Is Corporation Tax the most significant determinant for Foreign Direct Investment in Ireland by ICT companies from the United States of America?

This dissertation is submitted in partial fulfilment of the requirements for the Degree of MA in Accounting, Letterkenny Institute of Technology

James Cassidy

July 2012

Presented to:
Mr Paul McDevitt
Department of Business
School of Business
Letterkenny Institute of
Technology

Disclaimer 1

"I hereby certify that the material, which I now submit in partial fulfilment of the requirements for the Degree of Master of Arts in Accounting is entirely my own work and has not been obtained from the work of any other, except any work that has been cited and acknowledged within the text of my work".

Signed: ______________________

Date: ______________________

Disclaimer 2

"I agree that this thesis may be used by Letterkenny Institute of Technology for teaching purposes".

Signed: ______________________

Date: ______________________

Word Count

"I declare that the word count displayed is a true reflection of the work here in".

Signed: ______________________

Date: ______________________

Official Word Count: 16,497

Abstract

Foreign direct investment by multinational companies is influenced by many location specific determinants including the rate of corporation tax. The EU wants Ireland to increase corporation tax to prevent it having a presumed unfair advantage over the other member states in attracting foreign direct investment. Ireland requires this investment for economic recovery especially in the information and communication technology industry. The purpose of this study is to determine which location specific determinants decide foreign direct investment, those which are more specific to Ireland and information and communication technology multinationals from the United States of America and furthermore if corporation tax is the most significant location specific determinant in deciding foreign direct investment in Ireland for these multinational companies. The study was carried out using a range of primary research methods in the form of questionnaires and interviews as well as a literature review as secondary research. The research for the literature review was carried out using the search engines EBSCO and Google Scholar and it was found that the main location specific determinants were corporation tax, educated and skilled workforce, infrastructure, labour costs, political stability, language/cultural closeness, access to other markets and the information and communication technology cluster in Ireland. There was mixed opinion as to whether corporation tax was the most significant location specific determinant in foreign direct investment. However the more recent research would indicate that it is the most significant. It would seem that countries with a low corporation tax have an advantage in attracting foreign direct investment. However in countries with high corporation tax a well-developed infrastructure, public service and other host country attributes attractive to business can overcome this disadvantage. Questionnaires were then formed from this review and sent via email and postal routes to 90 information and communication technology corporations from the United States of America. From these it was found that overall the most significant location specific determinant was Ireland's low corporation tax rate with Ireland's educated and skilled workforce following closely behind. However, it was also found that the most significant location specific determinant differed between those multinational corporations who paid greater than €500,000 in corporation tax in the last trading period to those who paid less than €500,000. It was found that corporation tax was the most significant determinant with Ireland's educated and skilled workforce in second place for those who paid greater than this amount whereas those who paid less than €500,000 access to other markets was the most significant determinant with educated and skilled workforce ranked second. Corporation tax came third for those who paid less than €500,000. Interviews were then based upon these questionnaires to obtain more detailed open ended information from 3 participants who had great knowledge in this area.

They all agreed that corporation tax was a significant location specific determinant for attracting investments into Ireland also stated it was not the most significant as it is a combination of determinants. These included a combination of infrastructure, political stability, access to other markets, educated and skilled workforce and the information and communication technology cluster in Ireland. However, they also stated that if Ireland were to lose this unique corporation tax advantage they would lose foreign direct investment to other countries in Europe. Therefore taking all into consideration corporation tax is the most significant location specific determinant for attracting ICT foreign direct investment from the USA.

Acknowledgments

I would like to sincerely thank the following people for their help in completing this dissertation:

- My supervisor, Mr Paul McDevitt for all his time and support during my year at LYIT.
- The ‘Masters in Accounting’ class of 2012 for making this year a lot easier with their encouragement.
- All the respondents to my questionnaire who took the time to complete and return them.
- Each of the three interview participants for their answers and guidance on this research topic.
- My family for their patience during this tough year.

Table of Contents

List of Abbreviations

ACCI	American Chamber of Commerce Ireland
CT	Corporation Tax
FDI	Foreign Direct Investment
ICT	Information and Communication Technology
IDA	Industrial Development Agency
IMF	International Monetary Fund
LSD	Location Specific Determinant
MNC	Multinational Corporation
OECD	Organisation for Economic Co-operation and Development
USA	United States of America

List of Figures

List of Tables

1. Introduction

1.1 Overview and Justification of the Research Topic/Area

Ireland's foreign investment success began in the 1970s with the signing of the Anglo-Irish Free Trade Agreement to improve Ireland's struggling domestic industries and to attract foreign investors. This showed that foreign direct investment (FDI) had a positive effect on the economy and efforts to attract investment were increased *(Berry, Unknown)*. Since then FDI increased and today Ireland is one of the most favoured locations for FDI in Europe for multinational corporations (MNCs) and the second most attractive country globally for FDI *(National Irish Bank, 2011)*. This success has been highlighted by Ireland still gaining significant FDI even though FDI worldwide has decreased by 30%, *(Kennedy, 2009)*. The Industrial Development Agency (IDA) stated that in 2011 the FDI community generated €104 billion of exports making up 80% of all Irish exports. This was dominated by information and communication technology (ICT) FDI *(Kennedy, 2009)*. This FDI is due to attractive location specific determinants (LSDs) such as a favourable corporation tax (CT) rate which is among the most generous in Europe *(O'Connor et al., 2003; Matheson Ormsby Prentice, 2011).*

The largest source of FDI is from the United States of America (USA), accounting for 74% of Ireland's inwards investment. It accounts for 70% of all IDA supported employment therefore it is crucial to Ireland's economic success *(ACCI, 2012)*.

The ICT industry was chosen for this investigation as it is one of Ireland's leading industries and there is little literature on the determinants which attract this industry to Ireland. This research will help to fill the gap in this literature. The ICT industry includes many different activities in Ireland. These range from manufacturing to service companies *(Enterprise Europe Network, 2010)*. It is a vibrant industry, attracting 9 of the top 10 global ICT companies with an economic contribution accounting for approximately 25% of Ireland's total turnover *(ICT Ireland, 2012)*. Also, when analysed at an industry level the number one location worldwide for USA FDI in the ICT industry was Ireland (*ACCI, 2012).* Currently there are 153 foreign owned IDA registered ICT companies in Ireland with 59% originating from the USA. Also the ICT industry is one of the country's biggest employers as over 74,000 people are employed by these MNCs in Ireland *(Enterprise Europe Network, 2010; ICT Ireland, 2012)*.

It has been suggested that the low CT rate is the main reason for this successful extensive FDI in Ireland and that it was the main contributor to the economic growth leading to the 'Celtic Tiger' period. This period allowed Ireland to achieve high levels of economic growth compared to other EU member states and to become an economic success story *(Logue, 2006).* However the 'Celtic Tiger' period has come to the end of its cycle and has been replaced with an economic crisis. Economic growth is required to improve the economic situation. FDI and MNCs have helped to achieve this goal through their ability to generate jobs and produce new knowledge through technological and managerial advances *(UNCTAD, 2008)*. As Ireland is a small country successful FDI has a greater impact on its economy in comparison to larger countries. FDI is therefore a key part of Ireland's economic strategy and maintaining a low CT rate to help attract FDI is part of this strategy.

However this low CT rate is under threat from other EU members as they consider it gives Ireland an unfair advantage in attracting FDI. This low rate has emerged as a crucial point as the government renegotiates the bailout terms brought about by the economic crisis with the EU and International Monetary Fund (IMF) *(The Economist, 2010)*. France and Germany want to use this as an opportunity to force a rise in the rate (Brown, 2011). Furthermore the debate surrounding tax harmonisation in Europe has increased and if instituted each member state would relinquish their independence in setting taxation rates with an EU average imposed. An average CT rate would be set higher than the current rate of 12.5%.

It is suggested the main reason for the extensive FDI from the ICT industry originating from the USA is the low CT rate. There are studies such as *Simango (1993)* who have investigated the effect of CT on other industries in Ireland. However the researcher can find no literature on what affect the CT rate has on the ICT industry. This study will investigate CT and the ICT industry originating from the USA and this research may be used by a number of institutions including the IDA, ACCI or even the Irish Government to show the significance of the CT rate or other LSDs on the level of USA ICT FDI which Ireland attracts.

1.2 Research Aims and Objectives

"Is CT the most significant determinant for FDI in Ireland by ICT companies from the USA?" is the main research question for this study. This demonstrates the aim of this project which is to investigate what LSDs companies require in order to determine if CT is the most significant determinant for FDI in Ireland by ICT companies from the USA.

In order to assist the researcher come to a satisfactory conclusion more easily, the research question was split into 4 simpler objectives as seen below:

1. To determine LSDs which a MNC considers when choosing its FDI location.
2. To determine the LSDs which are applicable to Ireland.
3. To determine the significance of these LSDs to the ICT industry from the USA.
4. To determine the level of significance of Ireland's CT on FDI location decision compared to other LSDs.

The answers to each objective will be obtained through the use of a literature review, questionnaires sent to ICT companies in Ireland originally from the USA and interview held with three participants who have great knowledge in this area. The literature review was used as a starting point to create the questionnaire which allowed the research to gather further data.

1.3 Limitations of the Research

This research project consisted of primary and secondary research methods made up of questionnaires, interviews and a review of literature surrounding this research area. There are limitations to using each of these research methods. For questionnaires, if the researcher is not present it is always difficult to know if the respondent has understood the questions properly. If the response rate is very low the responses received may only be from those of a very highly motivated sample. Also, with an email questionnaire, the researcher can never be certain the person to whom the questionnaire is addressed actually fills it in *(Sociology, 2011).* A limitation of the interview process is that the answers given by the participants may not be very accurate or complete. The participants may not have a great knowledge of the research area. Therefore the validity and reliability of the interview process may be questioned *(Oatey, 1999)*. *Blaxter et al (2010)* states that secondary data must be analysed cautiously as the variables pertaining to this data may have changed over time.

However the short time scale for data collection is the main limitation of this research project as this prevented the delivery of more questionnaire reminders possibly allowing vital information to be missed and lead to an incorrect conclusion.

2. Literature Review

2.1 What is Foreign Direct Investment?

Traditionally international investment is made up of foreign portfolio investment and FDI *(OECD, 2008a).*

Portfolio investments consist of a purchase of securities and financial derivatives in a foreign currency of one country by residents of another with the intention of a high turnover on a short-term basis *(Husted and Melvin, 2009; Lipsey, 2001).* These allow investors to participate in the growth of foreign countries as well as hedging their consumption basket against exchange rate risk, realising diversification effects and taking the benefits of market segmentation on a global scale *(Bartram and Dufey, 2001).*

FDI is defined by the Organisation for Economic Cooperation and Development (OECD) as a category of investment in which a resident enterprise in one economy acquires an enterprise that is resident in an economy outside that of the investors with the objective of establishing a lasting interest *(OECD, 2011a).* This lasting interest implies the existence of a long-term relationship between the investor and the investment enterprise with the purpose of applying a significant degree of influence on the management.

There are two concepts of FDI. The first is the flow of capital across international borders from a home country to a host country which gives rise to a particular form of international assets for the home countries such as the value of holdings in entities. These are either controlled by a home country resident or a certain share of the voting rights is held by the home country resident. The second concept is a set of economic activities or operations such as production or sales which are carried out in a host country by firms controlled or partly controlled by firms in the home country (Lipsey 2004). *Hymer (1960)* further describes FDI as an asset transfer by the formation of subsidiaries or affiliates abroad without loss of control in which a foreign national takes command over a full range of operations.

In these concepts of FDI there is a common feature of ‘control’ over the host country entity. Control can be defined as applying a significant degree of influence over management *(Paprzycki and Fukao, 2008). Moosa (2002)* states that there is no agreement on what is a controlling interest. However the IMF states that control is recognised by the acquirement of at least 10% of the ordinary stocks in an enterprise by non-resident investors *(IMF, 2011).* If this control criterion is not met the foreign investment is classified as a portfolio investment. This would suggest that control represents the most important distinction between FDI and foreign portfolio investment as the portfolio investor does not seek control or a long lasting interest in a foreign entity. However *Jeffus (2004)* believes there is a misconception regarding the definition of FDI as it does not necessarily imply control over the enterprise as only a 10% ownership is required to establish a direct investment relationship with the entity.

2.2 Importance and Growth of Foreign Direct Investment

FDI boosts economic growth through its impact on trade in the host country. This impact includes job creation, spill over effects, productivity gains and also its ability to transfer new knowledge through technological and managerial advances *(Batten and Vinh Vo, 2009; UNCTAD, 2008)*.This view is supported in studies by *Barro and Sala-i-Martin (1995), Grossman and Helpman (1991)* and *Hermes and Lensink (2003).* They have shown that FDI plays an important role in promoting the host country's economic growth. For these reasons FDI is important to the global economy and attracting FDI has become a key part of national development strategies for many countries *(Aizhan and Makaevna, 2011).*

Over the last 32 years FDI has increased on a global scale. This is shown particularly from 1980 where its value was $52 billion but has since risen to $1,969 billion in 2007 (Figure 2.1). Developing countries and those economies in transition are the major recipients of FDI and have accounted for half of global FDI in 2011 with their inflows reaching an all-time high of $755 billion *(UNCTAD, 2012).*

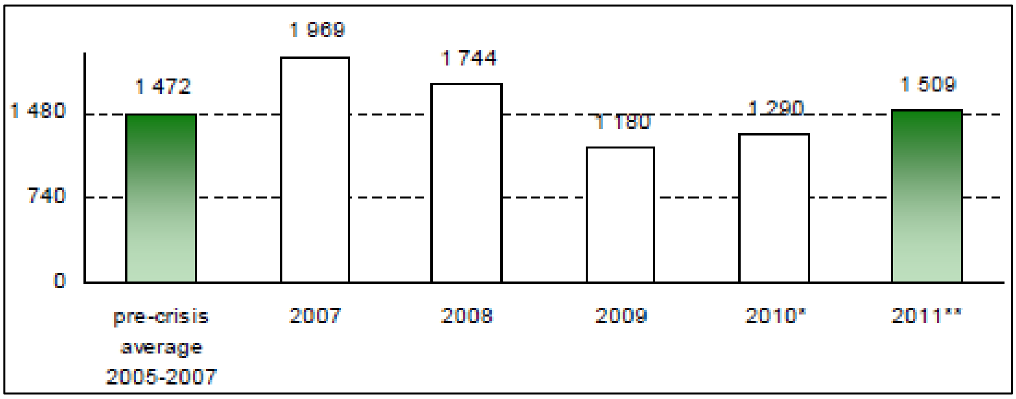

Figure 2.1: Global FDI flows, average 2005 – 2007 and 2007 - 2011

Source: *UNCTAD (2012)*

FDI growth began in Ireland in the 1950s when high tariff barriers were removed. It was boosted in the 1960s with the implementation of special tax incentives aimed towards manufacturing *(Barry and Bradley, 2005).* However since the 1970s FDI growth in Ireland has become successful specifically towards the high-technology industry's such as office machinery, computers, pharmaceuticals and instrument engineering. This has resulted in the

ICT industry becoming one of the top growth industries in Ireland today *(Kilmartin, 2010; O'Malley et al.2001).* The majority of FDI in the ICT industry has been supplied by ICT companies from the USA *(IDA, 2011).* This has allowed Ireland to become a major European centre for software products become the world's second largest exporter of software products *(Coe, 1997; Barry, 2004)*.

The USA is the single largest source of FDI in Ireland comprising of over 600 organisations and employing over 100,000 people *(IDA, 2010).* This accounts for more than 70% of IDA employment and 74% of Ireland's inward investment *(ACCI, 2012).* Collectively FDI in Ireland originating from the USA amounts to $190 billion *(ACCI, 2012; IDA, 2010).* These figures show that the Irish Government has been extremely successful in attracting USA investment through its attractive location advantages and how crucial US investment is to Ireland's economic success *(IDA, 2010; PRS, 2010)*.

2.3 Location Specific Determinants

A MNC will only invest where it considers the host country will offer superior LSDs compared to other countries *(Dunning, 1981).*

These LSDs then allow the MNC to explore their firm-specific ownership advantages *(Dunning, 1981).* As the MNCs decision is mainly determined by the degree of profitability, the LSDs have to make the corporation more profitable. Investors take into account the LSDs which affect overall profitability and the ease of gaining this profitability when deciding the location for FDI. The hard fact is that the chosen location must be more profitable than other locations *(Cheng and Kwan, 2000).* The LSDs, from literature, which MNCs consider to be the most significant determinants when making their FDI location decision are CT, educated and skilled workforce, infrastructure, cost of labour, political stability, language/cultural closeness, access to other markets and the ICT cluster in Ireland.

2.3.1 Low Corporation Tax

All companies resident in Ireland are liable to CT. The Irish Tax Institute states that CT within Ireland is the tax applied to a company's profits and that all companies incorporated in Ireland are automatically considered to be resident with certain exclusions. However a company not incorporated in Ireland may be deemed Irish resident if its central management and control resides in Ireland *(Gallery, 2011).*

In 1954, as part of their fiscal policy, the Irish government initiated a 0% rate on profits earned from exports. This progressed to a 10% rate in 1980 on all manufacturing profits. However due to pressure from the EU this rate rose to 12.5% on corporate trading income at the start of 2003. In 2010 the 10% rate on all manufacturing profits was replaced by the standard rate of 12.5% *(Begley et al., 2005).* Compared to other countries CT rates Ireland's regime has been low for many years. Figure 2.2 shows the average CT rates of all countries and demonstrates that Ireland's rate of 12.5% is low and should be attractive to investors.

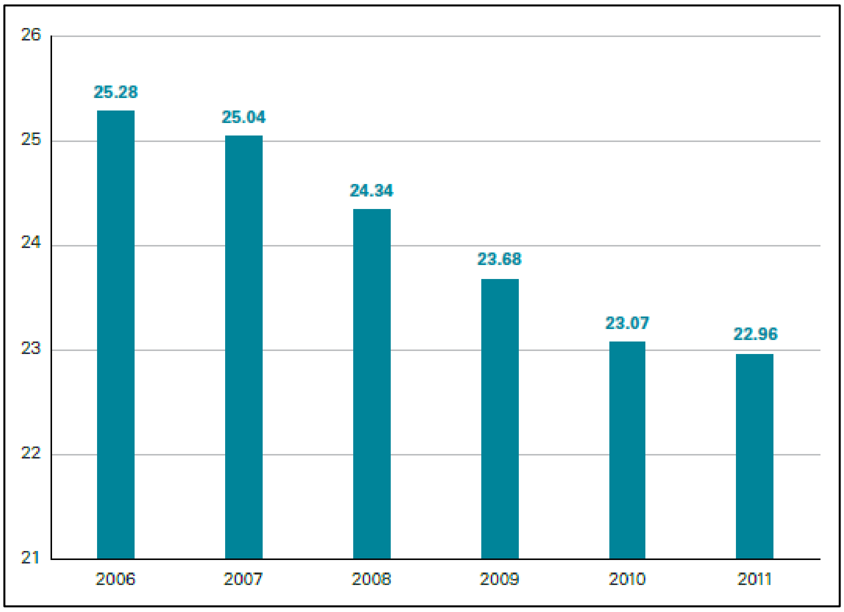

Figure 2.2: Average Corporate Tax Rates in all countries between 2006 and 2011

Source: *KPMG (2011)*

Not only is the Irish CT low, but its regime is relatively simple, has a wide base and is deliberately transparent compared to that of other countries. This is supported by a study carried out by *KPMG (2007)* which examined attitudes within European countries to the particular aspects of their home CT regimes. The study explored such factors as consistency, stability, complexity of legislation, tax rate and also the relation with tax authorities. Ireland was ranked second with a net attractiveness of 89%. This high ranking was due to their consistency in interpreting tax legislation, tax law stability, and attractive low tax rate.

All governments are keen to promote and attract FDI because it will create employment and add to the countries' economic growth. In addition to the CT they will receive a share of the resulting net increase in income through the taxation of the foreign-owned company's wages *(Hanson, 2001).* Governments therefore continually re-examine their tax policies to offer the best competitive environment for FDI in order to obtain an appropriate share of tax from these multinationals *(OECD, 2008b).*

In theory a CT regime should influence an investor's decision as to where to locate their FDI. This view is supported by *Gordon and Hines (2002*) when they suggested a host country's tax policy was capable of affecting the volume and location of FDI inflow because higher taxes reduce the profitability of a MNC which in turn reduce incentives to commit investment funds. Further support for this view is shown in a survey conducted by *De Mooij and Ederveen (2003).* They reported a mean tax rate elasticity of FDI to taxes of -3.3% which means that a 1% reduction in the CT raises FDI in that country by 3.3% as profits after tax will be reduced. However the research literature investigating the significance of CT on the level of FDI inflows to a country compared to other LSDs shows mixed results.

In 1968 a survey of forty business executives concluded good telecommunications, transport infrastructure and an educated workforce were significant LSDs for FDI. However the most significant determinant was the host country's tax regime *(Simmons, 2000).* Research carried out in the 1970s by Scholhammer involving 140 MNCs concluded that taxation was ranked third out of nine LSDs behind infrastructure and political stability *(Simmons, 2000). Hartman (1984)* conducted a study comparing the USA and several developed countries to determine if there was a link between the CT rates and FDI. He concluded that there was weak evidence linking taxes to the levels of investment flows between these countries. Further studies by *Boskin and Gale. (1987)* and *Slemrod (1990)* also found that there was minimal evidence supporting the relationship between taxation and FDI. However *Cassou (1997)* suggested there were limitations to Hartman's research. He suggested that the weak link conclusion could be due to the single time series data used in the study. Using panel data in his empirical analysis of the link between tax rates and FDI he found that the host country's CT rates and income tax rates were significant factors for FDI. A survey by *Devereux and Pearson (1989)* of 173 UK companies which conducted a large proportion of their investment overseas found the results indicated that taxation is commonly influential in investment location decisions. This was supported by *Ruding (1992)* in a further survey of company managers in twelve member states of the EU investigating the influence taxation had on their FDI location decision. The results indicated that taxation is also commonly influential in investment location decisions.

An explanation for the differing findings of the various studies has been put forward by the *OECD (2008b)*. They suggested that CT rates are more of a factor now than in the past when choosing a FDI location and is due to the removal of non-tax barriers and national economies converging. However they also suggested that a low CT rate will not always attract the FDI and that this may occur where a high CT rate is matched by a well-developed infrastructure, public service and other host country attributes attractive to business which include market size.

Interestingly this was supported by *Barry, et al. (1999)* when considering the explanation for the increase in Ireland's share of investment from USA in the EU in the late 1980's as they did not include the CT regime as a possible reason. Further support was also given to this view when the IDA surveyed 81 foreign owned firms operating in Ireland to indicate the first and second most significant LSDs from a choice of 7 for choosing Ireland as their FDI location. 36% replied that taxation was the most significant but 63% replied that taxation was the second most significant *(Simmons, 2000).*

However *Simango (1993)* carried out a similar investigation but restricted it to the US pharmaceutical industry to Ireland. This study found that the low CT rate was the most significant LSD and this was followed by access to the European markets, Ireland's educated workforce and English as Ireland's official language. A survey carried out prior to 1997 by Deloitte Touche Tohmatsu also supported the view that CT was a major factor when they found that almost 60% of foreign companies were influenced by Ireland's low CT rate when choosing their FDI location. However *Gorg and Ruane, (1997)* concluded that this survey did not indicate that the tax rate was more significant than the other included factors which were geographic location, infrastructure, educated workforce and low wage costs as they were also indicated. A more recent survey of 250 Irish-American business leaders in the USA by *Matheson Ormsby Prentice (2011)* found the competitive CT regime was the most significant determinant for FDI in Ireland and included the ease of access from North America, government incentives, English speaking and educated and skilled workforce. Interestingly they also reported the most negative aspects of Ireland were the inefficient government along with Ireland's financial instability, Eurozone instability, its poor infrastructure and its high labour costs.

2.3.2 Educated and Skilled Workforce

In the 1960s the Irish government invested heavily to reform Ireland's education system. Free secondary education and third-level student grants were introduced and this steadily increased participation levels in Irish education. Further change occurred in the 1990s with the introduction of free third-level education for all full-time students *(Cooney, 2008).*

Different avenues for third level education in Ireland have since been established. This has resulted in seven universities, twelve technical colleges, and numerous teacher training and privately-owned colleges *(Carone, 2011).*

Today Ireland's education system is ranked as one of the best in the world. The percentage of the population achieving third level education is one of the highest in Europe and above the OECD average (Figure 2.3). It is suggested that Ireland's highly educated and skilled workforce is one of the reasons it became a thriving economy *(Carone, 2011).* Ireland has five establishments of higher education ranked amongst the top 400 universities in the world according to the Times Higher Education Supplement and these enabled Ireland to offer an abundant supply of skilled labour *(The Times, 2012).* It is considered that a supply of employees with knowledge and skills in a particular field will contribute to the competitive advantage of the country *(Khandekar and Sharma, 2005)*.

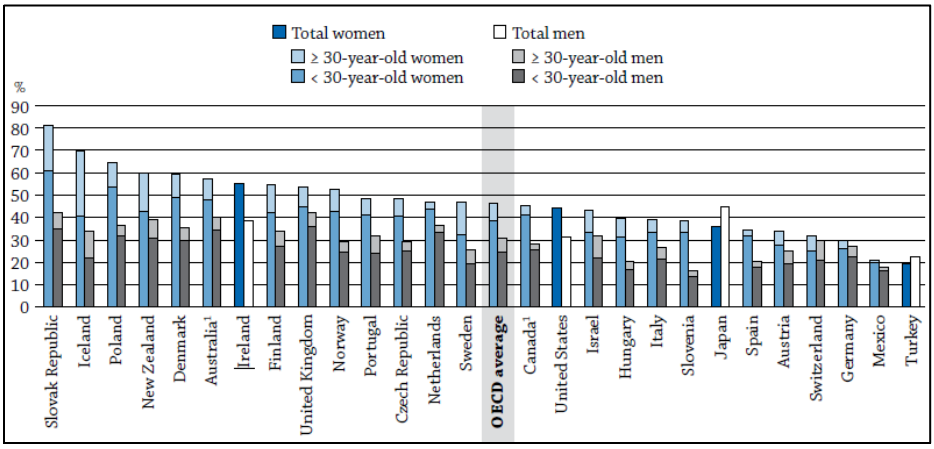

Figure 2.3: Third Level Graduation Rates in 2009

Source: *OECD (2011b)*

In support of this view *Cheng and Kwan (2000)* found the level of education to be a positive determinant in determining FDI location. Furthermore *Hannigan (2000)* cites the Irish education system as being the most significant LSD influencing the competitiveness of MNCs located in Ireland. Also in support of the Irish education system *Gunnigle and McGuire (2001)* found that an educated and skilled workforce was ranked second in significance to CT in attracting FDI to Ireland and concluded that it was a significant factor. Furthermore it is thought education levels influence the FDI inflows of a country because well-educated workers lower unit costs as they can handle a variety of tasks *(Shatz, 2010).*

The evidence suggests that education and a skilled workforce are synonymous and this was acknowledged by the *World Economic Forum (2012)* when they stated that quality higher education is a crucial factor for economies who want to move up the value chain and attract FDI.

2.3.3 Infrastructure

Ireland improved its infrastructure in the 1990s with EU structural funds and initially involved improving telecommunications allowing Ireland to convert to digital technology earlier than other countries *(Collins, 2007).* By the mid-1990s over 75% of users were connected to digital exchanges and a direct fibre-optic link to the USA was established *(Coe, 1999).* Also investment in the hard infrastructure of the country was undertaken. This involved improving the roads, ports and airports to reflect the demand of export-oriented manufacturers. Interestingly despite the high levels of investment Ireland's international infrastructure rankings have not improved significantly since 2000 with the transport infrastructures in particular appearing to lag behind counterparts across the OECD *(Harmes-Liedtke and Oteiza Di Matteo, 2011).* However Ireland's telecommunication infrastructure has improved significantly as its average measured connection speed has grown to be above the global average and is in the top 10 in the world as seen in the table below.

Rank	Country	Average Speed in Mbps
1	South Korea	16.7
2	Hong Kong	10.5
3	Japan	8.9
4	Latvia	8.9
5	Netherlands	8.5
6	Switzerland	7.5
7	Czech Republic	7.3
8	Ireland	7.0
9	Romania	6.6
10	Denmark	6.3
Avg	Global	2.7

Table 2.1: Average Measured Connection Speed by Country

Source*: Akamai (2011)*

A good infrastructure requires the availability of adequate roads, railways, ports and telecommunications for the purpose of operating effectively and should have a significant influence on FDI location decisions as it would affect foreign firms' costs, revenues and hence their profitability *(Kang and Lee, 2007). Wheeler and Mody (1992)* and *Kumar (2001)* reported that the quality of the host country's transport exhibited a high degree of statistical significance therefore having a positive impact on FDI. *Mollick et al. (2006)* also analysed the role of telecommunications and transport infrastructure and found that both have a positive impact on FDI. These findings are further supported in a study by *Kinoshita and Sharma*

(2005). They concluded that the telecommunication infrastructure had a positive impact on FDI inflow.

Interestingly *Demekas et al. (2007)* suggests that infrastructure is significant as a determinant of FDI for the less developed economies while it becomes insignificant for more developed countries. This would suggest that the infrastructure in developed countries was more equal and thus of less importance when deciding FDI. This was somewhat supported in a study by *Hannigan (2000)* when they concluded that the issue of infrastructure was the fourth most significant factor influencing competitiveness in the Irish economy. However a survey of 250 Irish-American business leaders found that the infrastructure in Ireland was a negative LSD for FDI *(Matheson Ormsby Prentice, 2011).*

2.3.4 Cost of Labour

The 1970s and 1980s allowed Ireland to position itself as a location for low cost FDI. However with the economic boom and the increased labour costs due to inflation, it now faces significant competition from low-cost emerging economies *(Crawley and O'Sullivan, 2006).* Figure 2.4 shows the growth in labour costs for different countries from 2000 to 2006. In Ireland from 2000-2006 average employment costs per employee grew by 29.6%. As a result Ireland's labour cost base is high compared to many countries especially emerging economies making this a non-competitive factor when considering FDI. This is supported by the *OECD (2010)* when they stated that the international immobility of labour wage differentials between source and host countries are often considered a major determinant of FDI flows. It may be expected that lower unit labour costs have a positive effect on the inward flow of FDI. This expectation was supported by *Liu et al. (1997)* when they found that low wage rates were one of the most significant LSDs for attracting FDI.

However in Ireland it may also be the case that unit labour cost reflects to some extent the quality of labour supply. *Sexton et al. (1996)* argues that the presence of a highly skilled workforce combined with moderate wage increases has been the over-riding factor in attracting FDI in Ireland. *Gunnigle and McGuire (2001)* add that MNCs are more likely to pay 'above the norm' increases for a well-educated workforce. Also *Hannigan (2000)* notes that this determinant is less critically significant than one might have assumed it to be in Ireland. However all this literature is pre 'Celtic Tiger' and during this economic boom period labour costs have inflated making the labour costs expense. This is reflected in a recent survey of 250 Irish-American business leaders where it was found that the labour costs in Ireland were a negative LSD for FDI *(Matheson Ormsby Prentice, 2011).*

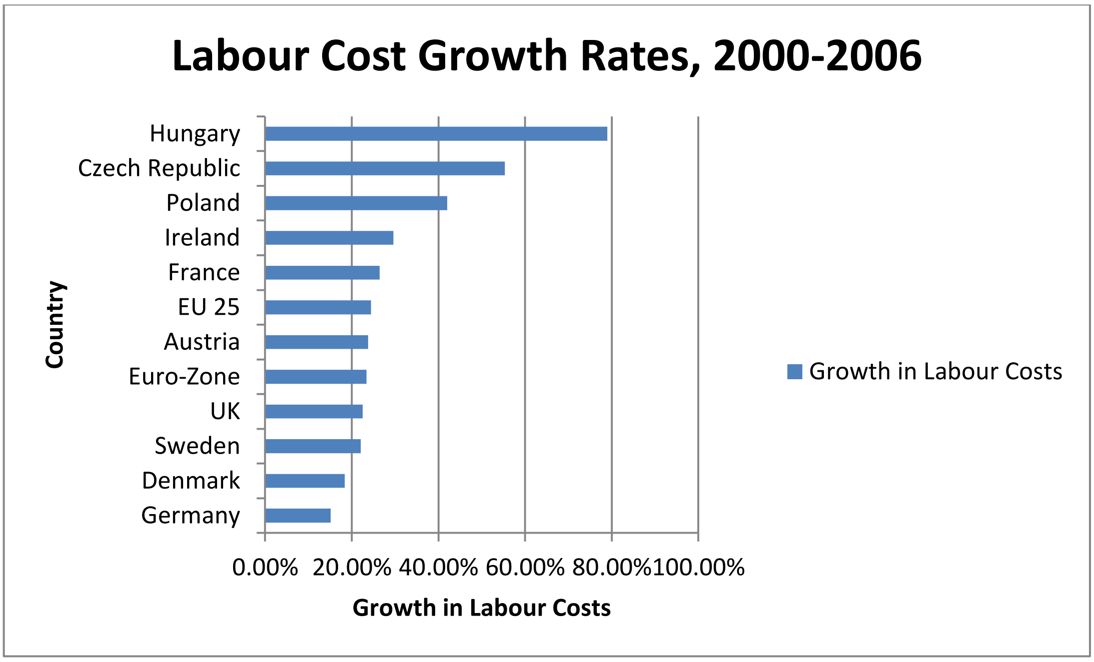

Figure 2.4: Labour Cost Growth Rates, 2000-2006

Source*: Eurostat (2006)*

2.3.5 Political Stability

The 1970's was an era of political instability in Ireland due to political corruption and regular changes in government with some terms not lasting a year. Between 1977 and 1978 3 elections took place in 18 months. These problems were eventually addressed by Fianna Fail and Fine Gael in 1987. They established the 'Tallaght Strategy' in the interest of the nation. This strategy had an agreement that the Fine Gael opposition party would not oppose economic reforms proposed by the Fianna Fail minority government. This then allowed economic reform leading to tax cuts, welfare reform, more competition and a reduction in borrowing to fund current spending. Fine Gael maintains that this policy of cooperation between the opposition and the government laid the foundations for the 'Celtic Tiger' economic boom of the 1990s and this policy continues to be largely followed by successive governments.

FDI is an activity based on future prospects on the return of investment thus a FDI decision requires some assessment of the political future of the host country to reduce the risk on investment. There does not appear to be a single definition of political stability in the literature.

However *Thunnel (1997)* described two types of political stability and instability. The first type is government political stability which may be assessed by the number of changes of governments. The second type is political instability which includes riots, demonstrations, political strikes, which are known to reduce the profitability of operating in the host country.

It has been suggested by *Kobrin (1979) and Erol (1985)* that the political stability of a country is one of the leading factors in assessing FDI location. This is supported by *Schneider and Frey (1985)* when they found a negative relationship between FDI and the number of political strikes and scandals in countries. Furthermore *Globerman and Shapiro (2003) and La Porta (1998)* have stated that political instability in the host country could discourage FDI inflow and that political stability tends to attract more FDI. However in contrast *Andreosso-O'Callaghan and Cassidy (2003)* have suggested that political factors play an insignificant role in a firm's decision to invest abroad.

There is little literature on the political stability of Ireland and FDI. However when comparing the value of exports and imports from the years 2000 to 2007 as shown in figure 2.5 a gradual increase can be observed. This was a period of political stability with economic growth. Following 2007 a period of political instability developed with economic recession and is shown in figure 2.5 by the gradual decrease since 2007. This may suggest that political stability helps the economy and therefore FDI.

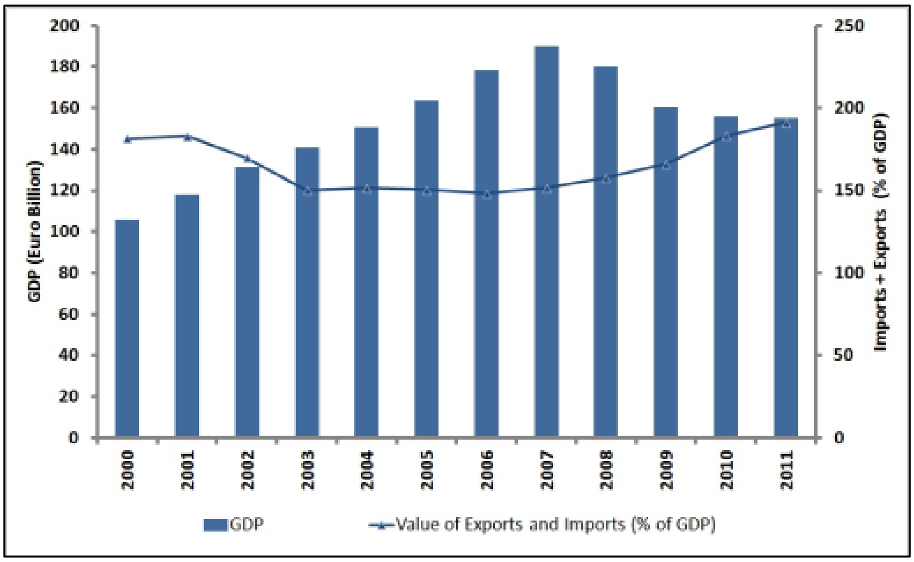

Figure 2.5: Size and Openness of the Irish Economy: 2000 – 2011

Source*: Economic and Social Research Institute (2011)*

2.3.6 Language/Cultural Closeness

The English language has the second largest number of speakers in the world and is the primary language of more countries than any other language as shown in figure 2.6. English is the global business language especially of MNCs. There is conflicting evidence that MNCs are more inclined to invest in countries with a similar culture *Turnball (1987).* When considering Ireland *Forfas (2001)* concluded that the use of English was the third factor in the attraction of FDI. The positive aspect of an English speaking workforce with a similar culture is shown by Ireland's relationship with the USA with 12% claiming Irish ancestry *(American Community Survey, 2006)*. 48% of FDI in Ireland originates from the USA. Furthermore it is considered that it may be more cost effective for multinationals to invest in countries with similar cultures as language barriers can produce miscommunication, uncertainty, mistrust and conflict *(Feely and Harzing, 2003)*.

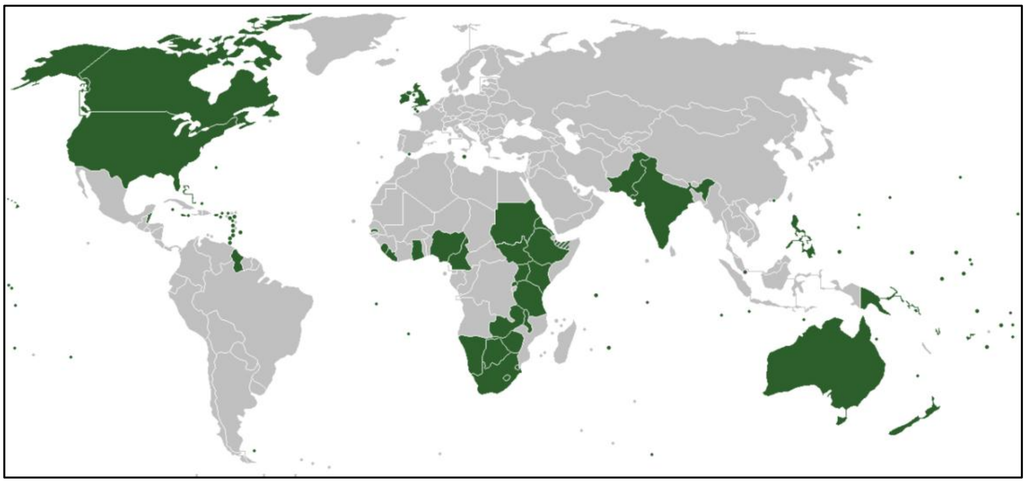

Figure 2.6: English speaking countries

2.3.7 Access to other Markets

Access to other markets is considered a significant LSD (*Cheng and Kwan 2000)*. When investigating Chinese LSDs they found that access to other markets and costs of labour, CT, infrastructure and economies of agglomeration as significant.

The geographical position of Ireland allows easy access to the economies of Britain, Europe, the Middle East and Africa. This access is enticing for MNCs from the USA as illustrated in figure 2.7 *(Enterprise Ireland, 2012; Ireland Information, 2012)*. Also this LSD is intrinsically linked to infrastructure and Ireland has adequate airports and sea ports which allow access to these markets. Flights from Ireland go frequently to these other markets and most of

Europe is within a 3 hour flight time. Also, flights to the USA from Ireland are frequent and are shorter than from any other EU country.

Furthermore as Ireland is a member of the EU and Euro, this allows access to a market of 500 million people with a world GDP of 28%. Also it allows more simplified trading with the EU countries. These advantages are attractive to MNCs *(Department of Enterprise, 2003; Enterprise Ireland, 2012)*. This LSD is also linked to the language/cultural closeness LSD and as Ireland is the only country in the Euro with English as the primary language, this is attractive for that FDI from the USA *(O'Connor, 2001).* Access to other markets for Ireland was shown to be a significant LSD for FDI by *Simango (1993)* when it was found that out of 10 determinants it was ranked fourth in significance in attracting US pharmaceutical MNCs to Ireland. This view was further supported by *Lyons (2012)* when a survey and interview study showed that access to other markets was the most significant determinant for FDI in Ireland. Educated and skilled workforce and government incentives were ranked second and third.

Figure 2.7: A map of Ireland, Europe, Asia and Africa

Source: *World Atlas (2012)*

2.3.8 ICT Cluster in Ireland

The successful development of Irelands ICT industry began in the 1980's when the IDA attracted and established world leading software and hardware MNCs in the country. This has continued during the past ten years and has increased by 10% each year (*OECD, 2008c)*. This increase in ICT companies allowed a cluster of MNCs to develop. Also smaller ICT companies gained from the new knowledge and innovation this brought improving the industry in general *(Green, 2000)*. This emerging cluster developed into one of the most concentrated areas of ICT activity and employment in OECD countries. In 2008 the *Department of Enterprise, Trade and Employment (2008)* stated the ICT cluster in Ireland involved more than 220 companies, employed approximately 40,000 people and was responsible for €50 billion of Irish exports *(Green, 2000; Leon et al., 2010)*.

It is suggested that this emerging cluster was responsible for the attraction of many 'foreign anchor firms' including 9 of the top 10 global software companies (e.g. Microsoft, IBM), 3 of the top 3 enterprise software companies (e.g. SAP, Oracle, Sage), 3 of the top 3 security software companies (Symantec, Trend Micro, McAfee) and 4 of the top 5 IT services companies (e.g. HP, Fujitsu, Accenture) *(Barry, 2006; IDA, 2012)*. This gave Ireland the largest market share of FDI in Europe (55%) with was more than twice the markets share of France (21%) in second place. In the mid-1990s Ireland was the most important ICT cluster in Europe *(Barry, 2006; Green, 2000)*.

This cluster is mostly situated around Dublin. However there are two other big locations, Limerick and Cork, with smaller concentrations as seen in figure 2.8.

The significance of industry clustering in attracting FDI has been reported by *Dunning (2000)* and *Enright (2000). Ivarsson (1999)* investigated the significance of FDI industry clusters in Sweden and found that over 50% of these firms located in clusters. In support of this *Bolancé and Pelegrín (2008)* and *Bronzini (2007)* suggested that the presence of similar industry activity in an area would attract more FDI due to the successful companies already in that location and also because of the benefits already established in the local economies. These benefits include access to resources, technological capabilities and knowledge spill overs *(Dunning, 2000).*

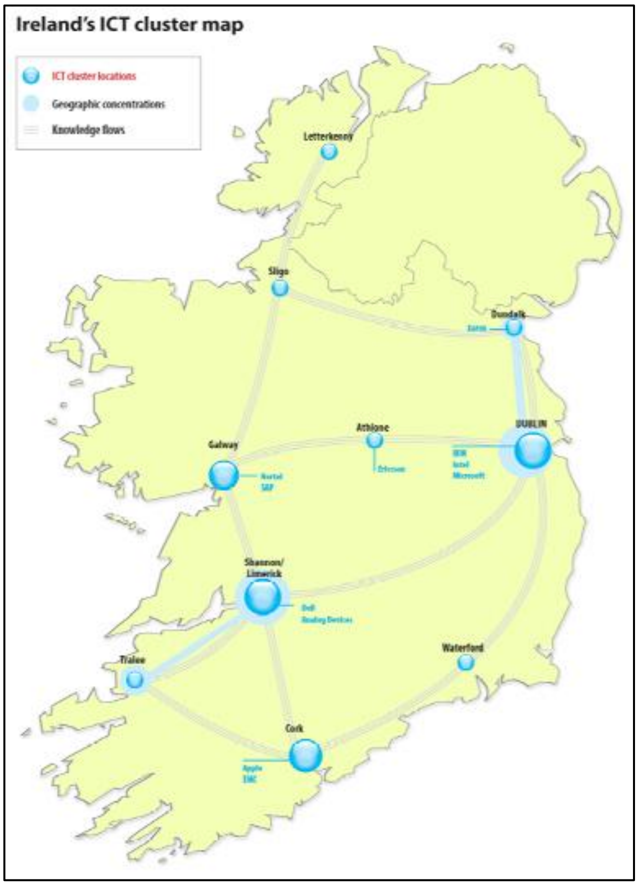

Figure 2.8: Ireland's ICT Cluster Locations

Source: *Department of Enterprise, Trade and Employment (2008)*

3. Research Methodology

3.1 What is Research Methodology?

There is no singly accepted definition of what constitutes research or research methodology in the literature. However a common definition is that of *Collis and Hussey (2009)* who state that research is a process of inquiry and investigation which is methodical and undertaken to increase knowledge in an area. This supports the view that research is the systematic investigation into a particular problem whereas research methodology represents the processes that make up the systematic investigation.

Reviewing the different research methods provides the researcher with insights into the overall research process, how it is carried out, what constitutes good and poor research and it sensitises the researcher to the range of research methods that can be employed to collect and analyse the required data *(Bryman, 2008).*

3.2 Research Problem, Aims and Objectives

This project investigates which LSDs attract FDI to Ireland by ICT companies from the USA to determine if low CT is the most significant determinant of this successful FDI.

This research topic evolved during the research process. At the start of this project the research question was general and read *"Is CT the most significant determinant for FDI in Ireland?"* However, following preliminary research it was noted that this topic was very broad and was refined to *"Is CT the most significant determinant for FDI in Ireland for USA companies?"* as the USA has the largest presence of FDI in Ireland. Further research showed this research question was also too diverse and it was decided to concentrate on a single industry. It was noted that the ICT industry is one of the top growth industries in Ireland with the majority of the FDI in this industry supplied by USA companies *(IDA, 2011; Kilmartin, 2010; O'Malley et al., 2001).* Therefore it was decided to review current literature on the relevant LSDs in this area. However the researcher could not find any relevant literature on this topic relating to ICT companies from the USA and because of this gap in the research literature the research question was refined to its present format *"Is CT the most significant determinant for FDI in Ireland by ICT companies from the USA?"*

To investigate this research question a number of smaller objectives were established which were to be achieved through primary and secondary research. The objectives were:

1. To determine LSDs which a MNC considers when choosing its FDI location.
2. To determine the LSDs which are applicable to Ireland.
3. To determine the significance of these LSDs to the ICT industry from the USA.
4. To determine the level of significance of Ireland's CT on FDI location decision compared to other LSDs.

This then examines the hypothesis of this project which is:

Corporation tax is the most significant LSD for FDI in Ireland for ICT companies from the USA.

3.3 Research Philosophy

The general approach to research involves research paradigms. It is suggested that a paradigm is a method of dissecting the intricacies of the real world (*Patton 1990).* Furthermore *Collis and Hussey (2009)* have stated that a paradigm can be referred to the process of scientific practice based on peoples' philosophies and assumptions about the world and the nature of knowledge about how research should be conducted. This would suggest that a paradigm is influenced by beliefs or philosophies.

Research philosophy deals with how the researcher thinks about the development of research which in turn determines how the research project will be carried out *(Saunders et al., 2009)*. It can be used to help create or clarify a research design *(Easterby-Smith, 2002)*. Choosing a suitable research philosophy is the first stage in designing a research methodology for a research study.

There are two main types of research philosophies 'Ontological' and 'Epistemological' (*Saunders et al. 2009)*. Ontology is concerned with the nature of reality which raises questions of the assumptions researchers have about the way the world operates and the commitment held to particular views. Epistemology is concerned with what constitutes acceptable knowledge in a field of study. This study does not question how the world operates but is concerned with knowledge in a field of study therefore it involves the epistemological research philosophy.

The paradigms which have dominated this research philosophy are positivism and interpretivism.

3.3.1 Positivism

Positivism is a deductive approach to the presentation of results carried out on a large scale *(Kumar, 1999)*. Therefore it can be described as a structured approach to data gathering which is analysed and interpreted in both a factual and statistical manner allowing replication *(Remenyi et al., 2003)*.

A number of authors have criticised the positivism philosophy. They suggest that insights into our complicated world are missed if such complexity is completely reduced to a number of law like generalisations *(Collis and Hussey, 2009; Saunders et al., 2009).*

However positivist research was developed to attain defined theoretical objectives. It is easily analysed and clearly demonstrates existing or emerging patterns and trends and gives the researcher control in measurement using validity and reliability testing.

3.3.2 Interpretivism

The interpretivism philosophy considers that the social world is continually changing and the research and researcher is part of this *(Hussey and Hussey, 1997)*. An interpretivist approach to research is based on the idea that the researchers and reality exist in the same world and as a result knowledge of the world comes from life experiences and the object of research has to be interpreted in terms of the life experience of the researcher. All material relating to the research area must be examined and interpreted before an understanding can be reached which is said to be the only way that reality can be understood. Using smaller samples interpretivism follows the qualitative research approach where the data collecting tends to be more in depth and flexible by means of focuses on the meanings and understanding behind the research *(Hussey and Hussey, 1997)*. The interpretivism philosophy has advantages and disadvantages.

Advantages: *Saunders et al. (2009)*

- Explores subjective meanings behind peoples actions
- Highly flexible giving many different answers
- Accounts for changing business environment.

Disadvantages: *Saunders et al. (2009)*

- Data collection can be time consuming and can be perceived as less credible by non-researchers.
- Researchers must be aware that patterns may not emerge, analysis may be difficult due to its qualitative nature and observer’s bias can occur.

In the researchers opinion many authors have complicated the explanation of interpretivism and positivism. However *Easterby-Smith et al (2002)* and *Saunders et al. (2009*) have simplified this issue when they suggested that interpretivism is concerned with understanding and appreciating the different constructions and meanings which people place on their experience whereas positivism study's facts and developing law like generalizations.

3.3.3 Research Philosophy Adopted

After studying relevant literature the researcher has chosen both the positivist and interpretative philosophies as both quantitative and qualitative approaches are required in this study through questionnaires and semi-structured interviews respectively. A drawback of using both philosophies is that it is time consuming to use two different types of data.

Positivism is used with the questionnaires as the results are quantitative. The semi-structured interviews may result in different opinions resulting in qualitative data and thus use the interpretative philosophy.

Saunders et al. (2009) described this quantitative and qualitative approach to philosophy as Pragmatism as it is perfectly possible to work with variations in epistemology.

3.4 Research Approach

Research is either Inductive or deductive. Research occurs when theory is developed from the observation of empirical reality and general inferences are therefore induced from particular instances while, deductive research is when a conceptual and theoretical structure is developed and then tested by theoretical observation. Therefore particular instances are deducted from general inferences (Collis and Hussey, 2009). As the researcher developed the theory from data collected via questionnaires and semi-structured interviews this research study was inductive.

3.5 Research Purpose

Literature surrounding research methods identifies three types of research which are exploratory, descriptive and explanatory.

3.5.1 Exploratory

As cited in *Saunders et al. (2009)*, *Robson (2002)* states an exploratory study is a valuable means of discovering what is happening, to seek new lines of enquiry, to raise questions and to assess phenomena with a fresh view through the use of a literature review or interviews *(Harvard, 2010)*. Its objective is to identify key issues and key variables within a research problem to develop concepts more clearly, establish priorities and improve the final research design *(Cooper and Emory, 2000; Harvard, 2010)*.

This research type is that it can be very broad in focus and rarely provides definite answers to specific research issues.

3.5.2 Descriptive

Descriptive studies attempt to provide an accurate description as well as produce a useful insight into the observations of phenomena *(Harvard, 2010)*. *Collis and Hussey (2009)* state that descriptive research can be used to describe concepts, as they exist, usually to differentiate and gain information about the type of a particular problem or phenomenon.

Overall this type of study should be thought of as a means to an end rather than an end in itself. If your research project utilises description it is likely to be a precursor to explanation.

3.5.3 Explanatory

Explanatory research is concerned with causes. It seeks to find and account for casual relationships between variables which place an emphasis on studying a situation or a problem to explain the relationships between variables *(Harvard, 2010; Saunders et al., 2009)*. Furthermore it is suggested that explanatory studies follow on from descriptive studies as they exceed simple descriptions of features of a phenomenon, to investigate and explain as to why or how it is occurring *(Collis and Hussey, 2009)*.

3.5.4 Research Purpose Adopted

This study involves both descriptive and exploratory research and together they can both be flexible and adaptable to change.

It is descriptive as it involves reviewing the literature available in journals, articles and books to gain information to construct a questionnaire as well as a range of interview questions.

This study is also exploratory as it uses questionnaires and interviews to gather research data.

3.6 Secondary Research

This part of the research involved a literature review examining books, academic journals, articles and any other literature relevant to this research carried out using the search engines EBSCO and Google Scholar. The purpose of the literature review was to determine which LSDs influence FDI, which are more specific to Ireland and if CT is the most significant LSD in deciding FDI in Ireland. Doing so will give the researcher a background into each of the research objectives.

3.7 Data Collection Methods

Data collection methods are either quantitative or qualitative. Quantitative generates or uses numerical data and qualitative is used predominantly for any data collection technique that generates or uses non-numerical data (*Saunders et al., 2009).* Table 3.1 below shows those quantitative and qualitative methods available to researchers.

Quantitative	Qualitative
Self-completion surveys via regular mail, overnight delivery fax and/or internet.	Human, electronic or mechanical observation.
Interviewer Completed Surveys via telephone, home, office, etc.	In-depth interviews (usually conversational rather than structured)
Human, electronic or mechanical observation.	Projective techniques and psychological testing (such as a thematic apperception test, projective measures, game or role-playing).
	Case studies
	Focus groups

Table 3.1: Quantitative and Qualitative Research Methods

Source*: Blumberg et al. (2008); Hair et al. (2007)*

Quantitative and qualitative research methods can be used separately as a mono research method or together as a mixed research method. *Saunders et al. (2009)* states that mixed research methods are those that use quantitative and qualitative data collection techniques either parallel or sequential to each other. A key characteristic of this method is that they are not combined. Quantitative data is analysed quantitatively while qualitative data is analysed qualitatively.

This study used the mixed research method with questionnaires and semi-structured interviews. *Tashakkori and Teddlie (2003)* suggested that the use of mixed research methods may provide more options to answer the research objectives and improve confidence in the results.

The use of questionnaires in this study provided primary secondary research to obtain the views of those ICT companies from the USA on which LSDs made Ireland attractive for FDI while a further discussion of these issues was carried out using semi-structured interviews on a smaller sample. The other methods in table 3.1 were not considered suitable for this project due to time constraints.

3.7.1 Questionnaires

Questionnaires are one of the most widely used data collection techniques because each respondent is asked to respond to the same set of questions. This provides an efficient way of collecting responses from a large sample prior to quantitative analysis *(Saunders et al., 2009)*. However the design of a questionnaire is critical to a good study. If not designed well the response rate may be low as the respondents may fail to understand the questions and also interpret the questions wrongly affecting the reliability and validity of the results *(Kent, 2001; Saunders et al., 2009)*. To negate these problems the researcher needs to address the types and design of questions, their layout, explanation of each question, the respondents and also the method of distribution *(Saunders et al., 2009)*.

There are many types and designs of questionnaires. Figure 3.1 shows the different types of questionnaires. Self-administered questionnaires are completed independently by the respondent whereas interviewer-administered questionnaires are conducted by the researcher *(Saunders et al., 2009)*. The choice of questionnaire is influenced by the research problem, the characteristics and importance of the respondents, the size of the sample and the type and number of questions needed to collect data *(Saunders et al., 2009)*.

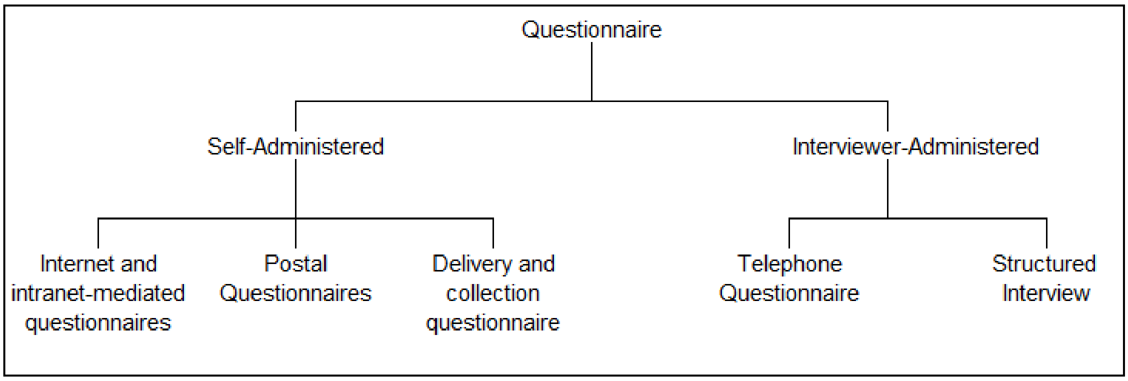

Figure 3.1: Types of Questionnaires

Source: *Saunders et al. (2009)*

Questionnaires can be delivered by post or electronic media (email), completed via the telephone or face-to-face. Each method has advantages and disadvantages. Face-to-face questionnaires may get a better response rate but they are time consuming. Postal and email questionnaires are not as time consuming but may have lower response rates and possibly lower quality answers as the respondent cannot query the questions. However they allow a larger number of people to be surveyed *(Blaxter et al., 2010)*.

Owing to the time limits of this study quantitative questionnaires were designed. Questionnaires were chosen because they were low cost, speedy and allow for a larger sample size to be surveyed *(Wright, 2005)*. The questionnaire was designed to use closed questions to allow the researcher to interpret the findings in a more quantifiable manner. The use of 'yes/no' answers and the Likert rating scale was used to allow any emerging patterns to be identified and analysed.

The questionnaire for this particular research project was a self-administered questionnaire issued via the internet and post. The questions were developed from a literature review. Each question was carefully considered in order to limit the disadvantages of questionnaires. They were kept simple with box ticking exercises and 'yes/no' responses. This type of approach was supported by *Fray (1996)* when he suggested that to ensure a high response rate from questionnaires, questions must be short, brief, concise and easy to understand.

The questionnaire was divided into 3 sections. Section 1 investigated the respondent's profile. This allowed the researcher to obtain an understanding of the size and type of organisation. Section 2 investigated the LSDs which the companies preferred. It asked the respondents to grade a number of LSDs in order of significance using a Likert scale of 1 to 5 with 1 being the most significant, 2 being significant, 3 being moderately significant, 4 being little significant and 5 being the least significant. Section 3 singled out CT in order to further determine its significance as a LSD.

Each questionnaire was accompanied with a covering letter which introduced the researcher, explained why the research was being carried out, introduced the research problem and explained how much their participation would be appreciated.

The questionnaire was piloted In accordance with *Kirklees (2011)* who stated that questionnaires should be piloted to check peoples understanding and ability to answer the questions. It also provided an estimate of completion time. The pilot was issued to a sample of lecturers within the Letterkenny Institute of Technology Business School as they were easily accessible and had knowledge on this research area. When the pilot was completed it allowed the researcher to eliminate any questions which were not deemed appropriate and to reword questions which were causing confusion.

The questionnaire was designed and administered using the online questionnaire design package Surveymonkey. The electronic questionnaire together with a covering letter was distributed to the finance directors of the 90 companies which were identified to satisfy the criteria of the study via the Letterkenny Institute of Technology secure email. The research population is discussed in section 3.8. This delivery method was used because it is said to give higher response rates. However this was not verified in this study as there was a low response rate using this delivery method. Because of this reminder questionnaires were issued via the postal route and sent to the Finance Director of the company with a 'pass-on' clause. This allowed the Finance Director to pass the questionnaire to another participant at the management level if they were unable to partake. The questionnaire also included a stamped address envelope to enable the reply to be returned directly to the researcher. The researcher chose to post the questionnaires as it was believed the response rate would be higher as individuals tend not to read emails when they do not recognise the sender due to the high volumes of junk mail received.

A copy of the covering letter and questionnaire can be found in appendix 1 and 2 respectively.

3.7.2 Interviews

The researcher chose interviews as a method for collecting further data as it is flexible and a constructive manner to obtain information *(Robson, 2002)*. This approach was supported by *Kahn and Cannell (1957)* as cited by *Saunders et al. (2009)* when they stated that an interview may access relevant data which may not be accessed using questionnaires.

However disadvantages of interviews are that they are time consuming and may have an element of bias which means careful preparation is required *(Opdenakker, 2006)*.

In literature there are three types of interviews which are commonly utilised. These are termed unstructured, semi-structured and structured.

Unstructured interviews are informal and are conducted without the use of an interview sequence which allows the researcher to elicit information by engaging the interviewee in free and open discussions on the topic of interest *(Hair et al., 2007)*.

Semi-structured interviews are unlike unstructured interviews in that the researcher will have a list of predetermined themes and questions. These may evolve and adapt as the interview progresses. Open ended questions are used in semi-structured interviews *(Saunders et al., 2009)*.

Finally with structured interviews the interviewer asks a number of predetermined open-ended questions in the same sequence each time while avoiding bias which may result from inconsistent interviewing practices *(Hair et al., 2007)*.

Semi-structured interviews were the most appropriate for this study because they allowed more flexibility and permitted follow-up questions to gain more information.

Interviews can be carried out face-to-face or by the telephone. *Opdenakker (2006)* states that telephone interviews are more advantageous to the interviewer than face-to-face interviews as it gives the interviewer an extended and ease of access to participants across the country. However it was decided that the semi-structured interviews would be carried out face-to-face as there was a small sample number. Furthermore face-to-face can allow the relationship between the interviewer and interviewee to increase and the researcher may interpret the strength of feeling of the answers by the body language.

The primary secondary research was collected from the questionnaires. Following this further data on those LSDs found significant by ICT companies from the USA and the significance of CT was collected from qualitative interviews.

The interview data was collected using tape recordings with the consent of the participant for future analysis and reference. However if this consent was refused then hand written notes were taken but they have a disadvantage in that they are only a summary of the interviewee answers and can increase interviewer bias. If not using a tape recording *Saunders et al. (2009)* states that the researcher should record an interview as soon as possible after it is conducted so as to control bias and to produce reliable data for analysis. The use of tape recordings allows the interviewer to concentrate on the verbal aspect of the interview and importantly allow the researcher to listen to the exact answers to the interview questions again. However commentators have suggested the use of a tape recorder may hinder the relationship between the interviewer and the interviewee as they may become conscious of the recording of the interview.

All interviews were conducted at the end of June and lasted approximately last 30-45mins. Prior to the interviews each candidate received a copy of the interview guide to allow time for preparation. Appendix 3 shows the questions used in the interview guide. The questions were on similar lines as on the questionnaires but were adapted to encourage more detailed answers.

3.8 Research Population

A sample of 90 ICT companies from the USA was obtained from the IDA website as they are responsible for the attraction and development of FDI in Ireland *(IDA, 2011)*. As all the ICT companies from the USA were selected this was not a sample but a census. This list provided the researcher with each company's name, address and telephone number which allowed the researcher to contact each company for a contact email address and an address for the reminder postal questionnaires.

The interviews were held with three participants who did not participate in the questionnaires. Each interviewee was selected by taking account of their knowledge and position in the company to establish that they had experience to discuss the research area and primary questionnaire findings to further improve understanding These include a member of the Irish-American Chamber of Commerce, an IDA Executive and a manager of a top ICT company from the USA in Ireland.

3.9 Data Analysis Methods

The research data was collected through questionnaires sent via electronic media and the postal service. Also data was assimilated through semi-structured interviews. The questionnaire analysis was carried out using the Statistical Package for the Social Sciences (SPSS).

Data from the semi-structured interviews was collected by tape recordings or written notes. To analyse the tape recordings a written account was produced using the actual words in the tape recording as recommended by *Saunders et al (2009).* Following this all the written notes were studied to examine the correlation to the questionnaire answers and to explore any new emerging patterns.

3.10 Ethical Considerations

Ethics is the *"norms or standards of behaviour that guide moral choice about our behaviour and our relationships with others" (Cooper and Schindler, 2008 as cited in Saunders et al., 2009).* Therefore research ethics will relate to questions as to how the research topic is formulated, clarified and designed. This means that the way the research is designed is both methodologically sound and morally defensible to all the participants *(Saunders et al., 2009)*. *Blaxter et al. (2010)* state that a significant aspect of sound research is ensuring research is ethically appropriate. All research gives rise to a range of ethical issues around privacy, informed consent, anonymity, secrecy, honesty and the desirability of the research. The participants must understand the nature of the research and the reason for it. Furthermore it is also imperative they agree to the research, know that it is voluntary and recognise it will be treated confidentially *(Blaxter et al., 2010)*.

The Letterkenny Institute of Technology research ethics committee states that *"all research carried out in the Institute or on behalf of the Institute must be governed by the institutes ethics policy and procedures".* This policy states that approval from the ethics committee must be obtained for research involving or impacting upon human or animal participants *(LYIT, 2011)*. This research project falls within this category so a number of the ethical factors previously discussed are applicable.

This project complied with these ethical factors as the researcher ensured that all the participants had substantial information to understand the project and the reason for the research. Also it was made clear that participation was voluntary and totally confidential. Furthermore the anonymity, privacy of the respondents and the answers were safe-guarded. Therefore, within this text, names of all participants will be anonymous. Also the results from questionnaires and semi-structured interviews were destroyed once analysed.

4. Analysis and Findings

4.1 Introduction

The aim of this study was to explore which LSDs attracted FDI to Ireland by ICT companies from the USA to determine if a low CT rate is the most significant determinant in attracting this FDI. In this chapter the results of the questionnaires and semi-structured interviews will be presented and analysed.

A total of 90 Questionnaires were sent to the selected companies as discussed in chapter 3. When the data collection period of 7 weeks expired a total of 40 questionnaires were returned. The percentages of responses received and not received are illustrated in table 4.1.

	Frequency	Percentage
Responses Received	40	44.4%
Responses Not Received	50	55.6%
Total Sent	90	100

Table 4.1: Percentage of Response Rates

Following the return and analysis of the questionnaires, interviews were held with three participants who had experience with which LSDs attracted ICT companies from the USA to Ireland. For the purpose of this analysis the participants will be known as interviewee 1, 2 and 3 to ensure anonymity. Their company positions are shown in table 4.2.

Interviewee 1: A member of the Irish-American Chamber of Commerce
Interviewee 2: An IDA Executive
Interviewee 3: A manager of a top ICT company from the USA in Ireland

Table 4.2: Interviewee Company Positions

4.2 Demographic Results

The first section of the questionnaire contained questions aimed at gathering information on each respondent's profile.

Question 1: What is your position within the company?

The first question in the questionnaire established what position the respondents held within their company. The responses included four company positions which were Finance Directors, Company Presidents, Financial/Tax Accountants and also Tax Managers. For analysis purposes these four company positions were placed into two groups. Finance Directors and Company Presidents were combined in one group while Financial/Tax Accountants and Tax Managers were combined into another group.

As illustrated in figure 4.1 Finance Directors/Company Presidents had a 57.5% (23) response rate while Financial/Tax Accountants/Managers had a 42.5% (17) response rate.

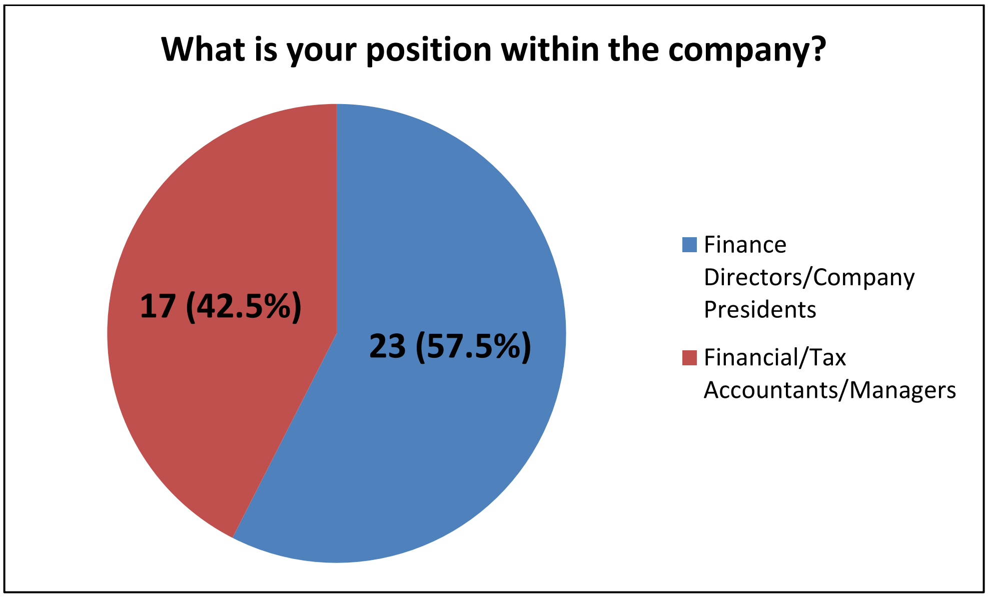

Figure 4.1: Number and Percentage Response Rate of Questionnaire

The company positions of the respondents would indicate they have the knowledge to complete the questionnaire in an informative manner which may allow a greater insight to the research question.

Question 2: How much corporation tax did your company pay in the last trading period?

The respondents could answer this question by selecting one of the options ‘0-50,000’, ’50,001-200,000’, ‘20,001-500,000’, ‘500,001 onwards’ euros. For analysis the answers were placed into two groups, less than €500,000 and more than €500,000. As illustrated in figure 4.2 just over half of participants, 52.5%, paid less than €500,000 in CT in the last trading period while 47.5% paid more than €500,000.

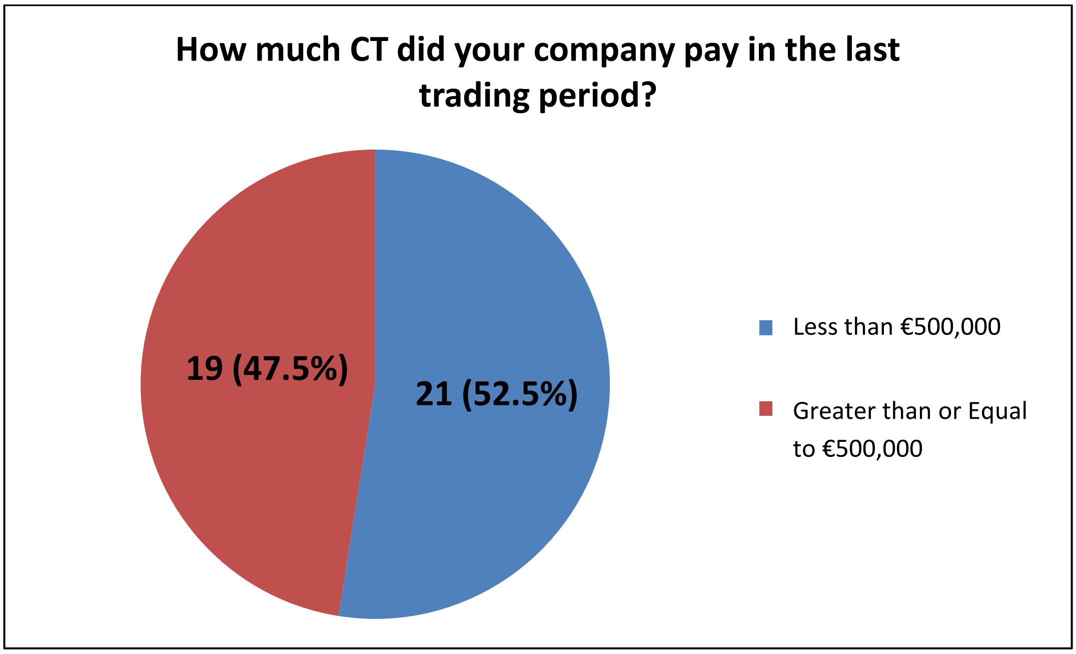

Figure 4.2: Corporation Tax Paid in the Last Trading Period

Question 3: How long does your company plan to operate in Ireland?

The respondents could answer this question by selecting one of the options ‘short term (1-3 years)’, ‘medium term (3-8 years)’, ‘long term (foreseeable future)’. These options were placed into two groups, ‘short-medium term between 1 and 8 years’ and ‘long term meaning more than 8 years’ i.e. the foreseeable future. As illustrated in figure 4.3 the results show that 40% (16) of the respondent’s plans to operate in Ireland only for the ‘short-medium term’ while 60% (24) of respondents plan to stay and operate in Ireland for the ‘long term’. These results would suggest that other countries are becoming more attractive for the companies of 40% of the respondents. This is a large figure and represents a significant trend. The reason has to be established and rectified for the long term recovery and success of the Irish economy.

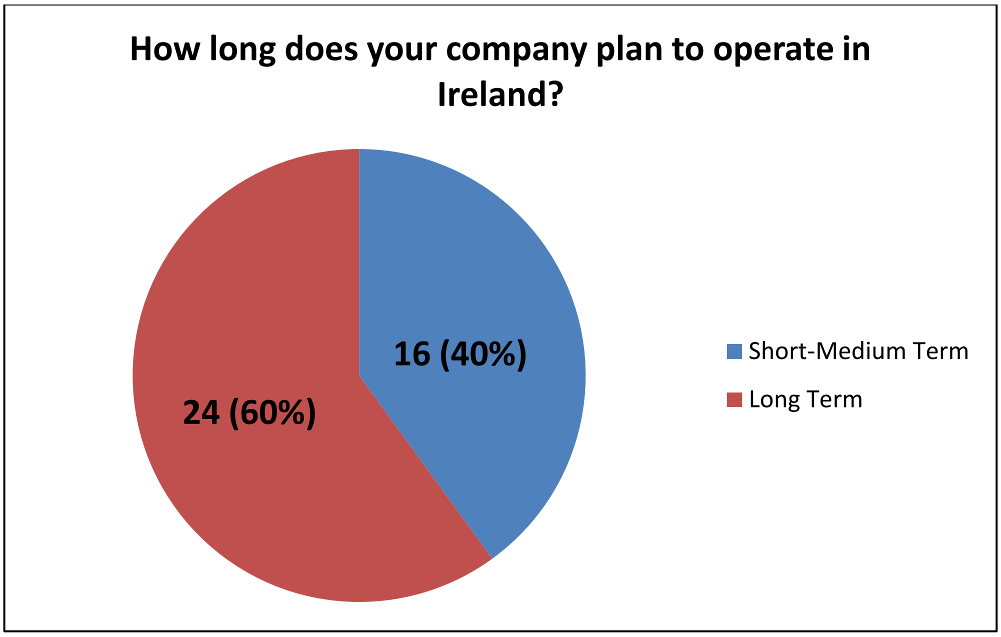

Figure 4.3: Length of Time Companies Intend to Operate in Ireland

When small companies and large companies were compared as to how long they planned to operate in Ireland 12 out of 21 or 57% of small company respondents were planning to leave Ireland in the 'short-medium term'. In the case of large companies only 4 out of 19 or 21% were planning to leave Ireland in the 'short-medium term'.

Time Companies Plan to Operate in Ireland	Small Company Less than or equal to €500,000	Large Company Greater than €500,000	Total
Short-Medium Term	12	4	16
Long Term	9	15	24
	21	19	**40**

Table 4.3: Time Period Companies Plan to Operate in Ireland

4.3 Overall Significance of each LSD

Questions 4 and 5 made up the second section of the questionnaire. They were designed to collect data on the significance of the LSDs identified in the literature review which may have encouraged FDI in Ireland from ICT companies in the USA. These questions attempt to determine which LSDs are applicable to this ICT industry.

There were 8 possible LSDs listed as shown in table 4.4. The respondents graded each LSD on a 5 point Likert scale ranging from ‘very significant’ to ‘insignificant’. To determine and rank the significance of each LSD the mean of each LSD was calculated as this value shows the central tendency of the data and allows a more statistical interpretation of the data than a frequency distribution. In this study the mean is more relevant than the median or mode as the results are of a normal distribution. To do this each response was assigned a weighting. Very significant was assigned the value of 1, significant assigned to 2, moderately significant assigned to 3, little significant assigned to 4 and finally insignificant was assigned the value of 5. Thus the lower mean value shows the most significant LSD in attracting ICT FDI from the USA and the higher value shows the least significant. The median and mode values were also calculated for comparison and to increase confidence in the results.

Question 4: If your company is considering leaving Ireland within the next 8 years (short-medium term), could you please indicate below on a scale of 1 to 5, how significant each factor was when making your decision to leave and investing elsewhere?

Rank	Determinant	Mean	Median	Mode
1	Cheaper Cost of Labour	1.50	1.50	1
2	Larger Regional Market	1.60	1.00	1
3	Economic Certainty	1.80	1.50	1
4	Lower Corporation Tax	2.10	2.00	3
5	More Access to Markets	2.40	2.50	3
6	Political Certainty	3.60	4.00	4
7	Superior Infrastructure	3.80	4.00	5
8	More Educated and Skilled Workforce	4.20	4.50	5

Table 4.4: The Rank and Mean Median Mode of the 8 LSDs in Questionnaire

Table 4.4 shows the results of the mean median and mode and the rank of each of the LSDs. The ranking was carried out using only the mean value. The 3 different calculations display a very large degree of agreement with the ranking positions and this increases confidence in the results.

It can be seen that companies wanting to relocate from Ireland in the next 8 years ranked cheaper cost of labour as the most significant LSD in this decision. Larger regional market was ranked as the second LSD for company relocation. However, when the values for the mean, medium and mode are considered the results are very similar and either of these LSDs could have been ranked in the first position. Ranked third is economic certainty. Again when considering all three calculations this LSD is very similar to those ranked in position first and second. These 3 LSDs have quite similar results in deciding their rankings and may be grouped together. Lower corporation tax was ranked fourth and the results showed a distinct separation from the first 3 rankings. More access to markets was ranked in fifth position and was close to the fourth ranking position when all three calculations were considered. Again these two LSDs have quite similar results in deciding their rankings and may be grouped together. The other LSDs, political certainty, superior infrastructure and more educated and skilled workforce were ranked sixth, seventh and eighth respectively. These 3 LSDs have quite similar results in deciding their rankings and may be grouped together.

When ICT companies are relocating from Ireland It would appear that the 8 LSDs investigated form three groups of closely ranked LSDs. The bar chart in figure 4.4 clearly illustrates the presence and layout of the three groups by the different colours of the bars.

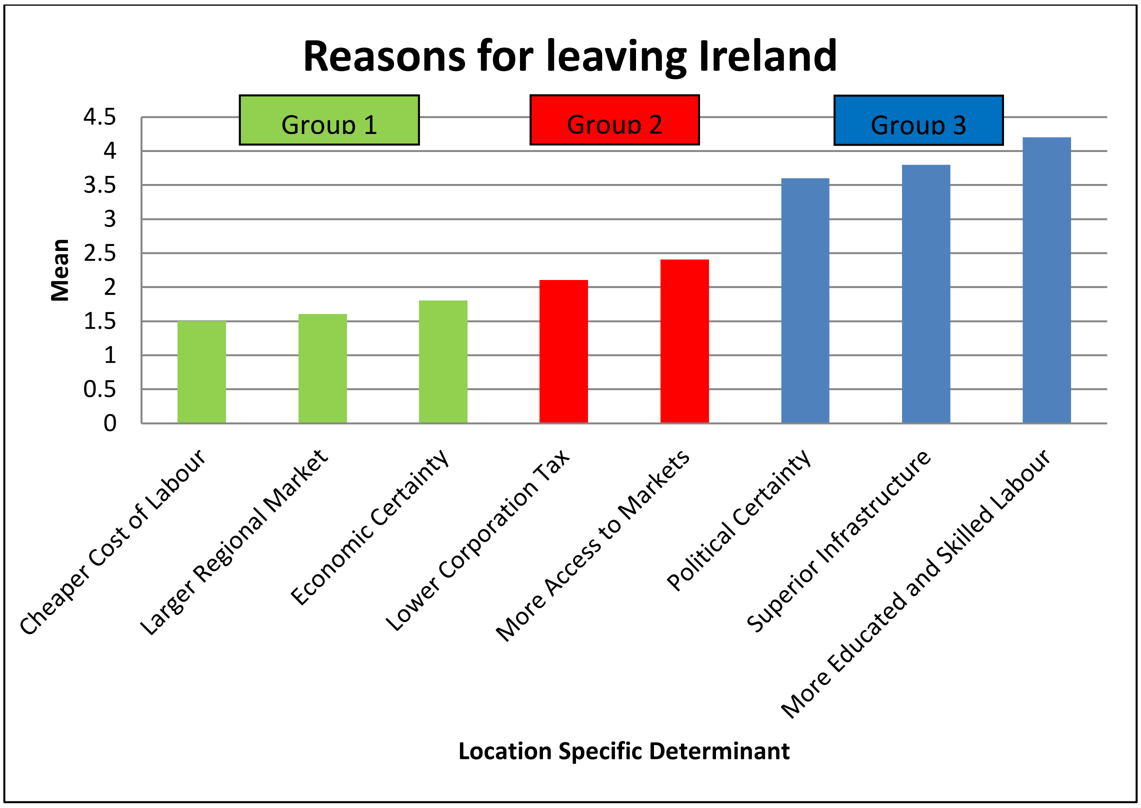

Figure 4.4: Overall Ranking of Favourable LSDs through the mean value

Also the three interviewees supported the questionnaire findings in that they considered that a cheaper cost of labour and larger regional markets were the primary reasons why companies would leave Ireland in the next 8 years. Interviewee 1 stated that Ireland's cost of labour has become better in terms of its competitiveness but *"in terms of energy, waste and other business costs, the price of doing business has gone up and up and up so even though labour costs have come down a little bit, Ireland would still be perceived as being very expensive from that perspective".* Interviewee 2 felt very strongly about larger regional markets as a reason for companies leaving Ireland when they commented that *"a unique selling point of France and Germany is that these countries can attract large companies into their country to manufacture or provide services and they have got millions and millions of a domestic population to which they can sell whereas Ireland cannot attract a company by saying here is a ready-made population of 50 million and you are going to sell to them".*

Question 5: If your company is to remain operating in Ireland please grade each of the following factors on a scale of 1 to 5 on how they make Ireland an attractive business environment.

Rank	Determinant	Mean	Median	Mode
1	Low Corporation Tax	1.70	1.00	1
2	Educated and Skilled Workforce	1.75	2.00	1
3	Access to other Markets	2.05	2.00	1
4	Infrastructure	2.25	2.00	3
5	Language/Cultural Closeness	2.73	3.00	3
6	Political Stability	2.95	3.00	4
7	ICT Cluster in Ireland	3.00	3.00	3
8	Cost of Labour	3.80	4.00	5

Table 4.5: Overall Ranking of Favourable LSDs

The significance of each LSD for ICT companies from the USA remaining in Ireland is illustrated in table 4.5. The lower the mean the more significant is the result. The results show that low corporation tax is ranked as the most significant LSD for companies to keep their FDI in Ireland. This LSD had the lowest mean of 1.70 with 60% of respondents finding it a 'very significant' LSD. However ranked in second place with a mean of 1.75 was educated and skilled workforce. The means of these two LSDs were close in number but the greater median of 2 shown by educated and skilled workforce shows a confidence in this ranking even though the mode results were the same. The mode is the least sensitive measurement of the 3 methods.

Access to other markets and infrastructure were ranked third and fourth respectively. They also had a larger difference between the means than the means between low corporation tax and educated and skilled workforce which supported access to other markets ranked as third and infrastructure ranked as fourth.

Language/Cultural closeness was ranked fifth out of the 8 LSDs for significance for USA ICT companies continuing operations in Ireland. It had a mean value of 2.73.

Political stability, ICT cluster in Ireland and cost of labour had mean values of 2.95, 3.00 and 3.80 and were ranked sixth, seventh and eighth respectively in the overall rankings. They were the least significant LSDs.

Figure 4.5 shows a bar chart of the rankings of the 8 LSDs in relation to the mean. It shows that low corporation tax and educated and skilled workforce could be grouped together as group A due to the small difference in the means. Also the same applies to political stability and ICT cluster in Ireland as there is also little difference between the means and is shown as group B.

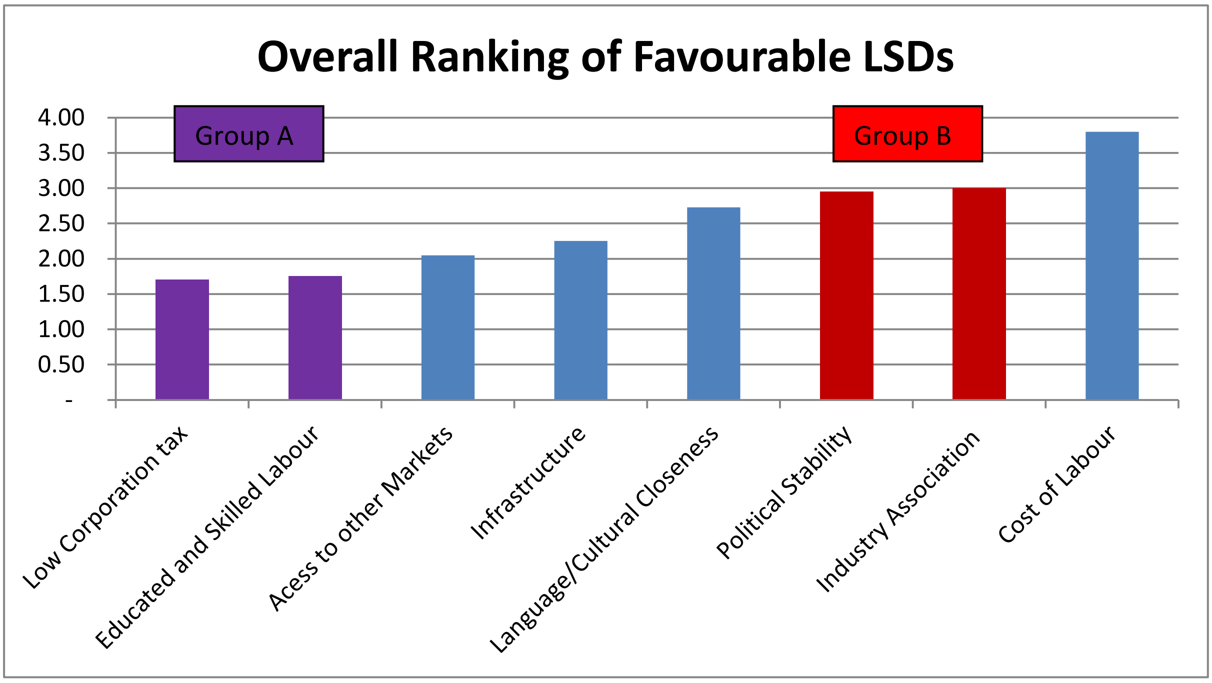

Figure 4.5: Bar Chart of Overall Ranking of Favourable LSDs through the Mean Value

Rank	Small Companies Less than €500,000 CT Paid	Mean	Large Companies More than €500,000 CT Paid	Mean
1	Access to other Markets	1.57	Low Corporation Tax	1.76
2	Educated and Skilled Workforce	1.70	Educated and Skilled Workforce	1.88
3	Low Corporation Tax	1.74	Infrastructure	2.17
4	Infrastructure	2.17	Access to other Markets	2.53
5	Political Stability	2.57	Language/Cultural Closeness	2.94
6	Language/Cultural Closeness	2.78	ICT Cluster in Ireland	2.94
7	ICT Cluster in Ireland	3.04	Political Stability	3.18
8	Cost of Labour	3.61	Cost of Labour	4.06

Table: 4.6 Ranking of LSDs for Small and Large Companies

When the LSDs ranking for small companies and large companies were compared low CT was ranked first for small companies and third for large companies. Educated and skilled workforce was ranked first for large companies. Interestingly access to other markets was ranked second for small companies and only fourth for large companies. The other rankings showed only small differences.

Overall the interviewees supported the results of the questionnaires as to the reasons Ireland was an attractive business environment for USA ICT companies. However, there were slight differences. Interviewee 1 stated that the *"big ICT MNCs' from the USA would always look at talent, tax and competiveness"*. It was further added that educated and skilled workforce *"Is a key factor in whichever industry you are in as the 'STEM' subjects (science, technology, engineering and maths) are particularly important to each area and compared to other countries, Ireland is ahead in producing these graduates".* Interviewee 2 suggested that talent was a main LSD in attracting this FDI from USA but the total picture was in fact a combination of the four **T's**. These include, Ireland's **Track** record with the ICT industry i.e. ICT Cluster, **Talent** i.e. educated and skilled workforce, **Tax** i.e. low CT and finally **Technology** capability i.e. infrastructure. Interviewee 3 believed that *"CT is the main factor as at the end of the day as the company's want to increase their profit for shareholders but when locating to Ireland this company also looked at the level of education of the labour force here as it is very important to a multi-lingual company like ours".* Interviewee 3 went on to state that that access to other markets and political stability were a great part of their decision to locate in Ireland as for access to other markets, *"Obviously Ireland is seen as a* *gateway to Europe as it is the only English speaking country in the Eurozone and it also opens up the Middle East and Africa".*

The interviewees were also asked if they believed only one LSD was responsible for successful FDI in Ireland or was it a combination of different LSDs. They all agreed that it was a combination of a number of factors. In particular interviewee 3 stated *"For some companies some factors will be more important than others but I don't think any company makes that decision on the basis of one factor. Some factors depend on the business that they are in and what you are trying to achieve".* Interviewee 2 further added that as *"Companies need to operate in Ireland they cannot focus on one determinant alone as each will affect their profitability and success for shareholders. For example, they need a talented and skilled workforce to operate effectively and produce higher profits where as they need the best corporation tax rate to reduce their tax to increase profits".* Also, at the end of our conversation, interviewee 2 further added that, *"There is no point having a low CT rate without having substance i.e. you need to be able to operate effectively on the ground".*

Also, when asked *"What other LSDs do you think Ireland has which are not mentioned here?"* interviewee 1 and 2 considered that the researcher had listed all the main ones which would attract FDI whereas interviewee 3 believed that the level of cooperation with tax authorities was a major factor and stated that *"some tax authorities across Europe, Middle East and Africa are not consistent and can vary in their aggressiveness in their cooperation with companies which is a huge thing as this relationship can help the company in the long run encouraging them to stay".*

4.4 An Increase in Corporation Tax

Question 6: If your company invested in Ireland before 1980, did the change in the corporation tax rate from 10% to 12.5% reduce the size of your company's operations in Ireland?

18 (45%) respondents stated that their company did not reduce the size of their operations and 10 (25%) answered that their company did reduce their operations. 30% of the respondents were not based in Ireland at the time therefore answering 'not applicable'. This is illustrated in figure 4.6

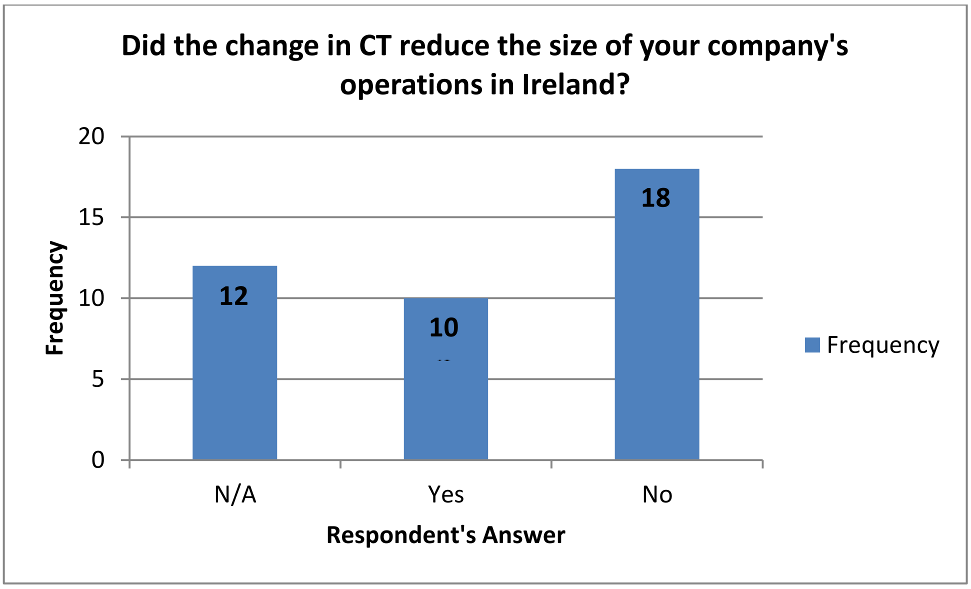

Figure 4.6: Did the change in CT reduce the size of your company's operations in Ireland?

The respondent's answers were cross tabulated with the respondents CT significance answers to question five to establish if there was a correlation between the respondents views on the significance of Ireland's low CT rate and their decision to change their company position in Ireland in 1980 when the CT increase occurred. This is illustrated in figure 4.7 and shows that the majority of respondents who considered the CT LSD to be 'very significant' did not change their position in Ireland in 1980.

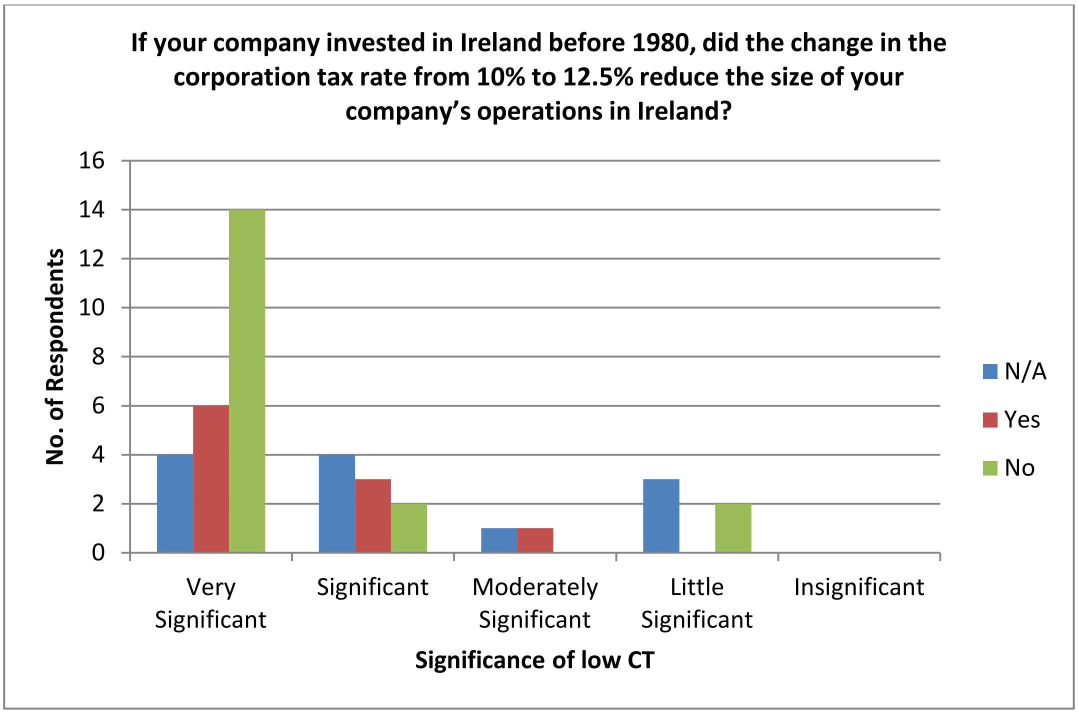

Figure 4.7: A cross tabulation between the significance of the CT rate and the increase in CT rate in 1980.

These results were supported by the interviews. Interviewee 1 stated, *"No, it was well flagged for about 15-20 years that the change was going to happen which meant that companies could plan. It was not an overnight change which was important".* Interviewee 2 stated *"if any ICT FDI was to leave Ireland at that time, it was not their main factor for leaving"* and interviewee 3 stated that, *"it did not change any company's position in Ireland because the increase was not a significant increase. Compared to other rates at the time, the 2.5% increase was not that much of an increase as it was still extensively less than the average rate in Europe at the time".*

Question 7: If the corporation tax rate increased further, would this encourage your company to change its position in Ireland?

70% of the respondents stated that it would encourage them to relocate while 30% considered it would not be a factor in that decision. This is illustrated in figure 4.8. Again these results were cross tabulated with the respondents CT significance answers to question five to establish if there was a correlation between the respondents views on the significance of Ireland's low CT rate and their company position in Ireland if CT was increased. The results are shown in figure 4.9 which clearly demonstrates that the greater the significance of

CT the more an increase in CT would encourage a company to change its position in Ireland.

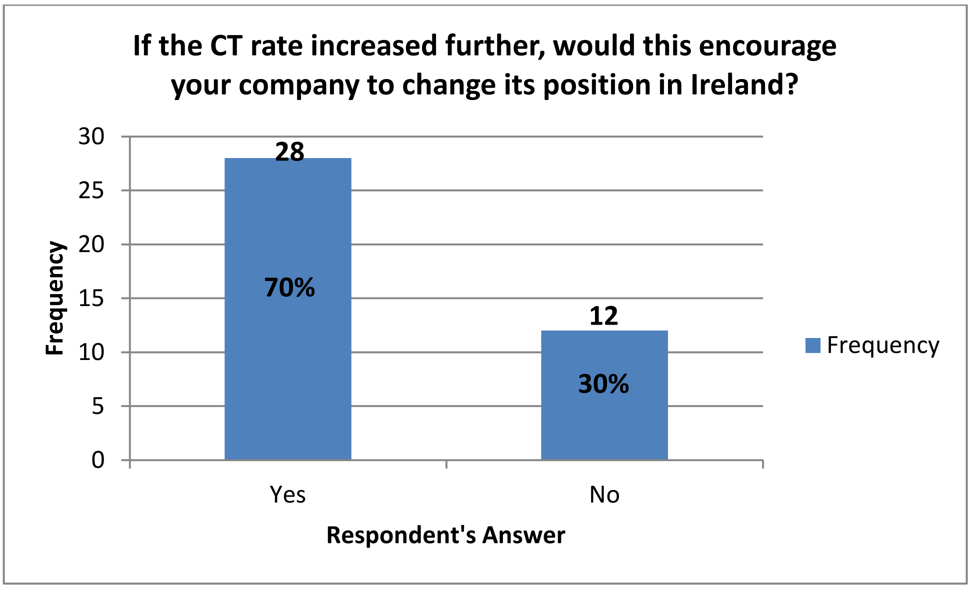

Figure 4.8: The effect of a factor increase in CT rate

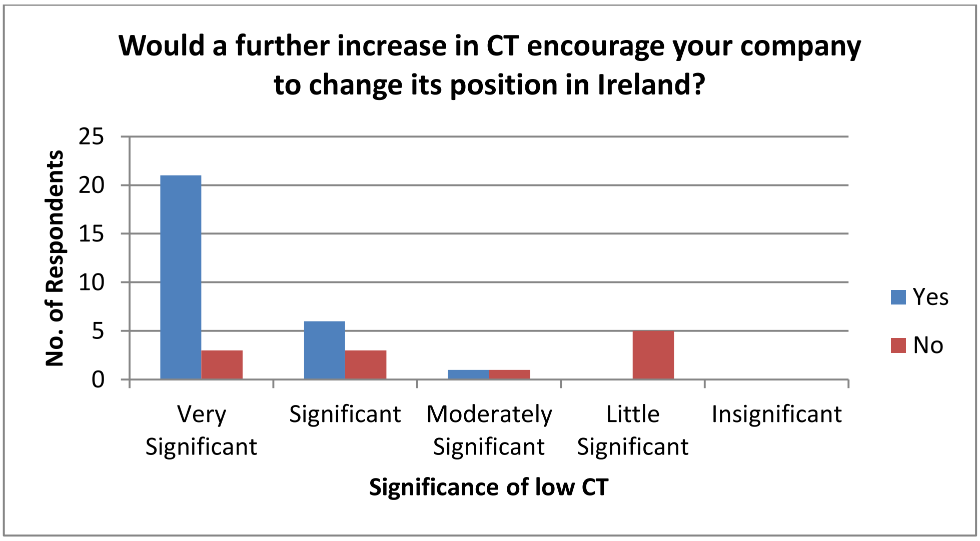

Figure 4.9: A cross tabulation between the significance of the CT rate and the effect of a further increase in CT rate.

There was support for these results from interviewee 1 as it was stated, *"For Intel, Oracle, Microsoft, Dell and other big ICT companies, corporation tax would be hugely important to them because they would tend to have setup an operation in Ireland that might be serving to the European and East African market therefore channelling a lot of their sales through Ireland causing their profits to come through Ireland".*

Question 8(i): At which of the following tax rates would the company consider reducing the size/scale of operations. 15%, 17.5%, 20%, 22.5%, or 25%?

The results are shown in figure 4.10 and it displays two major peaks. The first peak is shown at 15% at which 32.5% of the respondents would consider downsizing and the second peak at 25% where 30% of the respondents would consider downsizing their companies.

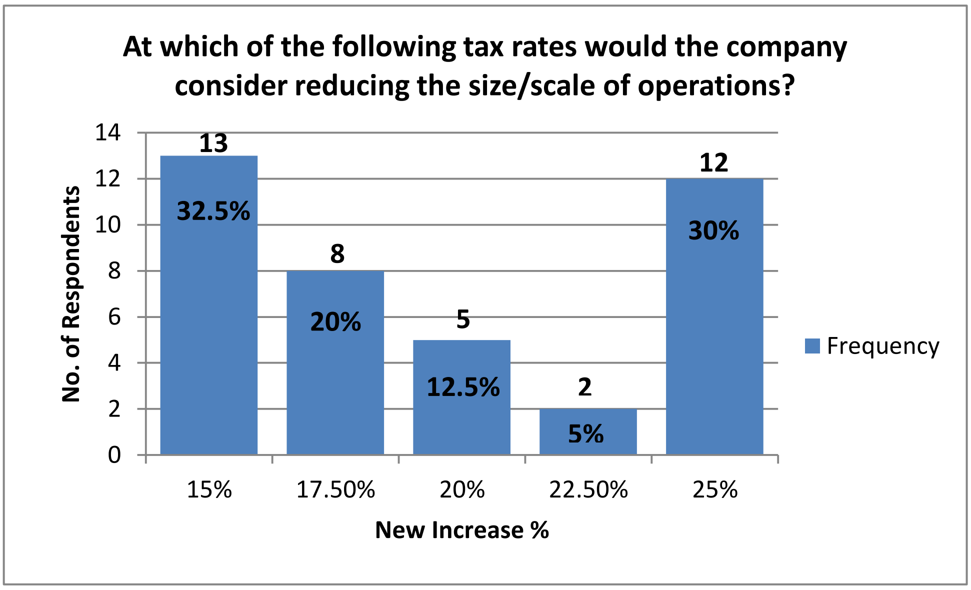

Figure 4.10: What CT rate would reduce the size/scale of operations?

These results were cross tabulated with the answers to question 7 which enquired how a CT increase would affect the company position. The results are displayed in the bar chart to in figure 4.11. The cross tabulation verified the results shown in figure 4.10. However all the respondents who had answered that a CT tax increase would not encourage them to leave Ireland answered question 8(i) by suggesting that a rise to 25% would make them downsize their operation.

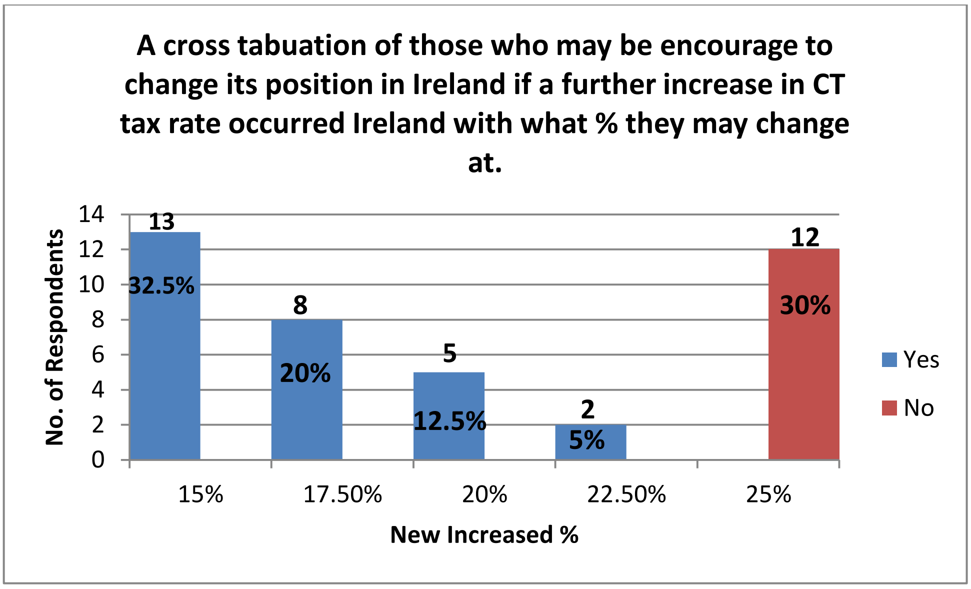

Figure 4.11: A cross tabulation between the effect of a further increase in CT rate and the rate which operations will be reduced in size/scale.

Question 8(ii): At which of the following tax rates would the company consider relocating all of its activities elsewhere. 15%, 17.5%, 20%, 22.5%, or 25%?

The results are shown in the bar chart in figure 4.12. There are three peaks at the CT values 15%, 20% and 25% and 22.5%, 30% and 32.5% of the respondents respectively answered that they would relocate their operations out of Ireland if the CT reached these levels.

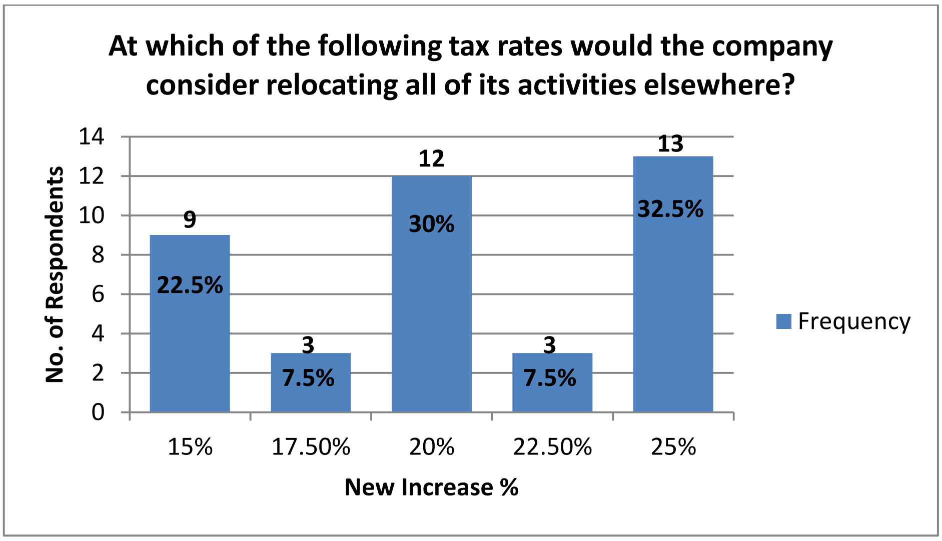

Figure 4.12: What CT rate would relocate operations from Ireland?

Also these results were cross tabulated with the significance of CT as in question 5. As illustrated in figure 4.13 an increase in CT to 15% or above encourages relocation. If CT were increased to 20% approximately 50% of companies (19 out of 40) would relocate.

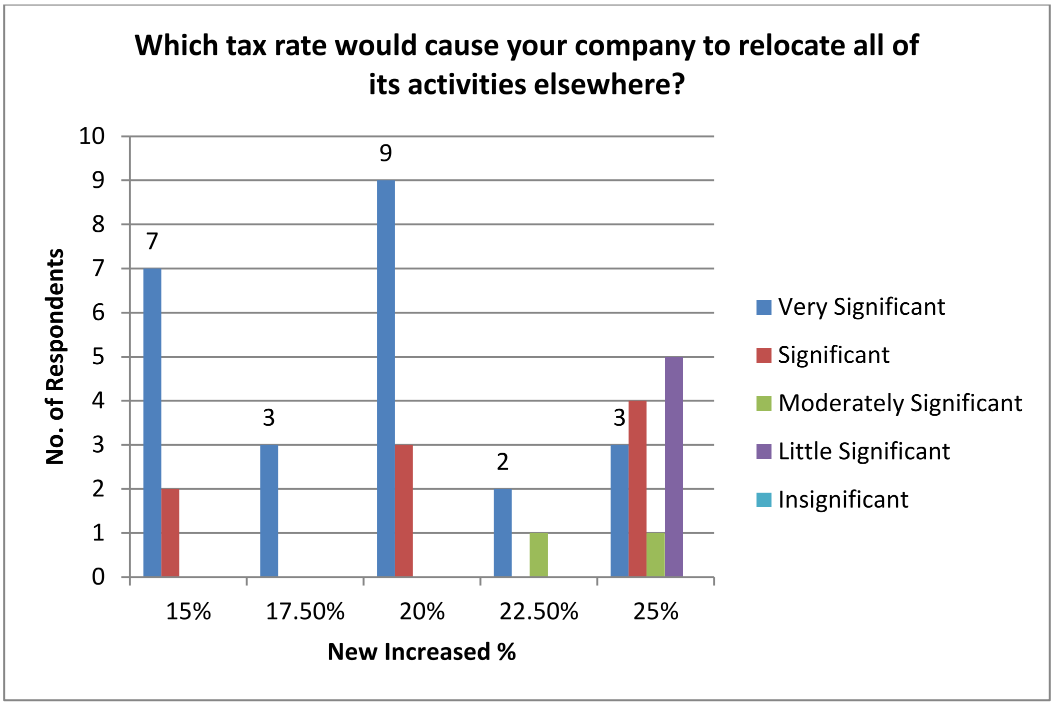

Figure 4.13: A cross tabulation between the effect of a further increase in CT rate and the rate which operations will relocate from Ireland.

4.5 Further Interview Analysis

Further Interview analysis 1: With France and Germany trying to get Ireland to increase their corporation tax rate, do you believe that this will have an effect on Ireland's FDI level from USA ICT companies? If CT was equalised throughout Europe do you believe Ireland would have other LSDs superior enough to compete with the other countries?

Each interviewee stated that if a tax equalisation occurred, this would have a detrimental effect on Ireland's level of FDI. Interviewee 1 stated that, *"I think the tax rate reflects that we need something unique because we do not have the large population base that Britain, France and Germany has. So yes tax equalisation would take away one of the unique selling points of Ireland as a very much export orientated country that does not have a lot of natural* *resources".* When asked would Ireland's other LSDs be strong enough to compete if this rise occurred interviewee 1 stated, *"You would have to try and compete but I would say you would have taken away one of our key differentiators".* Interviewee 2 also agreed with this as the manager stated, *"Ireland's corporation tax rate is its major unique selling point and if this were to go away, then it would be extremely hard for Ireland to compete with the rest of Europe. This would happen around 24%".* Once again, interviewee 3 also stated that, *"Harmonization would deter Ireland's FDI as Europe would have a bigger domestic market therefore meaning that Ireland's low tax rate helps them greatly. For example, a border corporation with the Northern Ireland had the decision between the south or north, they would choose the north because of the lower labour costs".*

Further Interview analysis 2: At the present time, what countries would be Ireland's biggest competition? What LSDs do these markets have that Ireland do not have at the present time?

Each of the interviewees said that the main competition would be from Switzerland and Singapore. Also interviewee 1 stated that *"'brick' countries such as Brazil, Russia, India and China would compete with Ireland as these countries have low costs of labour compared to European countries"* and further added that *"they would be coming to Europe to get access to the markets in Europe to grow their company in a way they could not do from their own country".* Interviewee 2 stated that Ireland's competition would be India and China for the services and electronics sectors of ICT respectively due to its low cost investments whereas closer to home interviewee 3 stated that Switzerland and Netherlands would be Ireland's biggest competition on a tax basis. It was stated that, *"You can go to Switzerland and get a minimal corporation tax rate depending on which canton you setup in. So if you pick a region that is not overly developed and they give you great tax breaks for setting up, depending on how many employees your bringing in, how much business you bring in and how long you are going to stay there. For example if you stay there for 10 years they may strike you a good deal. You do not get anything like that in Ireland. If you come here you just get 12.5% so everyone knows what they're getting. It is straight up, transparent".*

Further Interview analysis 3: What challenges do you believe FDI in Ireland faces in the future? Which LSDs can be boosted to help counter act these challenges?

Interviewee 1 stated that, *"the challenge for FDI in Ireland may face in the future is its ability to change. If you setup a company in Ireland and you are doing the same thing 10 years later that you were doing at the start then I think you are in trouble. You would need to adapt and change and figure out where the market is going and how you reskill and retool your employees".* To fix this it was stated that *"It is the role of the government to manage costs in* *terms of the cost of doing business in the country. A poor infrastructure adds to cost also. It is all the areas that the government controls. Even Tax".*

Interviewee 2 suggested that the future challenges Ireland had was maintaining the educated and skilled workforce LSD as acquiring the right type of detailed qualifications may be difficult. It was also further added that keeping broadband at a high capacity and low price was a necessity for ICT companies from the USA.

Also, both interviewee 2 and 3 stated that the threat of a European tax equalisation is a great challenge. Interviewee 2 stated, *"An equalisation of the corporation tax rate would affect Ireland to a certain extent as it would lose an advantage in attracting foreign direct investments".* To counteract this interviewee 2 believed that the government should put all its efforts into boosting the Irish educated and skilled workforce by *"working with universities and the government's education department to get the right courses to promote the STEM subjects".*

5. Discussion

It is important that when a country attracts FDI it is retained and increased. Interestingly this study showed that 12 (57%) from 21 small companies that paid less than €500,000 in CT plan to leave Ireland within 8 years. This was lower in large companies that paid €500,000 in CT with 4 (26%) from 15 companies planning to relocate within 8 years. This figure for small companies is very high and should cause concern to government. Lower labour costs, larger regional market and political stability were the first three reasons in that order for relocating. These reasons had similar means and could be grouped together as a single unit. However this may be due to the small sample size. CT was ranked fourth and access to other markets ranked fifth. These two LSDs had similar means and could be considered as one unit but this may also be due to the small sample size. However during the 'Celtic Tiger' economy the cost of labour increased greatly and this was shown as a negative for FDI by USA companies *(Matheson Ormsby Prentice, 2011).* Furthermore in the present economic crisis the local market will have contracted and it would seem reasonable to assume that this would affect more small companies than large companies as larger companies are more likely to have access to larger markets. Also as large companies cut costs smaller companies in the supply chain can be more affected than the large company. *Dunning (2000)* has quoted the advantages of company clustering but this shows that there can be disadvantages.

The cost of labour LSD was ranked eighth out of 8 significant LSDs for companies that intend to remain in Ireland for the long term. This may be due to these companies requiring a more educated and skilled workforce and this would support *Gunnigle and McGuire (2001)* when it was suggested that MNCs are more likely to pay 'above the norm' pay for a well-educated workforce. This is also in agreement with *Hannigan (2000)* who considered that labour costs were less critically important in Ireland. However the percentage of companies considering relocating in the short term is high and this would suggest that this determinant is more critical in harder economic times. When all the companies remaining in Ireland were grouped together, low CT was the main LSD for remaining followed by educated and skilled workforce, access to other markets, and infrastructure. *Gunnigle and McGuire (2001*) also found that an educated and skilled workforce was ranked second in importance to the CT rate. Interestingly when these companies were divided into those that paid more than or less than €500,000 low CT dropped to third place as a significant LSD for remaining in Ireland for companies paying less than €500,000. This result suggests that there is a critical value for CT paid which influences the position of CT in LSD significance. Access to other markets was the most significant LSD for companies paying less than €500,000 in CT for not relocating whereas low CT was ranked third. This is in agreement with a survey by *Lyons (2012)* when it found that access to other markets was the most significant LSD for Ireland. This may be explained by the desire for these companies to grow profits by greater sales rather than tax savings. Political stability was also ranked higher with these companies being in fifth position while in seventh position for companies with greater than €500,000 CT paid. In the researchers opinion political instability leads to economic uncertainty resulting in a shrinking home market place and a decrease in company profitability. This is in agreement with *Thunnel (1997).* The remaining LSDs bar cost of labour for both company types were not ranked in the same positions but were within one place of each other. This suggests that a range of LSDs are responsible for companies remaining in Ireland for the long term. This was supported by the 3 interviewees when they stated that this was due to a range of LSDs and not any particular one. Interviewee 3 particularly mentioned CT as being just one of a range of LSDs significant to these companies. However when asked if an EU tax harmonization occurred with the CT rate increased would this have an effect on the level of FDI that Ireland attracts all 3 interviewees stated that it would as this was Ireland's unique advantage. In the researcher's opinion if CT tax was increased to the level of France or Germany Irelands' attractiveness for FDI would be reduced and the top ICT MNCs in Ireland would reinvest in these country's to take advantage of a much larger regional market in mainland Europe. This may then reduce the ICT clustering effect and advantages in Ireland and thus encourage smaller companies also to invest in mainland Europe.

However it would seem that companies are sensitive to changes in CT as 25% of the respondents companies reduced in size when the CT rate was increased from 10 to 12.5% in 1980. This is in agreement with *Simmons (2000)* who stated that Ireland's low CT rate was the most significant determinant for locating in Ireland. However this reduction in size was not entirely attributable to the increase CT rate as a cross tabulation between the significance of the CT rate and the increase in CT rate in 1980 showed that the majority of respondents who considered the CT LSD to be 'very significant' did not change their position in Ireland in 1980. This would suggest that those companies which reduced in size had other reasons besides CT for a reduction in operations. This view was supported by the interviewees as they agreed that the CT increase was small, expected and still extensively less than the average rate in Europe.

When asked if the CT rate was increased further from its present rate 28 (70%) of the respondents stated they would reduce operations and 12 (30%) claimed it would not their influence this decision. It was also shown the greater the significance of CT to a company the more an increase in CT would encourage a change to its position in Ireland. Interviewee

1 supported this view by stating that large ICT companies which are based in Ireland serve the European and East African market and thus channel profits through Ireland and thus an increase in CT can have a big impact on profits. However in contrast *Boskin and Gale (1987)* and *Slemrod (1990)* found that there was minimal evidence supporting the relationship between taxation and FDI. Also the *OECD (2008)* has stated that a low CT rate will not always attract FDI as a high CT rate may be matched by a well-developed infrastructure, public service and other LSDs. However more recently and in support of these findings *Matheson Ormsby Prentice (2011)* found that the competitive CT regime was the most significant determinant for FDI in Ireland. It would seem logical to assume that at present as in 1980 the size of any CT rise would be a significant factor in a company's decision to downsize or relocate.

When the size of a CT rate rise was considered which would cause a reduction in companies operations in Ireland 32% of the respondents said they would reduce operations at a CT rate of 15%. Interestingly this was a greater rise in company operation reduction than in 1980 when it was 25% of the respondents. Then the CT rate rose by 2.5% from 10% to 12.5%. This would seem to indicate that this level of CT does affect company profits and in the present economic climate steps have to be taken to control expenses which may include job losses. When the CT rate increased to 17.5% the number of companies that would reduce their operations rose dramatically to 52.5% and when the rate rose to 20% 65% of the companies declared that their operations would be reduced. This shows that at these increased levels of CT a company's profits are put under great strain and *De Mooij and Ederveen (2003)* have shown that changes in CT tax does affect company profits.

When asked at what level of CT would companies consider relocating from Ireland 22.5% said they would leave at 15%, 30% would leave at 17.5%, and 60% would leave at 20%. In this question the researcher disregarded the highest CT of 25% as there was no facility to indicate 'none of these' and this figure may have given a warped result. However these figures appear to indicate that Irelands low CT was a big factor in these companies profitability and their decision to locate in Ireland. These results also seem to indicate that at 15% CT and above it would be increasingly difficult to keep and attract new FDI to Ireland. This view was supported by the 3 interviewees as they agreed that Ireland's low CT was a unique selling point and that tax harmonisation in the EU would be detrimental to Ireland. Furthermore a link between taxation and FDI is supported by *Devereux and Pearson (1989) and Ruding (1992)* but other studies by *Boskin and Gale (1987)* and *Slemrod (1990)* have disputed this conclusion and suggested a weak link between taxation and FDI. Also the interviewees suggested that the low cost of labour in other countries was a threat to Irelands

FDI and that an educated and skilled workforce with the necessary STEM subjects was necessary to combat this. Also they considered that government could act to curb costs.

6. Conclusions, Recommendations and Future Research

6.1 Conclusion

The literature review found that the LSDs a MNC considers when choosing its FDI location were CT, access to other markets, educated and skilled workforce, infrastructure, political stability, language/cultural closeness, ICT clusters in Ireland and cost of labour in which all of these LSDs were applicable for FDI in Ireland.

The research project asked *"Is CT the most significant determinant for FDI in Ireland by ICT companies from the USA?"*

With the help of each of the research objectives, the answer to this question formed two company types which depended on the amount of CT a company is going to pay. The evidence suggests that CT is the most significant determinant for FDI in Ireland for ICT companies from the USA if they are going to pay more than €500,000 in CT and it is not the most significant determinant for those companies that are going to pay less than €500,000 in CT. For companies going to pay CT at the smaller amount CT was only ranked in third as the most significant LSD with access to other markets and educated and skilled workforce were first and second respectively as the most significant LSDs. The 3 interviewees considered that CT was Ireland's unique selling point and if lost Ireland may lose its attractiveness to mainland Europe.

For both company types the four most significant LSDs included CT, access to other markets, educated and skilled workforce and infrastructure albeit not in the same order. The four determinants of lesser importance for both company types were political stability, language/culture closeness, ICT cluster in Ireland and cost of labour. These lesser determinants were not in the same order except for cost of labour which was the ranked eighth and last for both company types.

In summation CT is the most significant determinant for FDI in Ireland by ICT companies from the USA paying CT greater than €500,000 in CT and the third most important significant determinant for ICT companies from the USA paying less than €500,000 in CT.

6.2 Recommendations/Further Research

Further research is required to define which LSDs are considered to be the most significant for the ICT industry in Ireland as there is minimal research in this area. Research into the significance of ICT clustering to small and medium sized companies should be carried out as should an increase in CT occur then large companies with large CT commitments may relocate. Also more relevant information in this area would be attained with interviews even though it is an expensive and time consuming technique. It is more likely to gather completely new data from this technique than structured questionnaires. Government should fund this type of project as the outcome is of great importance to the Irish Economy.

References

Aizhan, K. and Makaevna, M. (2011). *Impact of Foreign Direct Investment on Economic Growth in Kazakhstan*. Singapore: IACSIT

Akamai. (2011). *The State of the Internet*. Available: http://www.akamai.com/dl/whitepapers/akamai_soti_q311.pdf?curl=/dl/whitepapers/akamai_soti_q311.pdf&solcheck=1&aK. Last accessed 6th April 2012.

American Chamber of Commerce Ireland (ACCI). (2012). *US Investment - Key Statistics.* Available: http://www.amcham.ie/article.aspx?id=461. Last accessed 25th July 2012.

American Community Survey. (2006). *Selected Social Characteristics in the United States: 2006.* U.S: Census Bureau.

Andreosso-O’Callaghan, D. and Cassidy, J. (2003). *Spatial Determinants of Japanese FDI in China.* Working Paper, University of Limerick.

Barro, R. and Sala-i-Martin, X. (1995). *Economic Growth.* Cambridge, MA: McGraw-Hill.

Barry, F (2006). *The Emergence of Ireland's ICT Clusters: The Role of Foreign Direct Investment*. Oxford University Press.

Barry, F. (2004). Export-platform foreign direct investment: The Irish experience. *EIB Papers*. 9 (2), Pg8-37.

Barry, F. and Bradley, J. (2005). *FDI and Trade: the Irish host-country experience*. Available: http://www.tcd.ie/business/staff/fbarry/papers/papers/fdipapej.pdf. Last accessed 6th April 2012.

Barry, F., Bradley, J. and O'Malley, E (1999). *Understanding Ireland's Economic Growth.* London: MacMillan Press Ltd. Pg 45 - 74.

Bartram, S. and Dufey, G. (2001). International Portfolio Investment: Theory, Evidence, and Institutional Framework. *Financial Markets, Institutions & Instruments*. 10 (3), Pg 85 - 155.

Batten, J. and Vinh Vo, X. (2009). An analysis of the relationship between foreign direct investment and economic growth. *Applied Economics*. 41 (13), Pg 1621 - 1641.

Begley, T., Delany, E. and O'Gorman, C. (2005). Ireland at a Crossroads: Still a Magnet for Corporate Investment? *Organizational Dynamics*. 34 (3), Pg 202 - 217.

Berry, R. (Unknown). . Available: http://www.lehigh.edu/~incntr/publications/perspectives/v19/Berry.PDF. Last accessed 25th July 2012.

Blaxter, L., Hughes, C. and Tight, M. (2010). *How to Research*. 4th ed. New York: Open University Press.

Blumberg, B., Cooper, D. and Schindler, P. (2008). *Business Research Methods*. 2nd ed. New York: McGraw-Hill.

Bolancé, C and Pelegrín, A. (2008). Regional Foreign Direct Investment in Manufacturing. Do Agglomeration Economies Matter?. *Regional Studies*. 42 (4), Pg 505 - 522.

Boskin, M. and Gale, W. (1987). *New results on the effects of tax policy on the international location of investment*. Chicago: University of Chicago Press. Pg201-222.

Bronzini, R. (2007). FDI Inflows, Agglomeration and Host Country Firms.*Regional Studies*. 41 (7), Pg 963 - 978.

Brown, J. (2011). *Ireland defends low corporate tax rate*. Available: http://www.ft.com/cms/s/0/e90525f2-66a1-11e0-ac4d-00144feab49a.html#axzz1nQfuLFWC. Last accessed 6th April 2012.

Bryman, A. (2008). *Social Research Methods*. 3rd ed. New York: Oxford University Press.

Carone, M. (2011). *Education in Ireland: Past Successes and Future Problems*. Available: http://www.lehigh.edu/~incntr/publications/perspectives/v19/Carone.PDF. Last accessed 6th April 2012.

Cassou, S. (1997). The link between tax rates and foreign direct investment. *Applied Economics.* 29 (10), Pg 1295 - 1301.

Cheng, L. and Kwan, Y. (2000). What are the determinants of the location of foreign direct investment? The Chinese experience. *Journal of International Economics*. 51 (2), Pg 379 -400.

Coe, N. (1999). Emulating the Celtic Tiger? A comparison of the software industries of Singapore and Ireland. *Singapore Journal of Tropical Geography*. 20 (1), Pg 36 - 55.

Coe, N. (1997). US Transnational and the Irish software industry: Assessing the nature, quality and stability of a new wave of foreign direct investment. *European Urban and Regional Studies*. 4 (3), Pg 211 - 230.

Collins, P. (2007). Information Age Ireland: The Attraction, the Reality and Never Ending Geography. *European Planning Studies*. 15 (1), Pg 67 - 86.

Collis, J. and Hussey, R. (2009). *Business Research: A Practical guide for Undergraduate and Postgraduate Students*. 3rd ed. Basingstoke: Palgrave Macmillan.

Cooney, T. (2008). Celtic Tiger Found in Education Jungle. DIT: School of Marketing.

Cooper, D.R. and Emory, C.W (2000). *Business Research Methods*. London, England: Sage.

Cooper, D.R. and Schindler, P.S. (2008). *Business Research Methods*. 10th ed. Boston, MA: McGraw-Hill.

Crawley, G. and O'Sullivan, E. (2006). The 'Celtic Tiger' and a knowledge economy. Industry and Higher Education. *Industry and Higher Education*. 20 (4), Pg 225 - 229.

De Mooij, R. and Ederveen, S. (2003). Taxation and Foreign Direct Investment: A Synthesis of Empirical Research. *International Tax and Public Finance*. 10 (6), Pg 673 - 693.

Demekas, D., Balasz, H., Ribakova, E. and Wu, Y. (2007). Foreign Direct Investment in European Transition Economies – The Role of Policies. *Journal of Comparative Economics*. 35(2), Pg 369 - 386.

Department of Enterprise. (2003*). Review of Industrial Performance and Policy 2003*. Available: http://www.djei.ie/publications/enterprise/2003/industrialperformanceandpolicy.pdf. Last accessed 25th July 2012.

Department of Enterprise, Trade and Employment. (2008). *Knowledge and Enterprise Clusters in Ireland*. Available: http://www.djei.ie/trade/euaffairs/Knowledgeandenterpriseclusters.pdf. Last accessed 25th July 2012.

Devereux, M. and Pearson, M. (1989). *Corporate Taxation and Economic Efficiency*. London: IFS.

Dunning, J (2000). *Regions, Globalization, and the Knowledge-Based Economy*. Oxford: Oxford University Press. Pg 7 - 41.

Dunning, J (1981). *International Production and the Multinational Enterprise*. London: Allen & Unwin.

Easterby-Smith, M., Thorpe, R. and Lowe, R (2002). *Management Research: An Introduction*. 2nd ed. United Kingdom: Sage.

Economic and Social Research Institute. (2012). *Irish Economy*. Available: http://www.esri.ie/irish_economy/. Last accessed 6th April 2012.

Enright, M.J. (2000). Regional Clusters and Multinational Enterprises: Independence, Dependence, or Interdependence?. *International Studies of Management & Organization*. 30 (2), Pg 114 - 138.

Enterprise Europe Network. (2010). *Information, Communication and Technology Sector in Ireland.* Available: http://www.een-ireland.ie/eei/assets/documents/uploaded/general/ICT%20Fact%20sheet.pdf. Last accessed 25th July 2012.

Enterprise Ireland. (2012). *Ireland offers easy access to world markets*. Available: http://www.enterprise-ireland.com/en/Start-a-Business-in-Ireland/Startups-from-Outside-Ireland/Access-to-International-Markets.html. Last accessed 25th July 2012.

Erol, C. (1985). An Exploratory model of Political Risk assessment and decision process of Foreign Direct Investment. *International Studies of Management and Organization*. 15(2), Pg 75 - 90.

Eurostat. (2006). *General and Regional Indicators.*

Feely, A.J. and Harzing, A.W. (2003). Language Management in Multinational Companies. *Cross Cultural Management*. 10 (2), Pg 16.

Forfás. (2007). *Annual Employment Survey.* Available: http://www.forfas.ie/media/forfas080401_annual_employment_survey_2007.pdf. Last accessed 25th July 2012.

Fray, R. (1996). *Hints for designing effective questionnaires*. Practical Assessment, Research & Evaluation, 5 (3).

Gallery, K (2011). *Irish Taxation: Law and Practice.* 9th ed. Dublin: Irish Tax Institute. Pg 669 - 674.

Globerman, S. and Shapiro, D. (2003). Governance Infrastructure and US Foreign Direct Investment. *Journal of International Business Studies*. 34 (1), Pg 19 - 39.

Gordon, R. and Hines, J. (2002). International Taxation. *Handbook of Public Economics*. 4, Pg 1935 - 1995.

Gorg, H. and Ruane, F. (1997). Reflections on Irish industrial policy towards foreign direct investment. *Trinity Economic Papers Series*. 97 (3).

Grossman, G. and Helpman, E. (1991). *Innovation and Growth in the Global Economy.* Cambridge, MA: MIT Press.

Green, R. (2000). Irish ICT Cluster. *OECD Cluster Focus Group Workshop*.

Gunnigle, P. and McGuire, G. (2001). Why Ireland? A Qualitative Review of the Factors Influencing the Location of US Multinationals in Ireland with Particular Reference to the Impact of Labour Issues. *Economic and Social Review*. 32 (1), Pg 43 - 67.

Hair, J., Money, A., Samouel, P. and Page, M. (2007). *Research Methods for Business*. Sussex: John Wiley & Sons.

Hannigan, K. (2000). Ireland's Economic Performance: A view from the MNCs. *Irish Business and Administrative Research*. 21 (1), Pg 69 - 73.

Hanson, G. (2001). Should Countries Promote Foreign Direct Investment? *G-24 Discussion Paper Series*. No. 9.

Harmes-Liedtke, U. and Oteiza Di Matteo, J. (2011). *Measurement of Quality Infrastructure*. Available: http://www.neilstoolbox.com/bibliography-creator/reference-website.htm#. Last accessed 6th April 2012.

Hartman, D. (1984). Tax Policy and Foreign Direct Investment in the United States. *National Tax Journal.* 37 (4), Pg475-487.

Harvard. (2010). *Research Methods: Some Notes to Orient You.* Available: http://isites.harvard.edu/fs/docs/icb.topic851950.files/Research%20Methods_Some%20Notes.pdf. Last accessed 15th June 2012.

Hermes, N. and Lensink, R. (2003). Foreign Direct Investment, Financial Development and Economic Growth. *Journal of Development Studies*. 40 (1), Pg 142 - 163.

Hussey, J. and Hussey, R (1997). *Business Research*. Hampshire, England: Macmillan Press Ltd.

Husted, S. and Melvin, M. (2009). *International Economics*. 8th ed.

Hymer, S. (1960). *The International Operations of National Firms: A Study of Direct Foreign Investment*. Cambridge, MA: MIT Press.

ICT Ireland. (2012). *Sector profile.* Available: http://www.ibec.ie/Sectors/ICT/ICT.nsf/vPages/Papers_and_Sector_Data~sector-profile?OpenDocument. Last accessed 25th July 2012.

IDA. (2012). *ICT Sector Analysis.* Available: http://www.idaireland.com/search-companies.xml?sectors=ida-sector-1%2C&locations=&countries=&query=. Last accessed 25th July 2012.

IDA. (2011). *IDA Services*. Available: http://www.idaireland.com/ida-ireland/. Last accessed 6th April 2012.

IDA. (2010). *Ireland and US Investment*. Available: http://www.merrionstreet.ie/wp-content/uploads/2011/05/IDA-Ireland-and-US-Investment.pdf. Last accessed 6th April 2012.

International Monetary Fund (IMF). (2011). *Glossary of Selected Financial Terms*. Available: http://www.imf.org/external/np/exr/glossary/showTerm.asp#89. Last accessed 6th April 2012.

Ireland Information. (2012). *An Outline Geography of Ireland*. Available: http://www.ireland-information.com/reference/geog.html. Last accessed 25th July 2012.

Ivarsson, I. (1999). Competitive Industry Clusters and Inward TNC Investments: The Case of Sweden. *Regional Studies*. 33 (1), Pg 37 - 49.

Jeffus, W. (2004). *Survey of the theories of Foreign Direct Investment*. Available: www.wendyjeffus.com/images/Foreign_Direct_Investment.doc. Last accessed 7th April 2012.

Kahn, R. and Cannell, C (1957). *The dynamics of interviewing*. New York: Wiley.

Kang, S. and Lee, H. (2007). The determinants of location choice of South Korean FDI in China. *Japan and the World Economy*. 19 (4), Pg 441 – 460.

Kennedy, J. (2009). *Ireland is bucking global FDI trends, IDA's chief exec says.* Available: http://www.siliconrepublic.com/business/item/14604-ireland-is-bucking-global-f. Last accessed 25th July 2012.

Kent, R (2001). *Data construction and data analysis for survey research*. London: Palgrave Macmillan.

Khandekar, A. and Sharma, A. (2005). Managing human resource capabilities for sustainable competitive advantage: An empirical analysis from Indian global organisations. *Education and Training*. 47 (8/9), Pg 628 - 639.

Kilmartin, D. (2010). *The Six Top Growth Industries in Ireland today*. Available: http://campus.ie/jobs/job-news/the-six-top-growth-industries-in-ireland-today. Last accessed 6th April 2012.

Kinoshita, Y. and Sharma, A. (2005). A Re-examination of Determinants of Foreign Direct Investment in Transition Economies. Washington, DC: IMF.

Kirklees. (2011). *Research & Consultation Guidelines: Questionnaires*. Available: http://www.kirklees.gov.uk/community/yoursay/Questionnaires.pdf. Last accessed 5th Dec 2011.

Kobrin, S. (1979). Political Risk: A review and reconsideration. *Journal of International Business Studies*. 10, Pg 67 - 80.

KPMG. (2011). *Corporate and Indirect Tax Rate Survey*. Available: http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/corporate-and-indirect-tax-rate-survey-2011.pdf. Last accessed 6th April 2012.

KPMG. (2007). *Attractiveness of European Tax regimes*.

Kumar, N. (2001). Infrastructure Availability, Foreign Direct Investment Inflows and Their Export-orientation: A Cross-Country Exploration. *Research and Information System for Developing Countries*. New Delhi.

Kumar, R (1999). *Research Methodology a Step by Step Guide for Beginners*. Australia: Sage.

La Porta, R., Lopez-de-Silanes,F., Shleifer, A. and Vishny, R. (1998). Law and Finance. *Journal of Political Economy*. 106(6), Pg 1113 - 1155.

Leon, R., Petersmeyer, W., Piedrahita, V., Walter, J. and Zaninovich, D. (2010). *The Celtic Tiger's Tale: Ireland's Information and Communication Technology Cluster.* Available: http://www.isc.hbs.edu/pdf/Student_Projects/Ireland_ICT_2010.pdf. Last accessed 25th July 2012.

Letterkenny Institute of Technology (LYIT). (2011). *Research Ethics.* Available: http://www.lyit.ie/researchinnovation/research/researchethics/. Last accessed 5th Dec 2011.

Lipsey, R. (2004). *Home and Host Country Effects of Foreign Direct Investment*. Available: http://www.nber.org/chapters/c9543.pdf. Last accessed 6th April 2012.

Lipsey, R. (2001). *Foreign Direct Investment and the Operations of Multinational Firms: Concepts, History and Data*. Available: http://www.nber.org/papers/w8665. Last accessed 6th April 2012.

Liu, X., Romilly, P., Song H. and Wei, Y. (1997). Country Characteristics and Foreign Direct Investment in China. *Weltwirschaftliches Archiv*. 133 (2), Pg 313 - 329.

Logue, F. (2006). Companies in Ireland make use of favourable tax system*. International Tax Review*. 17 (3), Pg 28 - 31.

Lyons, R. (2012). Investing in Ireland: A survey of Foreign Direct Investors. *The Economist*.

Matheson Ormsby Prentice (MOP). (2011). *MOP FDI Index: Report on the survey findings*. Available: http://www.mop.ie/__data/assets/pdf_file/0006/7818/MOP-FDI-Index-Report-on-the-Survey-Findings-May-2011.doc.PDF. Last accessed 6th April 2012.

Mollick, A., Ramos-Duran, R. and Silva-Ochoa, E. (2006). Infrastructure and FDI into Mexico: A Panel Data Approach. *Global Economy Journal*. 6 (6), Pg 1 - 25.

Moosa, I. (2002). *Foreign direct investment: evidence and practice*. New York: Palgrave. Pg 1 - 4.

National Irish Bank. (2011). *National Irish Bank/fDi Intelligence Inward Investment Performance Monitor .* Available: http://www.nationalirishbank.ie/en-ie/About-National-Irish-Bank/Press/Press-releases/2011/Pages/Press-release-24022011.aspx. Last accessed 25th July 2012.

O'Connor, T.P. (2001). Foreign Direct Investment and Indigenous Industry in Ireland: Review of Evidence. *ESRC Project*.

O'Connor, J. and Forde, E. (2003). Why Ireland remains tax-attractive. *International Tax Review*. 14 (8), Pg 39 - 42.

O'Malley, E. and O'Gorman, C. (2001). Competitive Advantage in the Irish Indigenous Software Industry and the Role of Inward Foreign Direct Investment. *European Planning Studies*. 9 (3), Pg 303 - 321.

Oatey, A. (1999). *The Strengths and Limitations of Interviews as a Research Technique for Studying Television Viewers*. Available: http://www.aber.ac.uk/media/Students/aeo9702.html. Last accessed 2nd Dec 2011.

OECD. (2011a). *Glossary of foreign direct investment terms and definitions.* Available: http://www.oecd.org/dataoecd/56/1/2487495.pdf. Last accessed 6th April 2012.

OECD. (2011b). *Education at a Glance*. Available: http://www.oecd.org/dataoecd/61/2/48631582.pdf. Last accessed 6th April 2012.

OECD. (2010). *Location Patterns and Determinants of MNT knowledge intensive activities in OECD countries: An empirical study based on an international commercial database.* Available: http://www.oecd.org/dataoecd/20/23/45256902.pdf. Last accessed 6th April 2012.

OECD. (2008a). *Definition of Investor and Investment in International Investment Agreements*. Available: http://www.oecd.org/dataoecd/3/7/40471468.pdf. Last accessed 6th April 2012.

OECD. (2008b). Tax Effects on Foreign Direct Investment. Available: http://www.oecd.org/dataoecd/62/61/40152903.pdf?&lang=en_us&output=json. Last accessed 6th April 2012.

OECD. (2008c). *Information Technology Outlook 2008.* Available: http://www.oecd.org/document/47/0,3746,en_2649_33703_46439983_1_1_1_1,00.html. Last accessed 25th July 2012.

Opdenakker, R. (2006). *Advantages and Disadvantages of Four Interview Techniques in Qualitative Research.* Qualitative Social Research. 7 (4).

Paprzycki, R. and Fukao, K. (2008). *Foreign Direct Investment in Japan: Multinationals' Role in Growth and Globalisation.* London: Cambridge. Pg 11.

Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage.

Political Risk Yearbook (PRS) (2010), *Ireland Country Report* for the period ending 31st December 2010

Remenyi, T., Williams, B., Money, R. and Swartz, E (2003). *Doing Research in Business and Management; An Introduction to Process and Method*. London: Sage.

Robson, C. (2002). *Real World Research*. 2nd ed. Oxford: Blackwell.

Ruding (1992). *Report of the Committee of Independent Experts on Company Taxation*. Brussels: European Commission.

Saunders, M. Lewis, P. and Thornhill, A (2009). *Research Methods for Business Students*. 5th ed. Essex: Pearson Education Limited.

Schneider, F. and Frey, B. (1985). Economic and Political Determinants of Foreign Direct Investment. *World Development*. 13(2), Pg 161 - 175.

Sexton, J. and O'Connell, P. (1996). *Labour Market Studies: Ireland*. Brussels: European Commission.

Shatz, H. (2010). Gravity, education, and economic development in a multinational affiliate location. *The Journal of International Trade & Economic Development*. 12 (2), Pg 117 - 150.

Simango, C. (1993). Strategic Locational factors influencing foreign investment. *European Business Review*. 93 (4), Pg 12 - 18.

Simmons, R. (2000). *Corporate Taxation and the Investment Location Decisions of Multinational Corporations*. Available: http://www.library.ln.edu.hk/eresources/etext/hkibs/hkws_0035.pdf. Last accessed 7th April 2012.

Slemrod, J (1990). *Tax effects on foreign direct investment in the United States evidence from a cross-country comparison.* Chicago: University of Chicago Press. Pg79-117.

Sociology. (2011). *Sociological Research Skills: Questionnaires*. Available: http://www.sociology.org.uk/methodq.pdf. Last accessed 1st Dec 2011.

Tashakkori, A. and Teddlie, C. (2003). *Handbook of Mixed Methods in Social and Behavioural Research*. California: Sage.

The Economist. (2010). *Should Ireland raise its corporate tax rate?* Available: http://www.economist.com/economist-asks/should_ireland_raise_its_corporate_tax_rate. Last accessed 6th April 2012.

The Times. (2012). *The World University Rankings 2011-2012*. Available: http://www.timeshighereducation.co.uk/world-university-rankings/2011-2012/top-400.html. Last accessed 6th April 2012.

Thunnell, L.H. (1977). *Political Risks in International Business: Investment Behaviour of Multinational Corporations*. New York: Praeger.

Turnbull, P.W. (1987). *A Challenge to the stages theory of the Internationalisation Process*. New: Praeger.

UNCTAD. (2012). *Global Investment Trends Monitor*. Available: http://www.unctad.org/en/docs/webdiaeia2012d1_en.pdf. Last accessed 6th April 2012.

UNCTAD. (2008). *World Investment Report*. Available: http://www.unctad.org/en/docs/wir2008_en.pdf. Last accessed 6th April 2012.

Wheeler, D. and Mody, A. (1992). International Investment Location Decisions: The case of U.S. firms. *Journal of International Economics*. 33 (2), Pg 57 - 76.

World Atlas. (2012). *Unknown*. Available: http://www.worldatlas.com/webimage/countrys/europe/ie.htm. Last accessed 25th July 2012.

World Economic Forum. (2012). *The Global Competitiveness Report*. Available: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf. Last accessed 6th April 2012.

Wright, K. (2005). *Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services*. Journal of Computer-Mediated Communication. 10 (3).

Appendix 1 – Cover Letter

20 Beechgrove Heights
Magherafelt
Co.Derry
Northern Ireland
BT45 5EF

Dear Sir/Madam,

My name is James Cassidy and I am currently studying for a Masters in Accountancy at the Letterkenny Institute of Technology. As required by this course I must carry out a dissertation on a chosen topic. My research topic title is *"Is corporation tax the most significant determinant for foreign direct investment in Ireland by ICT companies from the USA?"*

The purpose of this study is to establish the factors ICT companies originating from the USA considered when choosing Ireland as their location for foreign direct investment and then determine the significance of low corporation tax rate on their decision.

I would be very grateful if you would help me and participate in this research project by completing a questionnaire. I appreciate that there are many demands on your time and thus this study is designed with this uppermost in mind. This questionnaire should take about 5-10 minutes to complete. I can assure you that the questionnaires returned are completely anonymous ensuring that all participants are anonymous. The information obtained will be deleted once recorded.

There are two ways of completing the questionnaire:

- Go to this internet link http://www.surveymonkey.com/s/XJGWJKM, and fill out a soft copy of the questionnaire; or
- Fill out the enclosed hard copy of the questionnaire and return it to me using the pre-paid envelope.

If you are able to complete and return this questionnaire by the 30th May 2012 it would be greatly appreciated. However, if you are not available to take part in this questionnaire I would be very grateful if you could pass it on to another member of your company with the knowledge to fill it out. I look forward to your reply.

If you would like to obtain a summary of the results of this research I would be happy to send you copies. Please feel free to contact me at l00098193@student.lyit.ie in regards to any queries you may have.

Thanking you very much,

James Cassidy

Appendix 2 – Questionnaire

(1)What is your position within the company? ______________________________

(2)How much corporation tax did your company pay for that period? (Euros €)

☐ 0 - 50,000 ☐ 50,001 – 200,000 ☐ 200,001 – 500,000 ☐ 500,001 Onwards

(3)How long does your company plan to operate in Ireland?

☐ Cease operations immediately ☐ Short Term (1-3 years)

☐ Medium Term (3-8 years) ☐ Long Term (Foreseeable future)

(4)If your company is considering leaving Ireland within the next 8 years (short-medium term), could you please indicate below on a scale of 1 to 5, how significant each factor was when making your decision to leave and investing elsewhere? Please grade the all the factors below (1 = very significant, 2 = significant, 3 = moderately significant, 4 = little significant and 5 = insignificant).

☐ More educated and skilled workforce ☐ Lower corporation tax

☐ Political certainty ☐ Economic certainty

☐ More access to markets ☐ Larger regional market

☐ Cheaper Cost of Labour ☐ Superior infrastructure

(5) If your company is to remain operating in Ireland please grade each of the following factors on a scale of 1 to 5 on how they make Ireland an attractive business environment. Please grade the all the factors below (1 = very significant, 2 = significant, 3 = moderately significant, 4 = little significant and 5 = insignificant).

☐ Educated and skilled workforce
☐ Language/Cultural closeness
☐ Political Stability
☐ Infrastructure
☐ Access to other markets
☐ Cost of labour
☐ ICT Cluster in Ireland
☐ Low corporation tax

(6) If your company invested in Ireland before 1980, did the change in the corporation tax rate from 10% to 12.5% reduce the size of your company's operations in Ireland?

☐ Yes ☐ No ☐ N/A

(7) If the corporation tax rate increased further, would this encourage your company to change its position in Ireland?

☐ Yes ☐ No

(8) At which of the following tax rates would the company consider…

Reducing the size/scale of operations

(i) 15% (ii) 17.5% (iii) 20% (iv) 22.5% (v) 25%

☐ ☐ ☐ ☐ ☐

Relocating all of its activities elsewhere

(i) 15% (ii) 17.5% (iii) 20% (iv) 22.5% (v) 25%

☐ ☐ ☐ ☐ ☐

Appendix 3 – Interview Guide

(1) Could you please discuss in general why you believe Ireland has been an attraction for ICT companies from USA? What superior LSDs does Ireland have which other countries do not have?

(2) Could you please describe in more detail, as you possibly can, how significant you believe the following factors to be in attracting ICT FDI from USA.

- Educated and skilled workforce
- Political Stability
- Access to other markets
- ICT Cluster in Ireland
- Language/Cultural closeness
- Infrastructure
- Cost of Labour
- Low Corporation Tax

(3) Do you believe that one factor has brought this FDI to Ireland or a number of different factors combined? Could you please elaborate on this?

(5) Could you please grade each of those factors mentioned earlier on a scale of 1 to 5 on how they make Ireland an attractive business environment. (1 = very significant, 2 = significant, 3 = moderately significant, 4 = little significant and 5 = insignificant).

(6) What other LSDs do you think Ireland has which are not mentioned here?

(7) As corporation tax was mentioned above, could you please discuss your thoughts on how significant this LSD is in a company's decision to base here in Ireland?

(8) With France and Germany trying to get Ireland to increase their corporation tax rate, do you believe that this will have an effect on Ireland's FDI level from USA ICT companies?

(9) At what percentage do you think FDI would be deterred? If it increased to that of another country, for example UK's 20% rate, would companies leave and go to UK?

(10) If CT was equalised throughout Europe do you believe Ireland would have other LSDs superior enough to compete with the other countries?

(11) Could you discuss whether the increase in CT in 1980 from 10% to 12.5% had an effect on FDI in Ireland of those ICT companies from USA? Did companies either reduce in size or relocate all of its activities?

(12) At the present time, what countries would be Ireland's biggest competition?

(13) What factors do these markets have that Ireland do not have at present time?

(14) What challenges do you believe FDI in Ireland faces in the future?

(15) Which factors can be boosted to help counter act these challenges?