Multinational Investment Attraction: Principal–Agent Considerations

RAM MUDAMBI

Abstract. Government agencies are becoming increasingly involved in the process of providing investment supports to attract foreign direct investment (FDI). This paper focuses on the problem of how best to structure the investment supports. Five different types of investment supports are theoretically and empirically analysed. In each case the effect of the principal–agent relationships between the MNE investor and the agency charged with attracting FDI are assessed in the strategic context. Theoretical analysis suggests that in some cases, governments may prefer support schemes that appear to be more expensive, but have better incentive or risk-sharing implications. Empirical analysis suggests that MNE firm characteristics are related to the type of investment support package obtained.

Key words: Government investment supports; MNE investment location; principal-agent theory.

JEL classifications: F23, H43, L52.

1. Introduction

Government investment support schemes are now a standard entry on the list of items considered by corporate decision makers (Rolfe et al., 1993). Numerous examples of local and national authorities setting up elaborate incentive schemes and thereby providing substantial benefits to multinational enterprises (MNEs) in return for siting investment in their areas of jurisdiction are well documented. These schemes are typically set up under the aegis of an ‘inward investment agency’ or IIA. Typical examples include the Industrial Development Authority (IDA) of the Republic of Ireland (Watzke, 1982) and various regional IIAs in Britain (Dicken and Tickell, 1992).

The competitive environment of these IIAs has now become much more difficult with an increase in the number of viable sites and with foreign direct investment (FDI) shifting away from greenfield projects and towards a widening range of activities like joint ventures, acquisitions and alliances (Buckley and Chapman,
1993; Buckley and Glaister, 1994). In this context, it is particularly important that the investment attraction activity is structured in the most efficient manner possible.

This paper takes as given that the government can gain from encouraging MNE investment. The strong encouragement of MNE investment is the norm (Young, Hood and Wilson, 1994). It is true that MNE investment attraction activities can be viewed as non-productive rent-seeking in the sense of Krueger (1993). However, given the widespread prevalence of these activities, the decision of any particular government to offer investment supports is best viewed as a Nash best response to investment supports offered by others. While the resulting Nash equilibrium in which all governments offer investment supports is Pareto dominated, it is nonetheless robust.

Many previous studies have qualitatively assessed the strategic options open to the investing firm. De Meza (1979), Caves (1996), Eaton and Grossman (1986), Dunning (1988), Collie (1992) and Mudambi (1995a) have all examined various aspects of the investment decisions of firms in the context of multinational activity. There are also many quantitative analyses of the effects of different policy variables on the investment decisions of multinational firms. Greenaway and Nam (1988) analyze the effects of trade policy instruments like tariff walls and non-tariff barriers, while Grubert and Mutti (1989) and Shah and Slemrod (1990) examine the effects tax policy. Wheeler and Mody (1992), Woodward and Rolfe (1993) and Mudambi (1995b) study the preferences of decision-makers within multinational firms with regard to the location of investment. Cheong and Khem (1988) suggest a set of global government strategies. However, there does not appear to be much work on the design of government support packages for MNE investment attraction.

In structuring an investment support package, it is important to analyse the interaction of all the parties involved—the government sponsor, the IIA, the MNE and a private financial intermediary. The interaction becomes even more complex when international donor or banking agencies become involved. This makes for a fairly complex strategic game and it is not straightforward to design supports that will achieve the government’s objectives in the most efficient way.

Finding the most effective ways to structure investment supports is in many respects similar to the challenge facing investors, who seek appropriate behaviour on the part of entrepreneurs who have projects, but insufficient financial resources. In both cases, everything depends upon entrepreneurs choosing projects with appropriate risk levels, avoiding excessive risks after starting the project and exerting maximum effort to make the project succeed.

In this paper, a number of the most commonly used investment support schemes such as grants, tax abatements and subsidised loans are analysed with two objectives:

(a) To clearly identify the mix of advantages and disadvantages of each scheme and
(b) To assess whether particular types of MNEs have strong preferences for particular types of schemes.

The first objective is addressed using principal-agent theory, based on the underlying strategic risk–return considerations. It emerges that governments may prefer support schemes that appear to be more expensive, but have better incentive
or risk-sharing implications. The second objective is addressed by empirically examining some survey data on MNE investment decisions. The characteristics of particular MNE investors are empirically examined relative to the type of support packages they have obtained. Strong relationships between firm characteristics and the nature of the support package are found.

The research analysis is presented in Sections 2 and 3. The interests of the parties involved in the MNE investment process are discussed in Section 2. In Section 3, the results of this analysis are applied to assess the merits and weaknesses of five commonly used investment support schemes. In addition, the various support instruments are analysed empirically relative to MNE firm characteristics. Some concluding remarks are offered in Section 4.

2. The Underlying Principal–Agent Relationships

Government supports to attract MNE investment can improve the overall development prospects in a relatively backward area–FDI is recognised as a major contributor to regional development (Young, Hood and Peters 1994). Over time, the MNE development contributes towards providing jobs, raising the local standard of living and improving the tax base. Completing the circle, these gains finance the original investment supports.

Typically, the MNE investor attempts to put together a package consisting of the government assistance combined with its own funds and perhaps those of a (private) lender to accumulate the required project investment. The investor acts as the project manager, and the project proceeds must be divided so that taxpayers obtain a competitive rate of return.

The government faces the problem of structuring the investment support package to provide the least possible assistance to ensure that the project is undertaken, whilst encouraging the MNE investor to maximise capital and labour deployment. The ideal scenario is one where the private parties are rewarded solely on the basis of the performance of the project, ensuring that they bear all the risk. However, this ideal solution founders on the issue of non-project-specific risk, i.e.

* Private lender’s rate of return on loan funds

**Figure 1.** Typical principal–agent relationships in project implementation.
risk associated with factors outside the control of the MNE investor. Dislocations caused by terrorism, a widespread natural disaster or a national economic recession can cause a project to greatly under perform its potential. The main problem with forcing the private parties to bear a disproportionate amount of the risk, is that their cost of doing so may exceed the government’s cost of bearing it.

A well-known result from the public finance literature is that the government will usually have the lowest cost of bearing risk because it is likely to be most diversified. This is because its tax revenues emanate from the entire community (for example, Gardner, 1978). There may be efficiency gains available to taxpayers assuming some of the risks of project. However, this may leave the MNE investor in the happy position of keeping most of the gains from successful projects and sharing the losses of failed ones with taxpayers.

A complete understanding of each participant’s role in the development stage as well as the management stage of the project is essential to developing optimal investment supports. In the modelling of this structure, a number of theoretical approaches are possible. Cooperative games and matching models both provide relevant results. However, since the prime consideration is the division of project risk, principal–agent models are the most appropriate. The role of each participant is therefore analysed in a principal–agent setting, pointing out how poorly structured investment supports may induce perverse responses.

The Government

The evaluation of public investment differs from private investment in the broader scope of relevant costs and benefits. Non-market benefits that cannot be recovered by a private enterprise figure as gains in a public investment decision (Bailey, Harte and Sugden, 1994). Further, the costs associated with investment supports for the investment project are incurred before any gains appear. This timing differential and the risk adjustment are taken into account by calculating the net present value (NPV) of the project to the government. Although these estimates are subject to error, calculating them enforces the discipline of detailing the expected cash flows associated with the project.

While the government is typically more diversified than most private investors, with a small country dealing with MNE investors and multinational banks, this may no longer be true. Multinational banks, in particular, are typically very well-diversified (Madura, 1992). It is unlikely that the efficient contract in this situation involves any transfer of risk from the investors to the government.

Another consideration is that the success or failure of a investment project is strongly related to the health of the local economy. Thus, a project will probably succeed when the rest of the community is in good economic health but will most likely fail (and drain local resources) when the rest of the community is under economic pressure. It is crucial that the government evaluate its risk exposure, in this light.

The Inward Investment Agency

Actual implementation of investment supports is usually carried out by an IIA which works under guidelines issued by elected officials. The authority is responsible for analysing proposed projects and negotiating the supports with MNE investors, acting as an agent for the taxpayers. There are now a wide variety of IIAs
whose functional responsibilities, range from policy formulation to the monitoring and after-care of investors. Indeed, IIAs can often be distinguished from each other in terms of the range of functions they perform (Young Hood and Wilson, 1994). However, the objectives of all IIA activities can be summarised under the headings of targeting and timing, i.e. locating MNE investors (Kotler, Haider and Rein, 1993) and providing incentives to hasten their conversion from export to local production (Hood and Young, 1979; Buckley and Casson, 1981).

The government must perform a delicate balancing act in evaluating the IIA. Rewarding the authority on the basis of the gross size of its project support portfolio, i.e. on its expenditures, creates incentives for the poor scrutiny of projects. On the other hand, rewarding the authority on the basis of the commercial success of supported projects means that there is little to distinguish it from private commercial lenders; it will end up supporting projects that would have been undertaken by private investors without supports (Dieke, 1995). The socially valuable, but commercially marginal projects the authority was set up to finance will not receive support. There seems no alternative to using social NPV computations, with all the associated errors.

Finally, the government must decide whether to encourage the IIA to compete with other IIAs for particular investment projects. Bidding contests transfer taxpayer gains to the private MNE investor (Arthur, 1990; Dicken, 1990). In intense contests, it is likely that the successful IIA is the one which has most overestimated the project’s social value, leading to a net loss to taxpayers. This is the so-called ‘winner’s curse’ (Thaler, 1988). These considerations have been relevant in a number of recent bidding contests for major Asian investment projects in Europe. Indeed, the internecine bidding amongst UK IIAs has led one senior development expert to comment, “. . . UK taxpayers are not getting a good deal if you allow for unrestricted bidding from various parts of the country . . . There are supposed to be rules . . . but people have a habit of breaking them . . . All this does is set a new benchmark for the next round of negotiations” (Waples, 1996).

The MNE Investor

For the purposes of this analysis it is assumed that the development of the project and its subsequent management are carried out by the same firm. With government investment supports, the project may be steered towards benefiting the local economy as a whole. Further, the structure of the supports can influence the types of projects initiated and the manner in which they are managed.

Since only the developer knows precisely the level of assistance that will make the project worth undertaking, the investment supports will typically yield some (hopefully small) transfer of resources from taxpayers to the developer. Supported projects will result in above-market risk-adjusted rates of return, computed using standard financial models. ³

Another important issue here is the division of project risk. An efficient contract would require the government to absorb the risk that is beyond the control of the MNE investor. In reality, the MNE can influence the riskiness of the project in many ways. First, it can submit the more risky projects (or sub-projects) to the IIA for investment supports, financing the less risky ones internally or through the private capital markets. This process is called risk shifting in the corporate finance literature (Barnea, Haugen and Senbet, 1980). Second, a developer may choose to forgo additional investment in the safer parts of a project if most of the consequent
profits would go to taxpayers or other creditors in the form of accelerated repayments of subsidised loans. This problem is called the underinvestment problem in the corporate finance literature (Myers, 1977).

All these considerations highlight the point that if the government absorbs too much risk, the MNE investor may be tempted to further increase the risk of the project. Careful structuring of the support package is necessary to reduce the developer's incentive for taking on more risk.

_The Private Lender_

Ensuring the participation of a private sector lender, i.e. bank or consortium of banks in the financing of the project provides the IIA with independent evaluation and monitoring of the project. However, it must again be noted that the structure of the investment supports will have an impact on the incentives of the bank.

The relative risks borne by the development authority and the private sector bank will depend upon their seniority as creditors in the event of project bankruptcy. If the bank has seniority, then it bears less risk and has less of an incentive to evaluate and monitor the project, even if its actual financial commitment is larger. As will be seen below seniority is more important than actual exposure.

_3. Investment Support Schemes_

In this section, five commonly used support schemes are theoretically and empirically assessed in terms of the incentives provided to the parties associated with the project (Wells and Wint, 1990; Netherlands Economic Institute, 1992). The support schemes vary in terms of their costs and their effect on project risk allocation. They also vary empirically in terms of the type of firms that they appeal to. The schemes considered are grants, subsidies for infra-structural development, tax abatement, loans and loan guarantees and interest subsidies.

_Grants_

These involve the transfer of real or financial resources from the taxpayers to the MNE investor, who then has no obligation of repayment (Jenkins, 1992). This form of support is often given by granting the investor land (Basset and Smith, 1996).

The investor/developer has the incentive to declare the project a failure after investing a small amount of resources with a view to keeping the proceeds of the liquidation. Applicants must therefore be carefully screened. In addition, the requirement of a relatively large investment by the developer can reduce this tendency. The tendency to liquidate the project declines as the developer's stake increases. However, the presence of the grant in the project's capital structure will always soften the impact of a bankruptcy declaration and make it more palatable. This is particularly true of investment projects where the revenue expectations are not met and future prospects are not promising.

The incentives for the private lender to evaluate and monitor the project remain strong, as the grant does not affect its risk exposure. The IIA does not share in any gains from successful projects but it also is not exposed to any additional risk from project failure. All the costs of the investment support are borne up front and there is no uncertainty about them. The risks are borne, however, by the taxpayers, as they
receive no return in the form of job creation and corporate tax revenues from the enterprise if it fails.

**Infrastructural Development**

Upgrading of airports and recreational facilities, subsidies for worker training and the provision of roads electricity, water and sewerage links, all come under this heading. Like grants, the development authority does not share in the gains of a successful project (Bodlender and Ward, 1987). However, there are two major analytic differences between the two. First, the MNE investor does not retain ownership of any resource of value if the project fails and the bankruptcy incentive is removed.

Second, unlike grants, infrastructural development can rarely be finely targeted. Thus, the improved infrastructure will benefit many parties other than the MNE investor and in the event of project failure, the local area retains something of value. Thus, the infrastructural developments undertaken as part of a series of investment supports for Nissan's plant in Sunderland have aided many SMEs operating in the area (Lorenz and Smith, 1996). The French motorway network built to service the Channel Tunnel (as an aid to Eurotunnel) has greatly increased the flow of Belgian tourists to Normandy hotels and resorts. Both these examples are illustrative.

This may be a reason to hesitate in allocating the entire cost of the infrastructural improvement to the particular investment project which sparked it. Only if the improvements are project-specific should the entire cost be so allocated.  

**Tax Concessions**

Typically, these involve favourable changes to the MNE investor's property and/or profit tax liability. The incentive structure of tax concessions is very positive. This is because the benefits are only gained if the project succeeds. With project failure, the developer's tax liability would probably be zero in any case, and so the supports provide the developer with no net gain and impose no costs on the exchequer. However, if the project succeeds then the developer obtains the benefit of a lower tax liability and the overall benefits of the project should be positive (Bartik, 1985; Bloom and Mostert, 1995; Mudambi, 1995b).

Tax concessions minimise the risks borne by the government, increase the overall expected return on the project and increase the MNE investor's incentive to make the project a success. Only in cases where the government's cost of risk-bearing is substantially below that of the investor, i.e. where the investor is relatively undiversified, will tax concessions result in an inefficient allocation of risk.

**Loans and Loan Guarantees**

Loans may be provided to the MNE investor in a number of different ways.

(i) **Direct Finance**: This is the situation in many LDCs, where development authorities have financial arms.

(ii) **Full Loan Guarantees**: The actual loan is made by a private lender, but in the event of default, the IIA is liable for repayment.

(iii) **Partial Loan Guarantees**: In the event of default, the authority is liable for the first $\chi$% of the loan, while the private lender must seek the remainder from the receiver.
There is no difference between a direct loan and a full loan guarantee in terms of the allocation of project risk. Under both schemes, in the event of project failure, the government is exposed to the full extent of the loan. Thus, any shortfall between the amount raised by the receivers and the amount of the loan must be met from government coffers.

While these schemes are similar to grants, they provide a better incentive structure. With project success, the developer's returns are lower as it must repay the loan. With project failure, the proceeds of receivership do not accrue to the developer, but to the relevant lender. The incentive to prematurely liquidate the project is removed. Nonetheless, as in the case of grants, the MNE investor must be required to put in the appropriate level of investment to ensure that a high level of effort is forthcoming.

When considering partial loan guarantees, the order of precedence or seniority of the project's creditors is very important (Tschinkel and Wall, 1994). If the private lender is given seniority, its incentives for monitoring the loan are considerably reduced. One alternative that can be used is shared seniority, under which both the IIA and the private lender share proportionately in the loan losses of the project. A second alternative is for the IIA to claim seniority by specifying that all amounts recovered by the receiver will be deducted from the maximal reimbursement (see 1 in Appendix 1).

Under partial loan guarantees, the effects of seniority upon the actual allocation of project risk between the private lender and the IIA will depend upon the percentage not recovered by receivers of typical failed investment projects in the area. However, the private lender's risk exposure increases as its seniority declines (see 2 in Appendix 1).

Of course, the specification of seniority in the debt contract must also consider the question of enforcement. An important part of almost all Chapter 11 bankruptcy proceedings in the US is the renegotiation of the enterprise's debt obligations. A crucial result that emerges from the theoretical literature (Gale and Hellwig, 1985; Kahn and Huberman, 1988; Bolton and Scharfstein, 1996; Hart and Moore, 1997) is that renegotiation becomes more likely as the debt is used to finance a larger share of the project's assets. Thus, the IIA must consider not only its contractual position with regard to its seniority as a creditor, but also its bargaining position in the event of renegotiation.

It would appear that loan guarantees are more efficient in terms of their usage of public funds than direct loans, but this ignores the correlation between the chances of project success and the local economic climate. Direct loans require public money to be raised at the stage of project implementation (typically growth periods), whilst loan guarantees require it to be raised at project failure (typically economic slumps). The failure of a large number of loans which are (perhaps partially) guaranteed by the IIA when it is already under severe pressure could place heavy burdens on the sponsoring government.

**Interest Subsidies**

The similarity between an interest subsidy and a loan or a loan guarantee is that they all lower the developer's effective cost of funds. However, interest subsidies have very different incentive and risk allocation effects.

The interest subsidy scheme does not affect the risk borne by the private lender. Thus, for less diversified private lenders, the risk allocation properties of the scheme
are not efficient. This must be weighed against the benefits obtained through better private evaluation and monitoring of the project. When the private lender is well diversified (e.g. a large multinational bank) interest subsidies may be the best scheme for the IIA to adopt.

The amount of subsidy payable is the cost of the scheme. It may even be payable to the developer in the event of project failure. However, it must be clear that the authority is not liable for any amount in excess of the subsidy. Otherwise the scheme will have elements of a loan guarantee in it and the earlier analysis will become relevant.

**Empirical Results**

Finally, the question of MNEs’ preferences over the various types of investment supports must be addressed. This question is addressed empirically, by relating the investment support package obtained by MNEs to their firm-specific characteristics. The results of this exercise should aid IIAs in designing support packages tailored to their target group of MNE investors.

Empirical data were obtained, in the main, from a postal survey. A list of MNE engineering and engineering-related operations in the West Midlands region of Britain was compiled from business directories. The region was chosen because it has been Britain’s most successful region for attracting inward investment, with more than 900 companies investing over £3 billion and employing over 100,000 workers (Griffiths, 1993). After phone confirmations, a final list of 224 companies with personal contact names was assembled for the purpose of a directed mail survey.

An overall of 85 responses were received to the mail survey (37.9%). Of these, four were found to be national firms mistakenly identified as MNEs and seven were unusable for various other reasons, leaving 74 (33.0%) valid responses for evaluation. The response rate is well within the range expected for an unsolicited mail survey. The survey collected information on MNE firm-specific characteristics, the investment flows into the UK and aspects of the investment support package that each had received. The details of the variables used in the study are provided in Appendix 2.

Principal component factor analysis was used to extract factors underlying the MNEs’ assessment of investment supports. The latent root criterion was used to determine the number of factors extracted. The rationale is that the variation in each variable is unity after the variable has been standardised. Thus, each factor should account for the variation in at least one variable if the factor is to be considered useful from a data summarisation perspective (Churchill, 1995). There were four factors with eigenvalues greater than unity (see Table 1). The eigenvalue of the fifth factor was 0.8828. Thus, four factors were extracted.

The results of the factor analysis are presented in Table 1. The first factor may be termed ‘experience’, and explains 26.5% of total variance. The duration of UK operations (DT) and the size of investment flows (IN94) load heavily on this factor. This indicates that local experience affects the size of MNE investment. GRANTS and TAX also load heavily on experience, suggesting that MNEs with long tenures in the area are particularly interested in these supports. The results also suggest that these supports are strongly related to the size of investment flows. This effect of tax concessions agrees with earlier findings (Grubert and Mutti, 1989; Shah and Slemrod, 1990; Wheeler and Mody, 1992; Mudambi, 1995b).
Table 1. Firm characteristics: factor loadings and communalities’
(Varimax Rotation)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1 Experience</th>
<th>Factor 2 Local Dependence</th>
<th>Factor 3 External Dependence</th>
<th>Factor 4 Location Risk</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRANTS</td>
<td>0.907</td>
<td>-0.017</td>
<td>-0.018</td>
<td>0.047</td>
<td>0.825</td>
</tr>
<tr>
<td>TAX</td>
<td>0.876</td>
<td>-0.011</td>
<td>0.092</td>
<td>0.005</td>
<td>0.777</td>
</tr>
<tr>
<td>IN94</td>
<td>0.780</td>
<td>0.311</td>
<td>0.114</td>
<td>0.385</td>
<td>0.866</td>
</tr>
<tr>
<td>DT</td>
<td>0.690</td>
<td>0.333</td>
<td>-0.047</td>
<td>0.328</td>
<td>0.697</td>
</tr>
<tr>
<td>EMPL</td>
<td>0.456</td>
<td>-0.693</td>
<td>0.217</td>
<td>0.199</td>
<td>0.775</td>
</tr>
<tr>
<td>INFRA</td>
<td>-0.065</td>
<td>-0.794</td>
<td>0.231</td>
<td>-0.140</td>
<td>0.707</td>
</tr>
<tr>
<td>GLOAN</td>
<td>-0.356</td>
<td>-0.673</td>
<td>0.119</td>
<td>-0.060</td>
<td>0.598</td>
</tr>
<tr>
<td>LOAN</td>
<td>-0.469</td>
<td>-0.522</td>
<td>0.108</td>
<td>0.141</td>
<td>0.524</td>
</tr>
<tr>
<td>WEXPORT</td>
<td>0.076</td>
<td>-0.225</td>
<td>0.706</td>
<td>0.078</td>
<td>0.561</td>
</tr>
<tr>
<td>SALES</td>
<td>0.230</td>
<td>0.132</td>
<td>0.708</td>
<td>-0.409</td>
<td>0.738</td>
</tr>
<tr>
<td>T</td>
<td>-0.290</td>
<td>0.191</td>
<td>0.647</td>
<td>0.321</td>
<td>0.642</td>
</tr>
<tr>
<td>RISK</td>
<td>0.245</td>
<td>0.357</td>
<td>0.130</td>
<td>0.610</td>
<td>0.577</td>
</tr>
<tr>
<td>GSALES</td>
<td>0.106</td>
<td>-0.150</td>
<td>-0.016</td>
<td>0.708</td>
<td>0.535</td>
</tr>
</tbody>
</table>

| Eigenvalue | 4.0066 | 1.9845 | 1.5783 | 1.2525 | –          |
| Variance   | 3.4483 | 2.2980 | 1.5847 | 1.4908 | 8.8218     |
| % Variance | 0.265  | 0.177  | 0.122  | 0.115  | 0.679      |

Loadings of variables associated with particular factors are shown in bold.

The second factor may be termed ‘local dependence’ and explains 17.7% of total variance. The employment of the UK subsidiary (EMPL), infrastructural supports (INFRA) and the amount of loan guarantees (GLOAN) load heavily on this factor. The load of direct loans (LOAN) on this factor is not as heavy. This suggests that infrastructural development (which includes developing training facilities) is related to the level of current or planned employment in the MNE’s local operations. Similarly loan guarantees seem to be related to local employment levels. However, direct loans are the only investment support which do not appear to be closely related to employment or any of the firm-specific characteristics.

The third factor may be called ‘external dependence’ and explains 12.2% of total variance. The sales of the UK subsidiary (SALES), the share of exports in these sales (WEXPORT) and the UK subsidiary’s experience of exporting (T) all load on this factor. MNEs with greater external dependence seem to have larger UK subsidiaries (in terms of sales) but no particular investment support seems to be particularly related to this characteristic. The fourth factor may be called ‘location risk’. Both the systematic financial risk of the UK operation in terms of earnings (RISK) and the global sales of the MNE (GSALES) load heavily on this factor, suggesting that larger MNEs may be more sensitive to location-specific earnings risk. Again, this characteristic does not appear to be related to investment supports in a systematic way.

Thus, firm characteristics as well as project characteristics need to be considered in designing investment support packages. Experience and local dependence
emerge as the important factors to consider. The results suggest that an MNE with experience is more likely to be interested in tax concessions, while locally dependent one may be more concerned with infrastructural supports.

4. Concluding Remarks

Government investment supports for investment projects have become widespread in the international competition for investment resources. The process of optimally structuring such investment supports is a complex process. This is mainly because a number of parties are involved and every aspect of the support has effects on the incentives of each one of them.

In this paper an attempt has been made to theoretically and empirically analyse the most widely used investment supports in the context of the four major parties involved in an investment project. Two important conclusions emerge.

First, different types of support structures have different consequences for the government as well as for the private MNE investor. IIA s and governments should consider not only the financial condition, but the risk aversion of MNE investors in structuring their financial packages. They should also consider the implications of alternative support schemes in terms of the incentives each creates for developers and private lenders as well as the likely effect on the government’s finances. In some cases, governments may prefer support schemes that appear to be more expensive, but have better incentive or risk-sharing implications. The various alternatives may also be combined so as to carefully calibrate the risk borne by the MNE investor, the private lender and the state.

Second, the results highlight the importance of firm-specific characteristics. Earlier work has emphasised the importance for IIAs of targeting MNEs in terms of their attractiveness for local economic development (Young, Hood and Wilson, 1994). It has been demonstrated in this paper that targeting must be carried out with due consideration given by the IIA to the strategic implications of different support packages. These in turn should be considered in the context of MNE preferences with regard to investment supports (Rolfe et al., 1993; Mudambi, 1995b). The empirical analysis indicates that firm characteristics are strongly related to the type of investment supports obtained. Thus, IIAs may gain from structuring less expensive, but more appropriately tailored support packages.

Some suggestions for such tailoring emerge from the results presented in this paper. These results relate specifically to firms in engineering and engineering-related industries and to the UK as the home country of the investment. First, firms whose local operations have long tenure and those with significant pre-existing investment in the region appear to find grants and tax incentives most attractive. Second, firms whose local operations are employment-intensive appear to be interested in grants for infrastructural development and in loan guarantees. Firms with combinations of these characteristics are likely to be responsive to a wider range of incentives.

This analysis suggests that policy-makers at IIAs need to follow a two-stage strategy in a successful programme of MNE investment attraction. The first stage consists of ‘targeting’ the most appropriate MNEs and the second stage consists of ‘tailoring’ the appropriate package of incentives for the firms being considered. The first stage without the second is unlikely to yield the desired results.

The empirical work presented in this paper is quite preliminary, both in terms of geographic area and in terms of focusing on a specific industry. Further research
should identify how required investment supports vary between geographic regions and between different industry groups. Firms locating in Ireland may have different preferences over supports than those locating in the UK. Similarly, service firms may be systematically different from manufacturing firms in terms of their support preferences.

The study of investment attraction is still a relatively undeveloped area of study in international business. Much attention has been lavished over the last two decades on the decisions of the MNE investor, particularly with regard to relations with subsidiaries. The increasingly important role played by IIA:s in relation to MNE investment decisions suggests that more study of this area is warranted. Of particular interest would be the synthesis of the strategic considerations highlighted in this paper with the regional development considerations which have been the focus of the targeting literature.

Notes

1. It is true that there are overdeveloped locations where the government is interested in limiting rather than encouraging investment, e.g. Baum and Mudambi (1995) report this to be the case for the resort industry in Bermuda.
2. For the classic analyses of cost-benefit analysis applied to public investment decisions see Marglin (1963) and Little and Mirrles (1969).
3. An important element in determining the minimum level of investment supports required by the MNE investor is its level of risk-aversion, or the extent to which it is discomfited by risk. This is inversely related to its level of diversification. Thus, a well-diversified investor firm will be less risk-averse, and require a lower level of investment support than one which is less diversified.
4. A form of infrastructural development that is becoming very common in the hotel and resort industry is for the IIA to retain ownership of the land and buildings with the hotel firm providing the management for a fixed fee. Here, virtually all of the project risk is borne by the IIA.

References


Appendix 1: Partial Loan Guarantees

1. For example, let the outstanding loan be £100,000, with a partial loan guarantee of 40%. Should the investment project fail, the IIA will reimburse the private lender a maximum of £40,000.

Consider the alternative of shared seniority, specified by a percentage of, say, 45%. The IIA will reimburse the private lender 45% of all non-recoverables, up to a ceiling of £40,000. Suppose investment project fails and the receivers recover £70,000. Then the IIA will reimburse the private lender $0.45 \times [100,000 \cdot 70,000] = £13,500$, which is less than the £30,000 it would have to pay if the private lender had seniority.

However, if the receivers are able to recover nothing, the IIA will not reimburse the private lender $0.45 \times [100,000 \cdot 0] = £45,000$. Rather it will pay the ceiling specified by the partial loan guarantee, which is £40,000.

Now consider the alternative of IIA seniority. The private lender is now responsible for the first £60,000 of loss. If the receivers recover £70,000, so that losses are only £30,000, the IIA pays the private lender nothing. If the receivers recover nothing, the IIA reimburses the private lender the ceiling amount of £40,000.

2. The precise conditions for the private lender's risk exposure to increase as its seniority declines are derived here. Let $L$ be the outstanding loan and $\beta$ be the percentage guaranteed by the IIA. Let $\alpha$ be the percentage of loan losses reimbursed to the private lender under shared seniority. Finally, let $R$ be the amount recovered by the receivers. Typically $\alpha \geq \beta$ and this is assumed to be so.

Under shared seniority, the amount payable by the IIA to the private lender in the event of project failure is determined as

$$\min \left\{ \alpha (L - R), \beta L \right\}$$

If the IIA has seniority, the amount payable with project failure is

$$\max \left\{ \beta L - R, 0 \right\}$$

For the corner solution of $R = 0$, both schemes yield the same reimbursement to the private lender. If $R > 0$, then IIA seniority will yield a smaller reimbursement to the private lender than shared seniority if

$$\beta L - R < \alpha (L - R) \quad \text{or} \quad -L(\alpha - \beta) < R(1 - \alpha)$$

Thus $\alpha \geq \beta$ is sufficient to ensure that the private lender's risk exposure is greater under IIA seniority.
Appendix 2: Details of Variables Used in Empirical Analysis

Investment Supports

GRANTS = Pecuniary value of grants received from all government investment attraction agencies, 1990–4 (Ł '000)

INFRA = Pecuniary value of infrastructural supports received from all government investment attraction agencies, 1990–4 (Ł '000)

TAX = Pecuniary value of tax concessions received from all government investment attraction agencies, 1990–4 (Ł '000)

LOANS = Value of loans received from all government investment attraction agencies, 1990–4 (Ł '000)

GLOANS = Value of loan guarantees received from all government investment attraction agencies, 1990–4 (Ł '000)

Firm-specific Characteristics

INV94 = MNE investment flows into the UK in 1994 (Ł million)

RISK = Variance of corporate rate of return on capital, 1986–94

EMPL = Employment in the UK subsidiary

SALES = Sales of the UK subsidiary (Ł million)

DT = Duration of operations in the UK (years)

$T$ = UK subsidiary's experience of exporting (years)

WEXPORT = Exports as a percentage of the UK subsidiary turnover

GSALES = Global sales of the MNE (Ł million)