

# **LEARNING TRANSFER IN MULTINATIONAL COMPANIES: EXPLAINING INTER-ORGANISATION VARIATION**

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## **ABSTRACT**

This paper addresses the extent to which multinational companies (MNCs) in Ireland deploy practices aimed at the transfer of learning in their operations and the factors explaining inter-organisation variation in so-doing. Using data from 260 MNCs, we find that comparatively large numbers of firms deploy practices to transfer learning in their Irish operations. Most notably, we find almost half of all MNCs have a formal policy on OL, while more than six in every ten MNCs in Ireland utilise three or more learning transfer mechanisms. In investigating inter-organisation variation with respect to these, we test a number of hypotheses involving nationality, sectoral, MNC (e.g. organisation structure) and HR factors. Our results show that the presence of international HR structures are significant factors in explaining learning transfer in MNCs. We also find support that employment size, sector and integration between the MNC's global operations are useful variables in explaining variation in the deployment of practices on learning transfer between MNCs.

# **LEARNING TRANSFER IN MULTINATIONAL COMPANIES: EXPLAINING INTER-ORGANISATION VARIATION**

**McDonnell, A., Gunnigle, P. & Lavelle, J.**

## **INTRODUCTION**

Ensuing from the increased importance of creativity and innovation, OL (OL) has become a concept of ever increasing interest (cf. Cyert and March, 1963; Argyris and Schon, 1978; Senge, 1990; Huber, 1991; Dodgson, 1993; Moingeon and Edmondson, 1996; Smith et al., 1996; Denton, 1998; Williams, 1998; Argyris, 1999; Easterby-Smith et al., 2000). This coupled with the ultra-competitive global marketplace, makes OL a concept of particular importance to multinational companies (MNCs). Although there is little doubt of the concept's popularity, the field of OL is one characterised more by conceptual than empirical work. Further, in spite of the strong conceptual focus, there remains considerable room for improvement with the field quite fragmented (see Shipton, 2006 for an effort to arrive at a typology for OL research). Where empirical evidence exists, it tends to be dominated by small scale studies interested in more in-depth explanations of specific parts of the concept, rather than how the concept is being operationalised. The lack of empirical work is surprising given the significant interest in the subject and the suggestion that firms can achieve sustainable competitive advantage through effective OL (Moingeon and Edmondson, 1996).

OL in the international context is particularly under-researched (Monks and Walsh, 1999; Saka-Helmhout, 2007). This is in spite of almost consensus amongst authors and researchers alike that a major advantage of the MNC is the synergies developed from cross-border creation, accumulation and sharing of knowledge (Bartlett and Ghoshal, 1989; Gupta and Govindarajan, 1991). Macharzina *et al.* (2001) set out three inter-related features of OL in MNCs. First, they note that MNCs possess great scope to create firm-specific advantages as a result of its network of operations across different countries. Examples include the potential

of exploiting joint production economies (cf. Kogut and Kulatilaka, 1994), and having greater bargaining power in negotiations with key stakeholders, such as government representatives and trade unions (Vernon, 1971). They suggest that these firm-specific assets are connected with a degree of knowledge and the crucial issue is how MNCs exploit this proprietary knowledge across their global operations. Second, it is without question that MNCs are faced with greater levels of complexity, both internal and external, than indigenous firms. This complexity makes it more difficult for MNCs to exploit their proprietary knowledge globally. Finally, MNCs also possess knowledge generation capacity. For example, when conducting business internationally, the MNC may uncover better techniques and/or learn new approaches (Van Maanen and Laurent, 1993). Once again, the key issue remains how firms create and utilise this knowledge within their multinational network of operations (Macharzina et al., 2001).

Our critical contribution is to help redress the empirical lacuna through providing evidence on the extent to which MNCs are adopting practices to facilitate the transfer of learning, thus helping promote the effective flow of knowledge within the MNC. This sheds light on whether MNCs are deploying practices which offer the potential to achieve advantages as purported in the literature (cf. Moingeon and Edmondson, 1996).

This paper has two specific aims. First, we provide evidence on the extent to which MNCs in Ireland are using a number of learning transfer mechanisms. Specifically, the data illustrate the extent to which MNCs have a formal OL policy, and the use of expatriate assignments, international project groups, international formal committees, international informal networks and secondments to other organisations internationally for OL purposes. We use these as proxies for the emphasis placed on OL in MNCs. Second, we decipher the factors explaining

variation between MNCs with respect to the existence of a formal OL policy and the use of learning transfer mechanisms from the Irish operations. We suggest that national, industry, MNC (e.g. organisation structure) and human resource (HR) factors are potentially useful predictors. These are set out in a number of hypotheses, derived from the literature, and which we subsequently test. In addressing these aims, we draw on data gathered from the largest, most representative study to date on human resource management (HRM) practice in MNCs in Ireland (see Lavelle et al., 2009 for the main findings of this study).

The paper is structured as follows. We begin by setting out the research context before engaging with pertinent literature on OL in MNCs. We then set out our hypotheses which are subsequently tested to establish inter-organisation variation amongst MNCs. The research methodology employed is then highlighted, before setting out the principal findings. Finally, we undertake a discussion of the results and reach some conclusions.

## **THE RESEARCH CONTEXT**

Ireland represents an interesting locale for studying OL in MNCs due to its status as one of the world's most globalised and MNC-dependent economies (Kearney, 2002; Gunnigle et al., 2005; UNCTAD, 2006). Foreign direct investment (FDI) levels in Ireland, relative to the size of the economy, have been close to the highest in the world. Pre-1990 Ireland accounted for a mere 0.31 per cent of FDI inflows into Europe but the 2000 – 2004 period saw a rise to 3.24 per cent (Rios-Morales and Brennan, 2007). This moved Ireland into second place amongst European nations in terms of per capita stock of FDI. The proportion of the workforce employment in foreign-owned companies, as a percentage of total international trade related employment in Ireland, is the highest in the world (UNCTAD, 2007). The US is, by considerable distance, Ireland's largest source of FDI. The US corporate investment position

in Ireland accounted to some \$83 billion in 2006, larger than the combined US investment into Brazil, China, India and Russia (Hamilton and Quinlan, 2008). In more recent times, there has been an interesting development taking place, namely a surge in outward FDI, i.e. indigenous owned MNCs. FDI figures for OECD countries place Ireland among the group of countries with the second largest level of FDI outflows, alongside Japan, Germany, Canada and Sweden (UNCTAD, 2006). Indeed Ireland now has a larger stock of outward FDI as a percentage of GDP than most EU countries, and substantially higher than the EU average (Forfás, 2007).

It is clear that Ireland is a particularly useful and rich context in which to conduct research on MNCs. An examination of Irish indigenous MNCs also helps redress the noticeable under-representation of research on management practices in MNCs from smaller, late developing economies. The extant MNC literature tends to be dominated by research conducted in the larger, mature economies of the US, UK, Germany, with a growing literature on larger, developing Asian countries such as China. Ireland's economic growth story is particularly interesting considering the lateness at which industrial development began (O'Malley, 1992). Although political independence was secured from Britain in 1922, it was not until the turn of the 1960s that industrial development truly accelerated with the economic policy change to an open, free-market, outward looking development strategy.

### **OL IN MNCs**

OL in MNCs has been broadly defined as the acquisition, interpretation, integration and distribution of knowledge between the headquarters and its operations (Gupta and Govindarajan, 2000) as well as amongst the subsidiaries themselves (Bjorkman et al., 2004). This paper focuses on the final part of this definition, through exploring the use of

mechanisms by which MNCs transfer learning from its subsidiaries. Thus we are able to shed light on how knowledge is distributed from the Irish operations. In so doing, it is important to note that OL is a complex process and we are only providing evidence on one, albeit crucial, aspect of this process.

Due to the increasing geographical location of knowledge (Bartlett and Ghoshal, 1989), there is an increasing need for MNCs to establish mechanisms that can aid the transfer of knowledge across their international operations (Tregaskis et al., 2009). Formal and informal networks are widely acknowledged as critical dimensions for the creation and diffusion of explicit and tacit organisational knowledge (Gupta and Govindarajan, 2000). Tacit knowledge, referring to knowledge that people have but which cannot be readily or easily documented (e.g. a person's intuition), is the type of knowledge that can provide organisations with a key competitive edge over competitors because of its uniqueness to the organisation in which it is embedded (Tyre and Von Hippel, 1997). Ghoshal and Nohria (1989) and Ensign (1999) advocate the need for sophisticated organisational structures and management systems, in addition to informal networks between the MNCs' operations, as key to turning potential advantage to a realised one.

There are a number of means by which learning in one operation of the MNC can be transferred to other operations within the overall organisation. Possibly the most traditional method of transferring knowledge in MNCs is through international assignments, which can take the form of expatriate deployment both into and out of the firm's operations across different countries (Galbraith and Edstrom, 1976; Edstrom and Galbraith, 1977; Bartlett and Ghoshal, 1995; Berthoin Antal, 2000; Kidger, 2002). Expatriates develop knowledge banks from exposure to different situations and cultures which can be used to benefit the rest of the

MNC (Kamoche, 1997). They will gain an increased range of ideas and views from being on assignment, something the firm can then draw upon (Berthoin Antal, 2000; Minbaeva and Michailova, 2004). In addition to this, there are a number of structural devices open to MNCs including international project teams, steering committees and international boards (Kets De Vries, 1999; Gupta and Govindarajan, 2000; Mendez, 2003; Frost and Zhou, 2005). These structural mechanisms offer a different learning experience to the traditional expatriate assignment. For example, although the use of parent country nationals (PCNs) are particularly useful in helping local employees who may be unfamiliar with the MNCs' strategic goals, technologies and management practices, they may only take a global view of the organisation (Collings and Scullion, 2006; Kamoche and Harvey, 2006). On the other hand, these structural devices, such as international project groups, are considered by some MNCs as critically important through developing global innovation which also takes account of the local needs (Kidger, 2002). Hence, this method may offset some of the disadvantages of expatriate assignments. Whilst gaining and transferring knowledge from internal interactions and networks can be of considerable benefit, the development of networks with external actors is equally important (Tregaskis, 2003). These networks offer firms access to expertise and knowledge that may be unavailable within the organisation. In particular, network building with research and development facilities, customers, suppliers and competitors may provide the organisation with new skills and knowledge (Scott, 1995; Kaounides, 1999; Murray, 2001; Lam, 2001; 2003).

The existence or otherwise of a formal policy on OL may be construed as an additional proxy for indicating the value placed on it by MNCs. Having a formal international policy on OL can arguably be classified as a signal that this is an activity seen as particularly legitimate within the MNC (Tregaskis et al., 2005). Gammelgaard *et al.* (2004: 195) argue that



increasingly, the success of a MNC “is considered to be contingent upon the ease and speed with which valuable knowledge is disseminated throughout the organization”. A formal global reaching OL policy can play a key role in coordinating learning structures that promote the development and diffusion of knowledge across national borders (Tregaskis et al., 2009).

## **EXPLAINING INTER-ORGANISATION VARIATION**

We now present a number of hypotheses that aim to account for variation between MNCs with respect to the transfer of learning within their worldwide operations. These hypotheses are derived from the considerable theoretical base on HRM in MNCs and more particularly from the emerging body of research on learning in MNCs. Specifically, we explore the influence of a number of factors (national level, industry level, MNC and HR influences) on the existence of a formal OL policy and the use of five learning transfer mechanisms. The mechanisms we explore all represent means by which knowledge can be generated and transferred internationally, something which can play an important role to global learning and deriving competitive advantage (Gupta and Govindarajan, 2000). The specific mechanisms are:

- Expatriate assignments
- International project groups or task forces
- International formal committees
- International informal networks
- Secondments to external organisations internationally (e.g. suppliers, customers, universities, private R&D facilities).

### **National influences**

The national business systems (NBS) approach suggests national institutional contexts (e.g. governance systems, training and development systems) play a major role in determining the strategies and structures of organisations (Morgan, 2001; Almond and Ferner, 2006). Due to the embeddedness of MNCs in their home institutional environment, many attempt to transfer ‘home’ practices to their foreign (host) operations (cf. Edwards et al., 1999; Gamble, 2003; Pudelko and Harzing, 2007).

Studies on these influences are sparse in relation to OL in MNCs. A particularly noteworthy exception is a study by Lam (2003) who found country of origin differences in the way firm’s co-ordinate and organise knowledge resources in their foreign subsidiaries. Her four case studies, on Japanese and US research and development (R&D) subsidiaries in the UK, found US MNCs were far more likely to develop links with academic institutes and research centres to build their knowledge networks. Edwards *et al.* (2007) also found country differences regarding the use of mechanisms for diffusing OL. More specifically, they established that the number of mechanisms used was significantly lower in Japanese MNCs relative to US or continental European firms. Within the European category, French firms used the most mechanisms. Similarly, Denton (1998) found North American organisations were more advanced in their implementation of OL mechanisms than UK and European firms. We propose:

*Hypothesis 1a: The presence of a formal OL policy will vary with respect to the MNCs’ country of origin.*

*Hypothesis 1b: There will be variation in the utilisation of learning transfer mechanisms according to the MNCs’ country of origin.*

## **Industry influences**

The nature of activities conducted by MNC is likely to impact on whether MNCs have structures in place to transfer knowledge from one part of the worldwide operations to other operations or to headquarters. Previous research has shown that private sector, high-technology firms are more likely to undertake OL (Howard and Haas, 1993). Denton (1998) contends that OL is likely to be more developed in firms whose human capital is considered a critical asset. Interestingly, Denton (1998) did not find a statistically significant relationship between industrial sector and the OL practices. We hypothesise that it is plausible to expect differences between sectors as some are more knowledge intensive than others.

*Hypothesis 2a: The presence of a formal OL policy is likely to vary according to the sector of the MNC.*

*Hypothesis 2b: There will be variation in the utilisation of learning transfer mechanisms according to the sector of the MNC.*

## **MNC influences**

Size has proved an important determinant of variation in management practice in MNCs. It is posited that larger firms are more likely to have formal methods in place to support OL (Graham, 1996). For example, Edwards *et al.* (2007) found discernable size differences. Specifically, the authors found that organisations with 5,000 or more staff were most likely to utilise multiple learning transfer methods. Due to the predominant focus in the extant literature on the largest MNCs, to the neglect of the small to medium sized MNCs (Denton, 1998; Collinson and Rugman, 2008), previous studies may not have gained a true picture with respect to employment size effects. We help redress this, in part, as we capture a spectrum of MNCs ranging from medium to large in terms of employment (see the

methodology section for MNC definitions). For example, Irish MNCs tend to be small by international standards (Monks et al., 2001; McDonnell, 2007). We propose:

*Hypothesis 3a: The largest MNCs will be the most likely to have a formal OL policy.*

*Hypothesis 3b: The largest MNCs will make the greatest use of the learning transfer mechanisms.*

Organisation structure is commonly viewed as being of major relevance to OL. Indeed Stinchcombe (1990) viewed organisation structure as playing a crucial role in the ability of a firm to benefit from OL. Organisational structures that promote integration across the firm's global operations provide the MNC with great potential to acquire valuable knowledge, something not available to domestic firms (Tregaskis, 2003). The previous emphasis on hierarchical structures has now been replaced by the ascent of network and matrix structures in MNCs (Bartlett and Ghoshal, 1989; Nohria and Ghoshal, 1997). The quintessence of the matrix structure is that MNCs organise/co-ordinate their activities across a number of geographical and product/service divisions concurrently. In essence, a network structure allows a "flexible learning structure" within the organisation (Tsai, 2001: 997). MNCs following such structures may be more predisposed to having an OL policy and use learning transfer mechanisms. Thus, it is proposed that:

*Hypothesis 4a: The presence of international organisational structures will positively impact on the existence of a formal OL policy.*

*Hypothesis 4b: The existence of international organisational structures will have a positive impact on the utilisation of the learning transfer mechanisms.*

When MNCs have integrated operations, there is greater scope for developing common policies across borders and transfer of practices accordingly (Marginson et al., 1995; Edwards et al., 2006; Noorderhaven and Harzing, 2009). With respect to the transfer of HRM practices, Rosenzweig and Nohria (1994) note that there will be less imperative to transfer practices where there is a low level of integration between different country operations. In their study of MNCs in the UK, Edwards and colleagues (2007) found greater utilisation of multiple international learning transfer mechanisms where there was integration between the UK operations and other worldwide sites (Edwards et al., 2007). Where no such integration existed, then a formal policy on OL and use of the various international learning mechanisms was less common. In addition, they noted that international formal committees were significantly more likely where the UK operations supplied products/services and/or were supplied by the other worldwide operations (Edwards et al., 2007). They suggest this may be due to the utilisation of formal committees as a management method for coordinating activities across national borders. We propose:

*Hypothesis 5a: A formal OL policy will be more common where there is integration between the Irish operations and other sites in the worldwide company.*

*Hypothesis 5b: There will be greater use of the learning transfer mechanisms where there is integration between the Irish operations and other sites in the worldwide company.*

### **HR influences**

The extent to which there are relationships between international HR structures and the utilisation of international OL practices remain particularly under-developed. Ferner *et al.* (2007) suggest that the way in which the HR function is organised may be critical for providing organisational capabilities in the MNC (see also Tregaskis et al., 2005). For

instance, the development of HR structures can play a critical role in supporting social capital development (Taylor, 2006). The development of HR networks is believed to be becoming more common (Tregaskis et al., 2005; Taylor, 2006; Tregaskis et al., 2009) which may lead to improved efficiency in learning transfer across the MNC (Nahapiet and Ghoshal, 1998). It is suggested that social capital is a critical means of effective coordination and control in MNCs and aids their ability to learn faster than their competitors (Kostova and Roth, 2003; Inkpen and Tsang, 2005). Further, Noorderhaven and Harzing (2009: 7) make the point that social interaction should be seen not only as a means to transfer existing knowledge but as also a “condition for the social production of knowledge”. Tregaskis *et al.* (2009) also report the existence of HR policy formation committees as being related to increased international learning capability. Having these types of structures in place may be a useful aid in supporting both the creation and dissemination of knowledge across operations. Consequently, we suggest that:

*Hypothesis 6a: MNCs which systematically bring HR managers from different country operations together will be more likely to have a formal OL policy.*

*Hypothesis 6b: MNCs which systematically bring HR managers from different country operations together will make greatest use of the learning transfer mechanisms.*

*Hypothesis 6c: MNCs with a body which develops HR policies that apply across countries will be more likely to have a formal OL policy.*

*Hypothesis 6d: MNCs with a body which develops HR policies that apply across countries will make greatest use of the learning transfer mechanisms.*

The existence of global systems may also explain the increased use of OL. For example, a global succession planning system would suggest high performing and high potential

employees are brought to the attention of headquarter managers. With the drive to maintain competitiveness and profitability, organisations that adopt such a geocentric type orientation may be expected to ‘tap’ into and diffuse the knowledge these employees possess across the MNCs’ global operations. Therefore, we propose:

*Hypothesis 6e: MNCs with a global succession planning system will be more likely to have a formal OL policy.*

*Hypothesis 6f: MNCs with a global succession planning system will make greatest use of the learning transfer mechanisms.*

Tregaskis and colleagues (2009) also propose that the extent to which the MNC values OL as a strategic asset will be highlighted by the existence of a formal global policy. Logically, one would expect greater use of OL mechanisms where such a formal policy exists. A formal policy may also help curtail possible tendencies by subsidiaries against sharing knowledge due to a perception of being in competition with other operations for new product mandates (Tregaskis et al., 2009). We propose the following hypothesis:

*Hypothesis 6g: MNCs with a formal OL policy will make greatest use of the learning transfer mechanisms.*

## **METHODOLOGY**

### **Population development and data collection**

We adopted two definitions for a MNC in this study<sup>1</sup>:

- *Indigenous owned MNCs*: All wholly or majority Irish owned organisations with 500 or more employees worldwide and at least 100 employed abroad.
- *Foreign owned MNCs*: All wholly or majority foreign owned organisations operating in Ireland, with 500 or more employees worldwide and 100 or more employed in their Irish operations.

A key objective of this research was to address the lack of representative research on the activities of MNCs. Although their activities have received widespread attention and much research has taken place, there has been a failure to conduct representative studies of MNCs. In the Irish case, indigenous owned MNCs and the non-grant aided service sector (e.g. retail MNCs) are particularly under-represented. We undertook a particularly tedious and painstaking process of combing through various MNC listings to accurately derive the total population. The reason behind having to utilise numerous sources is our concluding that there are numerous reliability and comprehensiveness issues regarding these sources (see McDonnell et al., 2007), something now acknowledged internationally (cf. Alfaro and Charlton, 2006; Edwards et al., 2008).

This phase took some nine months to complete and gave a final listing of 491 foreign owned MNCs and 72 Irish owned MNCs - a combined total of 563 MNCs. A sample of 423 companies was selected with the excluded firms (i.e. the difference between the total population and the sample) primarily US MNCs. This was because US MNCs account for the great majority of MNCs in Ireland. Of this sample, 46 companies had to be subsequently

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<sup>1</sup> The dual employment threshold adopted in defining MNCs parallels the EU's Directive on European Works Councils (94/45/EC) although the size thresholds are somewhat lower in this study as not to be over-limiting in excluding moderately sized MNCs. The other consideration was that this study is part of a larger international research project known as INTREPID – Investigation of Transnationals' Employment Practices: an International Database – and consistent definitions were required across national surveys.



removed due to a) ceasing operations, b) not meeting the selection criteria or c) double-counting. This reflects the decision to include any MNC where there remained some doubt on whether they met the criteria. Consequently, an additional 37 companies had to be added from the residual population to compensate for these losses. This meant that the total valid sample of MNCs for the fieldwork was 414.

The survey involved the use of a structured questionnaire which considered five key aspects – the HR function, pay and performance management, employee representation and consultation, employee involvement and communication, and training, development and OL (see Lavelle et al., 2009 for the key results from across these areas). Dichotomous, multiple choice, list, ranking and quantity styled questions were used along with a small number of open-ended questions. The survey was administered through structured personal interviews with the most senior HR practitioner able to answer for all of the Irish operations. This invariably tended to be the HR Director/Manager. Interviews generally took between 40 to 60 minutes to complete. The interview approach was adopted for two main reasons. Firstly, it was believed that it may lead to a higher response rate (Baruch and Holtom, 2008). Secondly, this approach has also been lauded for its ability to reduce the amount of missing data (McKnight et al., 2007). The fieldwork commenced in June 2006 and finished in February 2007. This yielded 260 questionnaires (213 foreign and 47 indigenous MNCs), a response rate of 63 per cent. The responses were largely representative of the total MNC population. Consequently we have not re-weighted in this paper.

### **Data analysis**

This paper utilises a number of statistical techniques, notably ordinal regression and binary logistic regression. In addition, Pearson's chi-square test was used in parts to determine

associations between variables (e.g. to establish associations with respect to some of the descriptive data and whether the MNC was foreign or indigenous owned). We used binary logistic regression to explore variation with respect to our second proxy measure for the emphasis placed on OL, namely, the presence of a formal OL policy. Ordinal regression was used to explore variation with respect to the utilisation of the OL mechanisms (ranging from using none to all five mechanisms). Table 1 presents the dependent and independent variables used.

*Insert table 1 here*

We performed a number of tests for multi-collinearity between the independent variables and found that this was not a cause of concern. Amongst both regression models the lowest tolerance level found was .577 and the largest variance inflation factor (VIF) result was 1.733. These measures indicate whether a predictor has a strong linear relationship with other predictors. The common rule of thumb is that no multi-collinearity problem exists when the VIF is less than 4.0 and the tolerance level is greater than 0.2 (Menard, 1995). The correlation matrix for both regressions also showed no issues. Finally, we explored the condition index which again proved to be of little concern.

## **FINDINGS**

We now outline the primary findings from the study. First, we detail some of the key descriptive findings before turning to regression analyses which were used to test the aforementioned hypotheses.

### **Descriptives**

Approximately half of all MNCs in Ireland have a formal OL policy covering their Irish operations. Foreign firms are considerably more likely to have a formal OL policy than their indigenous counterparts (54 per cent versus 28 per cent;  $X^2 = 9.627$ ;  $p < .01$ ). Almost nine in every ten (88 per cent) firms with a policy covering the Irish operations indicated it also covered other worldwide operations. In terms of all respondents, this equates to 5.8 per cent with a local policy (covers the Irish operations only), 42.7 per cent with a global policy, whilst the remaining 51.5 have no OL policy covering the Irish operations.

Now we turn to the mechanisms MNCs are utilising to transfer learning internationally. As figure 1 illustrates, there is widespread variation across the five mechanisms. The most utilised mechanism is international informal networks (76 per cent), followed by international project groups/task forces (69 per cent), expatriate assignments (59 per cent), and international formal committees (50 per cent). Secondments to external organisations internationally (e.g. to suppliers, customers, universities and private research and development facilities) are the least utilised with just over one fifth of MNCs (22 per cent) indicating their use. A positive development is the finding that use of expatriates does not solely equate to inflows into the Irish operations. 56 per cent of foreign firms indicated they currently have expatriates on assignment in the Irish operations, while some 46 per cent of foreign MNCs in Ireland indicated there are personnel from the Irish operations on assignment in other parts of the worldwide company (Lavelle et al., 2009).

*Insert figure 1 here*

We uncover relatively large numbers of MNCs indicating multiple mechanism use. 14 per cent use all five mechanisms, 23 per cent utilise four, 24 per cent avail of three, 17 per cent

use two mechanisms, 7 per cent only utilise one with the remaining 15 per cent failing to make use of any of these OL transfer practices. Thus, over six in ten MNCs have adopted more than three mechanisms.

We discover that although not the most commonly used, international project groups/task forces are regarded as the most important mechanism for transferring learning. Four in ten respondents indicated this to be the case. This is followed by 28 per cent of respondents citing international informal networks, slightly ahead of the 24 per cent who chose expatriate assignments as the most important mechanism. Less than one per cent picked external secondments with the remaining 7 per cent indicating international formal committees as being the most significant.

### Statistical results

Tables 2 illustrates the binary logistic regression results which we use to determine whether the hypotheses relating to having a formal OL policy in MNCs are supported. The various tests outlined at the end of table 2, along with the non-significant Hosmer and Lemeshow value indicate that the regression model more than adequately fits the data.

*Insert table 2 here*

Overall, support is found for only three of the hypotheses. First, we find partial support for a size effect (H3a). As expected, the larger the MNC the more likely there is to be a formal policy on OL. More specifically, we learned that MNCs with worldwide employment of 30,000 to 59,999 are over three times more likely ( $p < .05$ ) and those with more than 60,000 employees are over eight times more likely ( $p < .01$ ) to have a formal policy than MNCs

employing less than 5,000. However, support for H3a with respect to employment size was only partial in that no significant association was found regarding employment in the Irish operations. A significant effect was only established regarding worldwide employment of the MNC.

Second, we found the presence of a HR policy formation body with responsibility for developing HR policies that apply across countries to be significantly associated with having a formal OL policy in the Irish operations (H6c). MNCs with this HR policy body were more than twice as likely to have a formal policy compared to those MNCs with no body ( $p < .05$ ).

Finally, we find that the level of HR networking to be a significant predictor variable (H6a). Specifically we find that a formal OL policy covering the Irish operations is over sixteen times more common in MNCs where there is extensive HR networking systematically taking place between HR managers from different country operations ( $p < .01$ ).

Table 3 illustrates the ordinal regression results for our measure regarding mechanism use for learning transfer. As per the binary logistic regression, this regression model shows adequate fit with the data. For example, we point to the significant model chi square value and the non-significant goodness-of-fit value along with the R-square estimates. Further, the test of parallel lines turned out to be non-significant meaning the assumption (that the location parameters are equivalent across the levels of the dependent variable) is not violated. A positive sign on a coefficient indicates a higher probability of association with the use of more mechanisms relative to the reference category. Conversely, a negative sign on a coefficient indicates a lower probability.

*Insert table 3 here*

Support is found for five of the hypotheses regarding use of the learning transfer mechanisms. First, we find a significant sectoral effect (H2b). Specifically, retail, wholesale, distribution, hotels, and catering MNCs use less transfer mechanisms compared to high technology manufacturing firms ( $p < .05$ ). Second, we once more find support for our hypothesis on HR networking (H6b). More specifically, it is found that where there is no networking between HR managers from different country operations fewer mechanisms are used ( $p < .05$ ). Third, we find that having a formal HR policy formation body is positively related to the utilisation of greater numbers of the mechanisms (H7d;  $p < .05$ ). Fourth, support is found for hypothesis H6e. Here we find the existence of a global succession planning system covering the Irish operations is positively associated with using a greater number of mechanisms ( $p < .05$ ). Finally, having a formal OL policy is considerably more likely to equate to the use of greater numbers of the aforementioned mechanisms (H6g;  $p < .01$ ).

Conversely, no support is provided for our hypotheses on country of origin (H1a & H1b), industrial sector (H2a), employment size (H3b), international organisation structure (H4a & H4b), operational integration (H5a & H5b), and HR influences (H6e).

## **DISCUSSION AND CONCLUSIONS**

This study has explored the usage of a number of mechanisms for transferring learning in the Irish operations and the existence of a formal policy on OL. Further, we investigated the effect of a number of independent variables in explaining inter-organisation variation with respect to these measures.

A particularly interesting observation made from the data was that a relatively significant number of MNCs are utilising practices for the transfer of knowledge from the Irish operations to other parts of the MNC without the guidance of a formal policy on OL. Specifically, it was found that each of the five mechanisms, bar external secondments, was used more than the number of MNCs with a formal OL policy. This suggests some organisations are operating in a type of vacuum whereby they are utilising a number of mechanisms aimed at transferring learning between its operations but these are not being guided or coordinated by an explicit policy. Not having a guiding policy may be detrimental to effective knowledge diffusion internationally because global policy can be useful for coordinating such processes (Tregaskis et al., 2009).

We found that over six in ten firms utilise three or more of the learning transfer mechanisms that we queried. The most popular mechanism was international informal networks, followed by international project groups or task forces; the least utilised being secondments to external organisations internationally. These results resonate quite closely with findings from the UK regarding the use of each individual mechanism (see Edwards et al., 2007). For example, international informal networks were the most utilised mechanism (76 per cent of MNCs in Ireland versus 84 per cent in the UK), followed by international project groups or task forces (69 per cent in Ireland versus 73 per cent in the UK). Only 9 per cent of MNCs fail to utilise any of these mechanisms in the UK compared to 15 per cent in Ireland, whilst similar numbers use two or more mechanisms (78 per cent in Ireland; 82 per cent in the UK). Consequently, we can surmise that in both the UK and Ireland, MNCs are adopting multiple mechanisms to promote the flow of knowledge within the MNC.

Some interesting results emerged from our findings on explaining inter-organisation variation. The international HR influences emerged as particularly useful in explaining variation. Specifically, significant positive relationships were found regarding the existence of a HR policy formation body, HR networking, the existence of a formal policy and utilisation of multiple learning transfer mechanisms. These factors have comparatively received less attention in explaining variation in management practices in MNCs but emerge as particularly important here. In considering why these international HR factors are so important, we point to the literature which suggests they assist in the development of a supportive learning environment in the MNC as well as assisting in the development of social capital on a global level (Nahapiet and Ghoshal, 1998; Kostova and Roth, 2003; Inkpen and Tsang, 2005; Tregaskis et al., 2009).

Worldwide employment was found to be positively related to the existence of a formal policy on OL. This finding may in part be explained by the additional complexity that larger organisations have to deal with. Interestingly however, size did not emerge as significant with regard to the use of learning transfer mechanisms. This is somewhat surprising as previous research has suggested higher levels of learning and training in larger firms due to their greater available resources (Tregaskis et al., 2001). In addition, this finding differs to the UK study which found the larger the MNC, the more likely they are to adopt multiple mechanisms (Edwards et al., 2007).

Support was also provided for a sectoral effect on the utilisation of learning transfer mechanisms. Our analysis found that high technology manufacturing MNCs were significantly more likely to adopt greater numbers of learning transfer mechanisms than MNCs operating in retail, wholesale, distribution, hotel or catering sectors. These two sectors



could arguably be classified on opposite ends of a continuum regarding the value placed on the firm's human capital in building competitive advantage. Consequently, we are able to provide some support to Denton's (1998) contention that OL would be more likely in firms where its human capital are regarded as a critical asset. In addition, the work of Howard and Haas (1993) noted that high technology firms were more likely to undertake OL.

Of some surprise was the lack of a nationality effect. Neither of the measures was shown to be significantly correlated with the country of origin of the MNC. The extant literature has previously found nationality differences in relation to OL in MNCs (cf. Denton, 1998; Lam, 2003; Edwards et al., 2007). However, much of this research focuses on differences between Japanese and US MNCs (e.g. Lam, 2003). Similarly, Edwards and colleagues (2007) found Japanese MNCs used significantly less OL mechanisms than US or European organisations. Our research is unable to corroborate these findings due to the low presence of Japanese MNCs in Ireland<sup>1</sup>. Despite the fact that US MNCs are more likely to have a formal policy and use multiple mechanisms, this did not emerge as statistically different to other MNCs.

Another surprising finding of non-significance was in relation to integration between the MNCs' operations. Previous research concluded that where MNC have integrated operations, much greater latitude exists for the transfer of practices (cf. Marginson et al., 1995; Edwards et al., 2006). As a result we had expected that there would be greater reason for shared knowledge and learning and thus use of learning transfer practices when there is integration between the MNCs' operations.

In conclusion, the level of engagement of MNCs in OL seems mixed. There is a body of literature which suggests that sharing knowledge between organisational units is a key source

of competitive advantage (Argote et al., 2000) and indeed that a key reason behind the formation of MNCs is the ability to share knowledge across borders (Gupta and Govindarajan, 1994). The evidence here is that significant numbers of MNCs are not very formalised with respect to establishing structures for transferring learning.

## **LIMITATIONS, AVENUES FOR FUTURE RESEARCH AND IMPLICATIONS FOR PRACTICE**

While this paper provides reliable, valid data on the state of play with respect to learning transfer in MNCs, it would be remiss not to point out some of the limitations of this study. OL is a particularly complex concept shown markedly by the relative lack of empirical work in the area. We only collected data on one aspect of OL and thus are unable to explore other key areas of OL including the acquisition, interpretation, integration of knowledge in MNCs. The results show that significant numbers of MNCs are seemingly engaging in learning transfer with other operations. However, the existence of an OL policy and use of the transfer mechanisms cannot be deemed to imply that learning is being transferred effectively and efficiently (Gupta and Govindarajan, 2000). Future studies may focus on the outcomes of these mechanisms in MNCs. When one considers the more competitive and cost conscious environment in which organisations now operate, it is important that MNCs investigate the effectiveness of the practices they have in place. These mechanisms can be extremely costly (e.g. expatriate assignments). Consequently, it would be foolhardy to just accept that having these practices is sufficient without exploring their effectiveness. In addition, what type of learning and knowledge is being transferred? For instance, organisations may also learn bad habits (Argyris and Schon, 1978), thus all learning is not necessarily welcome. This study provides generalisable results on a number of facets of OL but was unable to delve into the effectiveness and outcomes of these practices. Future studies may also explore in more detail

how MNCs may overcome the challenges involved in generating and sharing knowledge across foreign operations (Macharzina et al., 2001). These issues include the possibility that organisational members from different countries and cultures may interpret information and knowledge differently. Information regarded as little relevance to the subsidiary may be of major importance to the global firm.

These findings hold benefits to practitioners, primarily through the provision of a benchmark for organisations which will allow firms to establish what other MNCs are doing. If, as the literature suggests, firms can accrue sustainable competitive advantage through effective learning, it stands to reason that MNC managers should be looking at the practices which can help aid the realisation of these benefits. Whilst many of the more formalised mechanisms explored are used by significant numbers, the finding that international informal networks are the most utilised suggests that informal social interaction is an important condition for learning transfer between operations. International HR structures such as the extent of HR networking emerged as significant in explaining the existence of a formal policy on OL and greater use of the learning transfer mechanisms, lending support to the importance of informal communication channels as HR systems can play a vital part in social capital development (Taylor, 2006). These systems are also likely to be useful in achieving a better fit between the need for global coordination and local responsiveness.

The low level of networking with external actors through secondments should also be examined by MNCs. Although gaining and transferring knowledge within the firm can derive great benefit, building external networks with, for example, research and development facilities may be useful in the provision of different skills and knowledge not freely available in-house (Scott, 1995; Kaounides, 1999; Murray, 2001; Lam, 2001; 2003).

Finally, the finding that some MNCs are using learning transfer mechanisms without the guidance of a formal policy is of some concern. It has been suggested that policy can offset potential issues regarding local management not wanting to pass their knowledge onto other operations due to competition for new mandates within the company (Tregaskis et al., 2009). By having a formal policy, the probability of successful and positive learning transfer is arguably higher compared to where there is no such policy.

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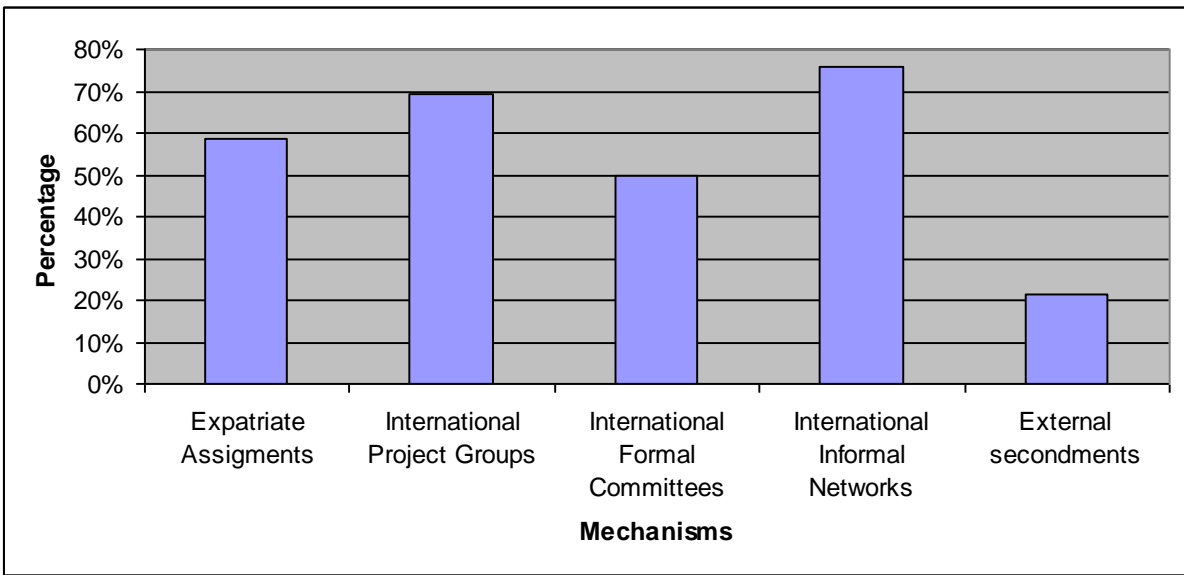
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**Table 1: Dependent and Independent Variables**

| <b><i>Dependent Variable</i></b>         | <b>Description</b>  |
|--|---|
| <i>OL policy</i>                         | Is there a formal OL policy covering the Irish operations? Yes (n=121); No (n=124)  |
| <i>Learning transfer mechanism use</i>   | How many learning transfer mechanisms are used (expatriate assignments, international project groups or task forces, international formal committees, international informal networks, secondments to other organisations internationally)? None (n=39); One (n=18); Two (n=42); Three (n=62); Four (n=58); All five (n=35)   |
| <b><i>Independent Variable</i></b>       | <b>Description</b>  |
| <i>Country of origin</i>                 | US (n=101); UK (n=35); Germany (n=19); Ireland (n=47); Rest of Europe (n=44); Rest of World (n=14).   |
| <i>Sector</i>                            | Dominant sectors of activity of the MNC in Ireland. Traditional manufacturing (n=38); High tech manufacturing (n=82); Financial & business services (n=79); Retail, wholesale, distribution, hotels & catering (n=40); Other (n=21).  |
| <i>Worldwide employment</i>              | Less than 4999 (n=80); 5000 – 29999 (n=88); 30000 – 59999 (n=34); 60000+ employees (n=58).  |
| <i>Irish employment</i>                  | 100 – 499 (n=141); 500 – 999 (n=42); 1000+ employees (n=77).  |
| <i>International business structures</i> | Existence of a) International product/service/brand based divisions, b) Regions, c) Global business functions. None of these structures (n=29); 1 of these structures (n=61); 2 of these structures (n=74); 3 of these structures (n=94).   |
| <i>International integration</i>         | Explores level of international integration between operations in the creation of products/services. No integration (n=43); 1 way integration (n=55) signifies the foreign operations supply (products/services) to the Irish operations or the Irish operations supply the foreign operations; 2 way integration (n=154) where both the Irish and foreign operations supply one another. |
| <i>HR Networking</i>                     | Measures the extent of networking between HR managers from different country operations. This measure is based on the frequency of face-to-face meetings, international conferences and task forces. No networking (n=30); Minimal networking (n=81); Medium level networking (n=49); Extensive networking (n=93).  |
| <i>HR Policy Formation Body</i>          | Measures the existence of a HR policy formation body that develops global policies for the worldwide company. Yes (n=150); No (n=108).  |
| <i>Global Succession Planning</i>        | Are the Irish operations covered by a global succession planning system? Yes (n=148); No (n=104).   |

**Figure 1: OL mechanisms used**



**Table 2: Binary logistic regression results – formal OL policy**

|   | <b>Odds Ratio</b> | <b>Coefficient (Standard Error)</b> | <b>Significance</b> |
|---|-------------------|-------------------------------------|---------------------|
| <b>Country of origin</b>                          |                   |                                     |                     |
| US (ref.)   |                   |                                     |                     |
| UK  | .711              | .342 (.615)                         | .578                |
| Ireland   | .420              | -.868 (.656)                        | .185                |
| Germany   | 1.485             | .396 (.681)                         | .561                |
| Rest of Europe                                    | 2.022             | .704 (.585)                         | .229                |
| Rest of World                                     | .278              | -.942 (.868)                        | .278                |
| <b>Sector</b>                                     |                   |                                     |                     |
| Traditional manufacturing (ref.)                  |                   |                                     |                     |
| High tech manufacturing                           | .682              | -.382 (.595)                        | .521                |
| Financial & business services                     | 1.537             | .430 (.554)                         | .438                |
| Retail, wholesale, distribution, hotels, catering | 1.268             | .237 (.691)                         | .731                |
| Other   | 1.408             | .342 (.939)                         | .716                |
| <b>Irish employment</b>                           |                   |                                     |                     |
| 100 – 499 employees (ref.)                        |                   |                                     |                     |
| 500 – 999 employees                               | .576              | -.552 (.545)                        | .311                |
| > 1,000 employees                                 | .911              | -.093 (.474)                        | .844                |
| <b>Worldwide employment</b>                       |                   |                                     |                     |
| 500 – 4,999 employees (ref.)                      |                   |                                     |                     |
| 5,000 – 29,999 employees                          | .876              | -.132 (.462)                        | .774                |
| 30,000 – 59,999 employees**                       | 3.280             | 1.188 (.607)                        | .050                |
| > 60,000 employees***                             | 8.252             | 2.110 (.646)                        | .001                |
| <b>International integration</b>                  |                   |                                     |                     |
| No integration (ref.)                             |                   |                                     |                     |
| One way integration                               | .939              | -.063 (.622)                        | .920                |
| Two way integration                               | .778              | -.251 (.567)                        | .658                |
| <b>International business structures</b>          |                   |                                     |                     |
| No international business structures (ref.)       |                   |                                     |                     |
| One international business structure              | 3.126             | 1.140 (.812)                        | .161                |
| Two international business structures             | 2.132             | .757 (.810)                         | .350                |
| Three international business structures           | 1.851             | .616 (.822)                         | .454                |
| <b>Global succession planning</b> (ref. = no)     | 1.109             | .103 (.423)                         | .807                |
| <b>HR networking</b>                              |                   |                                     |                     |
| No networking (ref.)                              |                   |                                     |                     |
| Minimal networking**                              | 6.956             | 1.940 (.951)                        | .041                |
| Medium level networking                           | 3.719             | 1.313 (1.017)                       | .197                |
| Extensive networking***                           | 16.170            | 2.783 (1.024)                       | .007                |
| <b>HR policy formation body</b> (ref. = no)**     | 2.357             | .858 (.404)                         | .034                |

Levels of significance are denoted by: \* 10% level; \*\* 5% level; \*\*\* 1% level.

N = 227

Model chi square 97.464\*\*\*

Nagelkerke R<sup>2</sup> .465

Cox & Snell R<sup>2</sup> .349



**Table 3: Ordinal regression results – Number of OL mechanisms used**

|   | <b>Coefficient<br/>(Standard Error)</b> | <b>Significance</b> |
|---|---|---------------------|
| <b>Country of origin</b>                            |   |                     |
| US (ref.)   |   |                     |
| UK  | -.631 (.445)                            | .157                |
| Ireland   | .044 (.472)                             | .926                |
| Germany   | -.352 (.499)                            | .481                |
| Rest of Europe                                      | -.076 (.390)                            | .846                |
| Rest of World                                       | -.859 (.591)                            | .146                |
| <b>Sector</b>                                       |   |                     |
| High tech manufacturing (ref.)                      |   |                     |
| Traditional manufacturing                           | .050 (.427)                             | .907                |
| Financial & business services                       | -.114 (.325)                            | .726                |
| Retail, wholesale, distribution, hotels, catering** | -1.026 (.472)                           | .030                |
| Other   | -.388 (.602)                            | .519                |
| <b>Irish employment</b>                             |   |                     |
| > 1,000 employees (ref.)                            |   |                     |
| 100 – 499 employees                                 | -.104 (.330)                            | .753                |
| 500 – 999 employees                                 | -.165 (.394)                            | .676                |
| <b>Worldwide employment</b>                         |   |                     |
| > 60,000 employees (ref.)                           |   |                     |
| 500 – 4,999 employees                               | -.359 (.440)                            | .414                |
| 5,000 – 29,999 employees                            | .033 (.372)                             | .929                |
| 30,000 – 59,999 employees                           | -.205 (.433)                            | .636                |
| <b>International integration</b>                    |   |                     |
| Two way integration (ref.)                          |   |                     |
| No integration                                      | -.087 (.392)                            | .825                |
| One way integration                                 | .376 (.344)                             | .275                |
| <b>International business structures</b>            |   |                     |
| Three international business structures (ref.)      |   |                     |
| No international business structures                | -.843 (.536)                            | .116                |
| One international business structure                | -.367 (.366)                            | .316                |
| Two international business structures               | -.306 (.315)                            | .332                |
| <b>Global succession planning</b> (ref. = yes)**    | -.768 (.305)                            | .012                |
| <b>HR networking</b>                                |   |                     |
| Extensive networking (ref.)                         |   |                     |
| No networking**                                     | -1.450 (.564)                           | .010                |
| Minimal networking**                                | -.889 (.355)                            | .011                |
| Medium level networking                             | -.274 (.360)                            | .447                |
| <b>HR policy formation body</b> (ref. = yes)*       | -.513 (.297)                            | .084                |
| <b>Formal OL policy</b> (ref. = yes)***             | -.806 (.302)                            | .008                |

Levels of significance are denoted by: \* 10% level; \*\* 5% level; \*\*\* 1% level.

N = 227

Model chi square 105.590\*\*\*

Nagelkerke R<sup>2</sup> .384

Cox & Snell R<sup>2</sup> .372

McFadden R<sup>2</sup> .135

Test of parallel lines .137

<sup>i</sup> The levels of foreign direct investment from Asia to Ireland have been extremely low. Consequently, MNCs from this region are minimal in Ireland.