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Internationalisation of Firms: Micro
Foundations of Macro Determinants**

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**FACTORS INFLUENCING THE INTERNATIONALISATION OF FIRMS:
MICRO FOUNDATIONS OF MACRO DETERMINANTS**

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Abstract

We draw on insights from the theory of the multinational enterprise (MNE) to explain outward investment and (thus) internationalisation. We claim that micro insights from the work of Stephen Hymer, Edith Penrose and other extant theories of the MNE can serve as micro foundations of some macro determinants of internationalisation. The focus on macro determinants pursues and develops an earlier critique of the theory of the MNE by Penrose; that it fails to distinguish between intra-national and inter-national expansion of firms. We propose demand-side national business cycle considerations as a Penrose-inspired answer to the Penrosean critique. Our evidence derives from USA and UK data, supports insights from Hymer, Vernon, Penrose and our response to the Penrosean challenge.

Keywords: Hymer, Penrose, Business Cycle, Outward Investment

I. Introduction

Penrose (1987) criticized Hymer and Coase-based theories of the MNE for failing to distinguish between intra-national and inter-national expansion. The latter (internationalisation), in her view, is best explained in terms of differences between nations vis-à-vis their regulatory frameworks and other inter-national differences. The Penrosean challenge to extant theory has not been answered. It calls for a macroeconomic approach to the determinants of internationalisation. The critical question, in this context, is to what extent extant theory of the MNE (including Penrose's own views) is of some input to answering why internationalisation. We claim that it does have an important input. We try to determine this by critically assessing and synthesizing extant theory of the MNE and then extending the result by invoking macroeconomic demand and business-cycle-related considerations of help to delineating between different nations. We use macroeconomic determinants that are derived from insight from extant theory and our extension, and test this for the case of outward investment from the USA and the UK .

Structure-wise, Section II critically assesses extant theory of the MNE; Section III integrates and extends the outcome; Section IV provides new evidence and Section V concludes.

II. Extant Theory of the MNE

In his PhD thesis, completed in 1960 and published in 1976, Stephen Hymer posed the fundamental question, why foreign direct investment (FDI) versus alternative modalities of foreign operations like, for example, licensing, tacit collusion, strategic alliances and the like.

This is of course the famous Coasean question, applied to the case of FDI and the MNE. It is the question why internalize - a verb that Hymer used already in his 1960 thesis, see below. In this sense Hymer was the first 'internalization' scholar, for the case of the MNE.

In his thesis, Hymer distinguished between FDI and portfolio investment in terms of the higher degree of control conferred to the firm through FDI. The choice of FDI versus, for example, licensing was explained in terms of 'reduction of conflict' in international markets, benefits from exploiting monopolistic advantages intra-firm rather than inter-firm and 'risk diversification'. From the three reasons Hymer felt the last to be least important because it did not involve control.

Already in 1960, Hymer paid particular attention to the reasons why intra-firm exploitation of monopolistic advantages was more profitable when intra-firm, rather than inter-firm. These involved the absence of suitable licensees (in today's terms thin or absent markets), different honest or dishonest perceptions of the advantage (in today's terms 'opportunistic' and non-opportunistic perception of the advantage's value) the possibility of post-contract bilateral oligopoly or monopoly problems (Hymer, 1976, pp. 12-29).

All the above sound very modern - some very 'internalization'-like. Following the emergence of the 'internalization' (due to transaction costs) perspective, notably by Buckley and Casson (1976) and Williamson (1981), there has been some controversy as to whether Hymer pre-dated 'internalization' or not. Kindleberger (2002), Hymer's PhD thesis supervisor, claimed that the

new theories simply elaborate on ideas already in Hymer's thesis, others have claimed that in the thesis itself Hymer focused on structural market failures at the expense of natural (transaction-costs related) market failures (notably Dunning and Rugman, 1985).

There is clearly no question that already in the thesis Hymer posed the 'why internalize' question, indeed in these very terms: "The firm is a practical device which substitutes for the market. The firm internalizes or supersedes the market". (Hymer, 1976, p. 48)¹

Despite the 'quote', transaction-costs-type theorizing in the thesis was minimal, so at the time Dunning and Rugman's (1985) claim was in essence right. The unearthing of Hymer's (1968) article (in French) where he used Coase's transaction costs approach as extant theory of the firm, alongside more traditional oligopoly theory, led in turn to claims by Casson (1990), and Horagushi and Toyne (1990) that Hymer clearly predated transaction-costs/internalization analysis. For Horagushe and Toyne "the genesis of transaction costs as applied to the MNE can be traced to Hymer."(1990, p. 487)

This claim is now rather uncontroversial. In the 1968 paper, Hymer has explained both horizontal integration and vertical integration, along, explicitly, Coasean lines, indeed predating much of Williamson-type arguments, to include much of the jargon (e.g., specific assets, dishonest (today opportunistic) licensees, etc.) - all these are detailed in Pitelis (2002). Importantly, however,

Hymer, went further in the 1968 article, also explaining FDI in terms of the speed advantages on intra-firm transfer of knowledge - an argument quite resource-based in nature, and reminiscent of Kogut and Zander's (1993) 'evolutionary theory of the MNE'.

In subsequent contributions, Hymer (1970, 1972, 1979) built-upon and extended his earlier ideas, to explain the 'macro cosm' (of international political economy or in his terms 'multinational corporate capital') in terms of the 'micro cosm' (of the MNE). In addition, Hymer (1970, 1972) used product/life cycle, theorizing (a push factor for diversification and internationalization of firms in mature industries), proposed an M-form hypothesis, in similar terms to Oliver Williamson's (1981) subsequent analysis, and was first to predict externalization through subcontracting, at the very time he was observing internalization and growing hierarchies. An important question is how does this impressive record relate to his analytical framework.

Hymer's analytical framework was simple yet powerful. For Hymer firms pursue high profits. For products with high fixed costs, the more you sell the higher is the profit margin - this is an incentive to grow (eventually to internationalize). There are constraints, however. Expanding abroad involves costs (the now famous costs of being foreign). To offset these costs firms need monopolistic advantages. They derive these in the context of growing domestically (in the US). For Hymer the M-form, organization retained profits, and eventually, multinationality per-se are such monopolistic advantages (Hymer, 1970, 1972).

Through its control potential, FDI is a powerful means of cross-border expansion. First, because of the intra-firm transfer of advantages already discussed. Second, and importantly, because through the removal of conflict, MNEs could capture value through establishing collusive oligopolistic conditions in foreign (and domestic) countries, but also through interpenetration of investments globally. This would lead to a global monopoly situation, a major source of inefficiency in capitalism and a reason to replace it with something more benign. Given that a benefit of FDI was control, if firms could somehow retain control, but without internalizing, they could choose to externalize, e.g., outsource. This would shift the burden of production to subcontractors, while MNEs could maintain overall control, through, for example, ownership-control of intangibles, such as brand names, or some tangibles examples could be the Coca-Cola secret recipe, the colours of Benetton etc. (in Cohen et al, 1979).

Hymer's focus on 'value capture' led him to underplay the issue of 'value creation'. For example, even if one accepts that global collusive oligopoly will be the outcome of MNE actions, an important question is how efficient was the process vis-à-vis alternatives. If firms acquire advantages through efficiency, then these should be considered. Differently put, is eventual global collusive oligopoly that resulted from efficiency-derived advantages, e.g., through innovation as good/bad as one without such efficiency advantages? Is it worse than 'perfect' competition without innovation? In brief, Hymer predicted a state, and ignored the nature and properties of the process. This is a major limitation.

The above pose the question whether advantages are purely monopolistic or also efficiency-based. Interestingly, Hymer himself did not question the efficiency advantages of MNEs, yet chose to focus on the eventual disadvantages of the equilibrium state. Subsequent writers, such as Dunning (1988), correctly renamed advantages to 'ownership', in recognition that these can be both monopoly and efficiency-derived. Penrose (1959) went further in claiming that advantages are definitionally derived at first efficiency ones, as they result from a process of endogenous growth that results from knowledge and innovation within firms. She went on to claim that in their attempt to capture value, firms could use 'impregnable uses' as well as outright monopolistic practices. Thus, the final state could be inefficient, but never the process. The potential inefficiency of any equilibrium state would call for suitable regulation by the state (Penrose, 1959/ Pitelis, 2004).

Hymer's external market opportunity/reduction of conflict (forces of competition)-based approach (also) pre-dates Porter's (1980) contribution to competitive strategy. Both suffer from a difficulty to account for internal firm resources and explain endogenous growth and (thus) the direction of expansion. Penrose's (1959) contribution is a natural extension and complement to Hymer's. Together they can serve as a more general theory of the firm and the MNE.² It is a great tribute to Hymer's insight that he also predated some resource-based ideas (in Hymer, 1968), but also explicitly built on Coase and used transaction-costs analysis (totally missing from Penrose). It is for these reasons too, that the two theorists together serve to provide a more developed analytical framework.³

Despite Kindleberger's 'attention is called to the pioneering work of Edith Penrose ...' (1984, p. 181)⁴, Penrose's work has found little application to the theory of the MNE.

One can hazard various reasons why that happened. While Penrose has spent a lot of time and effort analyzing MNEs (see Penrose 1956, 1968, 1985, 1987, 1995, 1996), she did not try to draw the links between her analysis of the theory of the growth of the firm and the MNE itself. In part, this is due to her view that once up and running a subsidiary could usefully be regarded as a separate entity (Penrose, 1956). In addition, Kay (1999) observes, Penrose's choice of (the oil) industry was not the best case study of her theory of growth, exhibiting hardly any (internal resource-related) diversification strategies. In addition, Penrose's theory is arguably more amenable in explaining the direction of expansion than the mode (see Kay 1999). When it comes to understanding the mode, transaction costs-related arguments may be indispensable. Another reason may be that the Penrosean approach is arguably compatible with Hymer. It complements the latter by providing an endogenous growth theory cum (relatedly) an explanation of the direction of diversification. Other than these, the resource-based related firm specific advantages can be easily translated as monopolistic and/or ownership advantages.⁵ An important reason for the failure to recognise the Penrosean contribution to the issue of the MNE is that initially she had refused to attribute much significance to the issue of multinationality *per se*, versus expansion in general. In most of her writings, Penrose views the multinational as a natural outcome of the process of expansion.

In her 1987 entry to the *New Palgrave*, for example, she points out that ‘There are differences between national and international firms but the differences are not such as to require a theoretical distinction between the two types of organization, only a recognition that national boundaries make an empirical difference to their opportunities and costs’ (1987: 563).

In the introduction to the 1995 edition of *The Theory of the Growth of the Firm*, she suggests that ‘... it is easy to envisage a process of expansion of international firms within the theoretical framework of the growth of firms ... It is only necessary to make some subsidiary ‘empirical’ assumptions to analyze the kind of opportunities for the profitable operations of foreign firms that are not available to firms confining their activities to one country as well as some of the special obstacles’ (1995: xv).

It is only in her very last published paper, the 1996 entry to the *International Encyclopaedia of Business and Management*, that she concedes importance to the issue of international borders. These, she suggests, make enough difference to ‘justify separate treatment of international firms. The differences arise from the additional obstacles (or advantages) relating to culture, language and similar considerations (which may not apply nationally within ethnically diverse countries), to different currencies, border controls or other types of physical or financial regulations, political attitudes of foreign or home governments, size of protected markets, the configurations of firm cultures or associations, the type of technology involved, and so on’ (1996: 1720).

Arguably, this late recognition of the significance of national borders in requiring a separate treatment of the MNE explains the earlier lack of emphasis on the theoretical *raison d' être* of the MNE.

Penrose's reluctance to acknowledge any major need for separating national from international expansion stresses our earlier point, that the *raison d' être* of the MNE should be looked at in the (sometimes artificial) differences that emerge from the existence of nation states. In the absence of these, FDI and MNEs would simply not exist, and similarly all we could only need is a theory of the growth of the firm.⁶

Having said that, it is arguable that Penrose herself did not fully provide a satisfactory reason to distinguish between national firms and MNEs. To this end, we claim here that demand-side, business-cycle-type differentials across countries may provide some answers to our concern.

III. An integrated framework and the role of the business cycle

Our discussion in the previous section affords scope for synthesis and integration.⁷ Penrose supplements Hymer in explaining endogenous growth, the internal generation of advantages and partially the direction of expansion. Hymer discusses pull and push factors for diversification. The various versions of transaction costs analysis explain in part the choice of mode. Dunning's OLI also addresses the issue of location. Throughout the pursuit of long-term profit through

innovation and/or monopoly restrictions and oligopolistic interaction motivate and shape decisions and choices.

Missing from this synthesis is a consideration of an important delineating factor between intra-country and inter-country expansion. We suggest that this can be national demand-side and/or business-cycle related factors. As already noted, in Hymer, a push factor for domestic diversification is the product life cycle. Extending this reasoning, we suggest here that another (push and pull) factor contributing to foreign diversification can be (is) the ‘business cycle’ and more specifically differential effective demand-growth related (locational) factors among countries. This need not be the only such factor, but we claim it to be an important one.

Demand-side factors can be of the push type or of the pull type, or both. On the push side, declining domestic effective demand, low expected rates of profitability and growth can be important. From the pull side, faster expected growth rates and/or profits abroad can be seen as locational advantages, see Dunning (1998). When the two are combined, with demand declining at home alongside accumulated retained profits and other ownership or monopolistic advantages, there remains almost no other choice. Despite the fact that such factors are often underplayed in the literature, demand-side considerations are often implicit in other theories and they usefully complement Hymer’s explanation of product-life-cycle-based domestic diversification. Explicitly demand-side questions from the point of view of the firm also enter Vernon’s (1966) ‘product life cycle’ hypothesis. In Vernon’s approach, products are seen to have a life cycle with three main phases: introduction and growth, maturity, and decline. In the first phase production takes place at home, for various reasons, such as the need for careful control and monitoring of the market. In

the second phase the product becomes standardized and given that it is already somewhat known abroad through exports, FDI is contemplated. In the third phase, FDI becomes inevitable, as tariffs tend to constrain further exports. Scale economies tend to be exhausted at home and servicing foreign markets becomes very difficult.

Vernon's theory has been attacked as an inadequate account of post Second World War Two MNE activities, for example by Buckley and Casson (1976) on grounds such as the difficulty the theory has to explain non-export substituting investments, the appearance of non-standardized products being produced abroad and the case of carefully differentiated products to suit the local market. Another potential criticism of the theory is that the decline in the rate of growth of demand in the maturity phase can be avoided through unrelated diversification to products at a different phase of their cycle. In this sense, conglomeration can be seen as an answer to the vagaries of the product cycle, as in Hymer (1979). The aforementioned criticisms derive from the focus of Vernon's approach to demand for the individual product, not aggregate demand. The aggregate demand deficiency argument applies to all firms, at all phases of their products, albeit to different degrees of severity, depending, among others, on the phase of the product cycle. FDI, in our framework, can be seen as firms' reply to the vagaries of the 'business cycle', thus giving rise to a genuinely 'all weather company'. In this sense, the aggregate demand argument goes beyond, and survives the criticisms of the product cycle theory.

To summarise, demand-side, business-cycle-related considerations build on the tradition and insights of Penrose and Hymer and provide an important distinguishing factor between domestic and inter-national diversification. To the extent inter-national location matters, it is almost self-

evident that inter-national macro-economic, demand-related conditions will be of importance. However, it is not claimed here that demand-side, business-cycle-related considerations provide a new theory of the MNE. One needs to bring together all issues raised in this paper; failing or missing markets, differential firm advantages, locational factors, oligopolistic interaction and more.⁸

In the context of this paper, and building on Penrose, the MNE is a firm. Its explanation requires a theory of the growth of the firm and limits to growth, plus a justification for the special importance of national state boundaries. The theory of (limits to) growth is the Penrosean one. It is compatible with, and complements Hymer. Both need to be complemented with transaction costs related arguments, in order to explain more adequately the choice of mode. Locational factors can be one factor that separates national from inter-national diversification. Demand-side, business-cycle-related considerations are also important. They can be seen as another international location (dis)advantage, a pull and push factor for FDI, in firms' pursuit of being 'all weather companies'. Endogenous constraints as in Penrose, alongside oligopolistic interaction, can explain the limit to the growth of the MNE.

To summarise, by crafting (dynamic) transaction costs and by recognising the importance of the national demand-side and business-cycle-related factors we can add-on the Penrose-Hymer story and come up with a fuller picture. This provides elements of an integrative framework and tools to be applied in specific cases so as to explain and/or predict the specific actions of specific firms.

IV. Some new econometric evidence

The conceptual value-added of the previous pages consists in the synthesis and extension of Hymer, Penrose and related views and the attempt to delineate more finely between intra- and inter-national diversification, by invoking macro-demand and business-cycle-related arguments.

At one level, citing supportive evidence in favour of the above is easy. Caves (1996) cites a voluminous literature in favour of transaction-costs and resource-based insights, Dunning's overall work provides a wealth of evidence on advantage-related, transaction costs and locational factors, Kogut and Zander (1993) provide evidence in favour of Penrosean insights. Cantwell (2000) cites evidence in favour of the Penrose-related technological accumulation arguments. It could be possible to claim that taken together, the above evidence also supports the individual parts of our proposed synthesis.

If we accept the above argument, for the time being, the question then turns to the role of demand and business-cycle-related factors.

On the issue of demand, Pitelis (1996) provides econometric evidence for the UK, according to which outward investment is significantly and regularly influenced by domestic aggregate demand. Primary-questionnaire-based evidence by Iammarino and Pitelis (2000), moreover on FDI from Greece to Bulgaria and Romania, report that from a total of 85 direct investments, a

total of 53 cited “expected economic growth” as their main motivation for investing abroad, by far the most popular factor. “Geographical location” was second with 31 firms citing it, with “investment incentives”, “labour costs”, “domestic market share”, “regional market share”, “proximity to the EU”, “source of raw materials” and “cultural similarities” occupying the next seven. “Transport costs”, “political and economic climate”, “country’s chance to join the EU”, “historical links”, “energy costs” and “labour skills” followed next. The primary data evidence is clearly in support of demand-side factors and locational factors, much in support of our conceptual arguments.

There is no attempt to our knowledge to test directly for the role of the national business cycle in motivating outward investment. An aim of this section is to test for such a relationship. The best known proxy variable for the business cycle is the unemployment rate (UR), see for example Rowthorn and Wells (1987) A high UR is a sign of economic decline, thus in the context of our arguments, a reason for outward investment. The opposite applies for the case of declining UR.

Besides testing for business cycle-related arguments, the use of the UR can also allow us to test insights from Penrose’s theory. A high UR is a sign of ‘excess (human) resources’, which, according to Penrose should lead to outward investment. Given this, the UR tests both for Penrose’s theory and for the business-cycle argument.

Given the above, the econometric relationship we wish to test is

$$\text{ODIS} = f(\text{UR}, \Sigma_t) \quad (1)$$

Where ODIS is outward investment as a percentage of the GDP

UR is the unemployment rate

Σ is a vector of other relevant variables and

t is a time subscript

While our focus here is on UR, it is important to choose other determinants of ODIS. Based on the existing theory we use three more explanatory variables: the profit share (PS), strike intensity (NC) and the real rate of interest (IRR).⁹

The first two variables aim to account for ‘real’ factors, while the IRR for monetary factors.

PS is an important variable derived from various theories. A high profit share proxies a high domestic profit rate, which implies positive investment opportunities at home. This should discourage outward investment. A high profit share is also a ‘sign’ of the existence of ‘monopolistic advantages’ (the profit share can be seen as the ‘degree of monopoly’ of the economy, see Cowling (1982). For Hymer (but also Porter 1990), this could be seen as a factor contributing to outward investment. On the other hand, a high ‘degree of monopoly’ may lead to low effective demand at home, thus motivating outward investment. In all these effects are conflicting so what we test here is for the relative strength of the conflicting effects of PS on ODI.

Strike intensity is representative of the harmonious or conflicting relationship between business and labour, the existence or otherwise of ‘corporatist’ economies and, importantly, the relative bargaining power of MNEs and trade unions. Relevant literature has relied upon some conventional variables as proxies for class power. In our econometric work, we use the number

of realised conflicts (NC) between capital and labour. One would expect a positive relation between NC and ODI, in that political and social (in)stability leads to outward investment. Such a relationship is also in line with a power-based, ‘divide and rule’ interpretation, but also with a transaction costs-based analysis. Conflictual relationships between business and domestic labour can be taken to imply high intra-firm transaction costs, thus a need for dis-integration and/or foreign operations. Overall we expect a positive sign between NC and ODI.

Our last variable. IRR, aims to test for the role of monetary factors (to include monetary policy) on ODI. In general, high real interest rates imply a high cost of capital and a restrictive monetary policy. Both should be expected to affect positively outward investments. Assuming, as Hymer observed, that MNEs can borrow abroad anyway, i.e. without undertaking ODI, one could suggest that the main reason for a positive link between IRR and ODI would come from IRR’s implications for domestic demand. High IRRs imply restrictive policies, thus a reason for ODI.

Equation 2 formalises our aforementioned arguments:

$$ODIS = f(UR, CP, NC, IRR) \quad (2)$$

The expected signs being: $f_{ur} > 0$; $f_{cp} ?$; $f_{nc} > 0$; $f_{irr} > 0$. This specification is a hitherto untested equation. We assume a linear function and a stochastic relationship and hence equation 2 including the error term that assumed to satisfy the usual assumptions results in the following specification.

$$ODIS_t = a_0 + a_1 UR_t + a_2 PS_t + a_3 NC_t + IRR_t + u_t \quad (3)^{10}$$

Equation 3 was tested using an autoregressive distributed lag (ARDL) structure on 31 observations for the USA and the UK.¹¹ The Akaike Information and the Schwarz Bayesian criteria suggest that a lag structure of the model up to the first order is preferred by the data. We regard the ARDL (1,1,1,1,1) model as a starting point and attempt to optimise the fit for each country by narrowing down the number of parameters, taking the t-value as an indicator. Table 1 (appendix 1) presents the estimated regressions preferred by the data.

TABLE 1 ABOUT HERE

After the application of a full range of misspecification tests in the estimated regressions, which are reported in Table 1, we fail to reject the null hypothesis. Therefore, there is no evidence of serial correlation, or of a rejection of the linearity, normality, homoskedasticity assumptions at the 5% and 1% level of significance by the standard Langrange Multiplier test. Moreover, the CUSUM and CUSUMSQ tests provide no evidence of structural instability in any of the reported regressions. The coefficients of determination, R^2 , which is 0.67 in the USA and 0.89 in the UK indicate a goodness of fit of our estimated regression. Our selected set of independent variables explains a significant part of the variation in outward investment.

Our tests for the determinants of outward investment, provide support for insights by both Hymer and Penrose but also for our extension concerning the role of the national business cycle. In

particular, all variables are significant, but the strike intensity and the real interest rate in the UK, and have the expected signs. The statistical significance of the lagged dependent variable in the UK shows the autoregressive nature of the outward investment in this case. UR was found to have a positive and significant effect on ODIS. The same is true for the IRR in the USA. The anti-inflationary monetary policies of the last two decades are likely to have increased the cost of business credit and debt that may have operated as a de-stabilising mechanism for domestic capital accumulation in the USA encouraging outward investment. The result is surprising in the UK. Severe re-distributional trends towards business profit and labor rationalization in the UK since the end of the 1970s might have compensated the higher cost of money for business, which seem to care more about their profit share and business cycle. A high profit share was found to have a negative impact on outward investment in both countries. This points to the importance of healthy domestic economic conditions being a disincentive for outward investment, or a pull factor for investing in the domestic economy. Strike intensity was found to have a positive and significant effect on ODIS in the USA. The variable used, the number of conflicts might also capture changes in business confidence about economic, social and political stability that influence the investment climate. In the UK, the rise of Thatcherism signals the fall of trade unions' militancy, a change that possibly explain the unimportance of strike intensity in business investment decisions.

Our evidence is in line with existing theory and conventional wisdom, but also extends existing theory in new interesting directions. It also adds value by testing the theoretical insights.

V. Concluding remarks

We have extended existing theories of the MNE, notably Stephen Hymer's by making use of Penrosean insights, and went on to further extend the outcome. We have then tested the resulting theory econometrically for the case of the USA and the UK. Our results support the view that business cycle, and 'excess resources'-related factors can motivate outward investment.

Political and social instability, monetary austerity and a low domestic profit share are also factors that may lead firms to undertake outward investment. All these are both in line with, and confirm, existing theory and conventional wisdom. They add empirical weight on an issue where evidence is rather scarce and shed empirical light on firm motives to go abroad.

There is an interesting, albeit hardly revolutionary, policy implication for government policy, too, from our evidence. If governments wish to avoid 'capital flight' they should strive for 'political stability' and a 'healthy economic environment', to include healthy demand conditions. It is hoped that such policies will also be conducive to attracting inward investment – which, however, is another paper.

Endnotes

¹ In our mind the importance of this quote should not be overstated. It is important that the very way Hymer had posed the question was ‘why internalize’ (with the verb or not). As it happens, the use of the verb ‘internalize’ (and also the use of very Coasean terminology in the thesis) has led some scholars to revisit Hymer’s contribution to ‘internalization’ (e.g., Teece 2005, forthcoming).

² See Pitelis (forthcoming 2005) for a resource/knowledge-based OLI that integrates Hymer’s and Penrose’s thinking.

³ Kindleberger (2002 or 1984), and Horagushi and Toyne (1990) have previously observed the need to draw on Penrosean thinking and (for the last mentioned) combine Penrose with Hymer.

⁴ See, however, Cantwell (1991, 2000) who points to similarities between Penrose’s contribution and those of the “competitive international industry” approach to the MNE.

⁵ In contrast to Hymer, Penrose clearly distinguished between monopolistic and non-monopolistic advantages. She recognised the existence of both. She suggested that larger and older firms have a ‘competitive advantage’ over smaller firms in terms both of non-monopolistic advantages, such as size, experience, access to funds, etc., but also due to sheer ‘monopolistic power’ (1956: 64).

⁶ In this context, it is interesting to note Penrose's observation - critique in her *New Palgrave* entry, of Coase (1937) and Hymer (1970)-based theories, which, in her view, fail to 'distinguish the multinational corporation from domestic firms' (1987: 562).

⁷ The need for synthesising transaction costs to the resource-based view is acknowledged by Penrose (1996) and by Coase (personal correspondence, 1999).

⁸ Notably, cultural considerations to include "psychic costs" (see Dunning, 2000), and further aspects of the "international competitive industry approach", such as "technological accumulation" as discussed in Cantwell (2000).

⁹ For source and definition of variables see appendix 2.

¹⁰ All variables are in real terms.

¹¹ The ARDL approach is the most appropriate testing and estimation procedure for annual data. The main advantage of the ARDL approach (Pesaran and Shin, 1995; Pesaran *et. al.*, 1996) lies in the fact that it can be applied irrespective of whether the regressors are I(0) or I(1), and this avoids the pre-testing problems associated with standard co-integration analysis, which requires the classification of the variables according to their order of integration. Note that in our specification two variables are defined in ratios (ODIS, PS) and hence are non-trended. The proxy we use to capture the capital-labour relationship (NC) is also a non-traded variable, while the real interest rate (IRR) is an I(1) variable.

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Appendix 1

Table 1. Econometric Results

Period	<i>USA</i>	
1972-02	$\text{ODIS} = -0.83 + 0.18\text{UR} - 0.12\text{CS}(-1) + 0.0036\text{NC} + 0.061\text{IRR}$ $(-1.61) \quad (3.80) \quad (-3.93) \quad (4.07) \quad (2.14)$	
	R ² =0.67	
	<i>UK</i>	
1972-02	$\text{ODIS} = 2.8 + 1.13\text{ODIS}(-1) + 0.034\text{UR} - 0.12\text{CS}$ $(2.20) \quad (8.93) \quad (8.69) \quad (-2.11)$	
	R ² =0.89	
Test Statistics		
LM Version	USA	UK
Serial Correlation	CHI-SQ(1)=2.37	CHI-SQ(1)=2.24
Functional Form	CHI-SQ(1)=4.31	CHI-SQ(1)=4.69
Normality	CHI-SQ(2)=1.13	CHI-SQ(2)=8.34
Heteroscedasticity	CHI-SQ(1)=1.06	CHI-SQ(1)=0.60

Notes : Italic numbers are t-values. Critical values for CHI-SQ (1) and CHI-SQ(2) at 5% level of significance are 3.84 and 5.99 and for CHI-SQ (1) and CHI-SQ (2) at 1% level of significance are 6.63 and 9.21.

Appendix 2

Source and Definition of Variables:

ODIS = ODI/GDP

PS = P/Y, where Y = P+W

ODI = Direct Investment Abroad, IMF, International Financial Statistics, various years.

GDP = Gross Domestic Product, IMF, International Financial Statistics, various years.

P = Gross Trading Profits (non-financial corporate sector); CSO Blue Book, UK National Accounts, various years, Survey of Current Business, US Department of Business, various years.

W = Wages and Salaries; (non-financial corporate sector); CSO Blue Book, UK National Accounts, various years, Survey of Current Business, US Department of Business, various years.

UR = Unemployment Rate (OECD, Economic Indicators, 2005)

NC = Number of Strikes and Lockouts, Yearbook of Labour Statistics, 2005.

IRR = Lending Interest Rate (IMF, various years) – Inflation Rate (CPI) (IMF, various years)

ODI, GDP, P, and W have been deflated by GDPDeflator (1995)