxation

Level of knowledge

Profits tax?

Sales tax?

Withholding on dividends or intra-group transactions?

Stability of fiscal system

=> **Tax risk: low, medium, high**

II. TRAFFIC RISK

II.1 MARKET

Activity

Traffic established?

stable

sharp fluctuations

steady growth

New traffic?

Growth factor

Not applicable

General economic activity

Sector/domain activity

Acquisition of market share

Previous quality of service

Non-existent
Poor/fair/good

=> **Prediction reliability: poor/fair/good**

Customers

Identified major customers
"Atomised" market

Competition/captive traffic

Present situation

Competitor terminal in port?
Competitor terminal in country?
Competitor corridors?
Traffic volatile or stable?

Future situation

Contractual guarantee of exclusivity?
Entry barriers?

Risk of changes: low/medium/high

=> **Risk of competition: low/medium/high**

II.2 OBLIGATIONS

Public service obligations

Technical

Minimum capacity
Performance standards

Tariffs

Free rates
Price cap
Escalation formulas
Cost +
Exemptions?

Fee payable to franchisor

Up-front fee ?
Fixed annual part?
Fixed amount?
Judgement criterion?
Variable annual part?
Fixed amount?
Judgement criterion?

Franchisor subsidy

Investment
Fixed annual part?
Fixed amount?
Judgement criterion?
Variable annual part?

Guaranteed traffic?

Cost + fee

II.3 GUARANTEES

Extra-franchise port services

What port services do my customers require?

Who is in charge? (me, public or private port authority, potential problem)

Level of service guaranteed?

Level of service satisfactory?

Price level satisfactory?

pilot service

inshore pilot

haulage

buoying

maintenance of access

maintenance of bassins

maintenance of protective structures

other

Operating hours for these services

Degree of sensitivity to inspection

customs

vet-phyto

other

Vessel waiting time

Priorities granted

Operating hours for port or various services

Land transport

What modes of transport are used for my traffic?

For each mode:

capacity of operators

quality of service of operator(s) (time taken, security, etc.)

obstacles to the work of these operators (regulatory, political, etc.)

III. PROJECT RISKS

Investment

Dredging

Infrastructures

Buildings

Facilities

Missions

Design

Construction /installation

Rehabilitation / repair

Maintenance (infra, super, dredging)

Operation

Security

Amount

Obligations relating to investments

Functional specifications

Technical specifications

Functional specifications related to a threshold (future subject)

Information supplied and technical specifications imposed

Investigation campaigns

Contractual information?

APS

APD

Work and supply contracts

Franchisee-employer

Approval of franchisor required?

Call for tenders obligatory? thresholds?

Maintenance standards imposed?**Construction period/Commissioning date**

Under-estimated

reasonable

comfortable

Penalty level

Operation

Public suppliers (water, electricity, etc.)

Safety rules

Sub-contracting authorised/approval

IV. CONTRACTUAL RISKS**Status of project company**

State or franchisor has blocking minority interest?

Proportion of capital reserved for local investors?

Contracts with third parties

What contracts taken over by franchisee?

Franchisor's approval required for signature of new contracts?

Bonds

Nature of bonds

Amount

Call conditions

Consequences of legislative regulatory changes

Borne by franchisor

Borne by franchisee or not specified

Possibilities for recourse

Contract revision

Instigation of franchisor

Instigation of franchisee

No provision

Force majeure

Causes

Procedures

Early termination

Franchisor's request

Causes

Procedures

Franchisee's request

Causes

Procedures

Disputes

Possibilities for claim

Contract law

Arbitration clause

V. FINANCIAL ASPECTS

Franchise period

Project IRR over this period

Payback period

VI. TENDER ASSESSMENT CRITERIA**Preselection**

Criteria

Technical assessment

Criteria

Financial assessment

Criteria