KINGSTON BUSINESS SCHOOL, KINGSTON UNIVERSITY LONDON, UK.

An Investigation of the Effect of Civil Liberties and Political Rights on Foreign Direct Investment

Doctoral Thesis
Volume II

Degree: International Business

Amir Hermidas

Supervisors: Dr Fragkiskos Filippaios, Dr Kent Springdal, Dr Theresa Woodward

September 2013

Declaration

The author hereby declares that, except where duly acknowledged and referenced, this research study is entirely his own and has not been submitted for any degree or other qualification at Kingston Business School, Kingston University of London or any other third level institution in the UK or abroad.

Amir Hermidas, September 2013

Abstract

Globalization has affected the economic activity of the countries across the world through liberalization of trade and exchange regimes. Moreover, the enhancements in information technology in turn have made it possible for firms to coordinate their activities in a more efficient way, in recent decades. In this setting it is easier for firms to outsource their activities to other countries through Foreign Direct Investments (FDI) in order to gain competitive advantage. FDI has been considered as one of the factors that significantly influence the economy of countries through affecting the balance of payments, increasing employment, transfer of technology and resources. Since FDI is generally considered as one of the factors that has a great potential to contribute to economic activity of the countries, particularly in case of developing and less developed countries, the disparity in the level of FDI flows observed in case of many developing countries has led to plethora of research on the subject relating the inequalities to macroeconomic factors, institutional factors, and economic geography. In spite of the fact that the literature on FDI, is well developed on a number of areas, the literature on the effect of institutional factors on FDI activity, and in particular the effect of civil and political liberties on FDI flows remains limited and subject to contrary results that renders it inconclusive.

This research explores the effect of civil and political liberties on FDI flows. In doing so, we review the literature on determinants of FDI, and establish the firms' motivations as factors that affect their FDI behaviour. Furthermore we introduce, and conceptually bridge the Varieties of Capitalism of Hall and Soskice (2001) into IB literature, in order to distinguish between the behaviour of firms from various market economies (i.e. LMEs, CMEs, and Nordic) based on the labour law policies of the firms' home countries. Consequently the incorporation of VoC into IB literature allows us to build on the works of Due et al (1991) and Gold (1993) and Hall and Soskice (2001), and explore the effect of the differences that exist in the way firms in different market economies coordinate their activities, and afford us the possibility of explaining the firms coordination of their FDI activity in the light of their market structures, and underlying institutional differences that influence their behaviour with regard to FDI.

We also review the literature on institutional determinants of FDI in order to enrich our understanding of the institutional factors that influence FDI activity. In reviewing the literature on institutional determinants of FDI, we specifically adopt meta analysis methods in order to examine whether there are systemic biases introduced to the literature through the common choices made in terms of scale and study properties (i.e. the choice of country level analysis, data range and decade influences; etc.).We find that firms' motivations influence the type of relationships found between FDI and the existing level of civil and political liberties in countries. The use of composite measures such as democracy instead of their disaggregated individual constructing sub measures such as civil and political liberties generally leads to provision of distorted results. We also find that the choice of host country influences the relationship between FDI and democracy as well as political liberties. Similar to the arguments put forward by Busse (2004) we find that FDI activity has been subject to changes in different decades as a result of changes in the firms' motivations and market structure.

Moreover, we theoretically explore the effect of civil liberties and political rights on the initial cost of FDI and thereby FDI activity. The models provided build upon the works of Grout (1984); Hart and Moutos (1995) and Adam and Filippaios (2007). It is assumed that the decision of FDI is influenced by the initial cost of investment into the designated host

country. Therefore, firms are considered to bargain with employee representatives (labour unions) in the host country before deciding upon their investment abroad, in order to obtain full information with regard to the initial costs of investment. Our theoretical model demonstrates that the effect of civil liberties channelled through union power in the bargaining processes over wages and employment, on aggregated FDI flows is negative, while the effect on sectoral FDI flows is non-linear where the non-linearity stems from the level of labour to capital share of production of specific sectors considered. Furthermore, our theoretical model shows that the effect of political rights channelled through taxes on income and profit tend to be positive on FDI flows irrespective of the level of aggregation.

Our empirical investigation of the theoretical findings using the data on the FDI from 8 host countries into 140 developed, developing and less developed host countries for the period of 1990-2009, show that the effect of civil liberties on aggregated FDI flows is negative, while a positive effect is reported for the effect of political rights on aggregated FDI flows. In contrast, considering the effect of civil and political liberties on sectoral FDI (manufacturing and services sectors) we find a non-linear effect reported for both factors, indicating that the effect of civil and political liberties on sectoral FDI flows are non-linear across sectors. Our sensitivity analyses explores the effect of civil and political liberties on aggregated and disaggregated FDI flows into two main group of countries: countries with high and moderately high level of civil liberties; countries with moderately low level of civil liberties. The results provide further empirical evidence on the non-linear effect of civil and political liberties on sectoral FDI flows into host countries with various levels of civil liberties. However, the effect of civil liberties is shown to be linear and negative on aggregated FDI flows into all countries, irrespective of their level of civil liberties. In contrast a non-linear effect of political rights on aggregated FDI flows into host countries with various levels of civil liberties is observed.

This research contributes to the literature in several ways: Firstly, it contributes to the theory by bridging the IB literature to the literature from political science on Varieties of Capitalism. Secondly, it provides a theoretical framework, and empirical analyses that explore the FDI activity in the sectoral level. Thirdly, it demonstrates that the use of aggregated data leads to findings linear relationships where the in reality the effects of civil liberties and political rights on FDI are not linear. Fourthly, it provides a number of recommendations for future research.

Acknowledgements

This research would not be possible if not for the support and encouragement of a number of individuals, to whom I will be forever indebted. In particular I would like to thank Dr Fragkiskos Filippaios from University of Kent for his vision and support, and Dr Kent Springdal and Dr Theresa Woodward from Kingston University London, for their invaluable comments and guidance along the years.

Moreover, I would like to thank the Kingston Business School and Economic and Social Research Council for providing the opportunity to carry out this research, and the University of Kent for provision of atmosphere of support and collaboration.

Finally, I would like to thank my family and friends whose help, support and encouragement have afforded me the possibility of doing research for past few years.

TABLE OF CONTENTS:

Declaration ii
Abstract iii
Acknowledgements v
Table of Contents vi
List of Abbreviations xi
List of Figures xi
List of Tables xii
Chapter 1 : Introduction 1
1.1. Introduction 1
1.2. Research Problem 1
1.3. Research Aims and Research Questions 3
1.4. Research Justification and Research Contributions 6
1.4.1. Paucity of Research and Inconclusiveness of the Findings 6
1.4.2. Contributions to the literature 7
1.5. Thesis Overview 8
Chapter 2 : Literature Review 11
2.1. Introduction 11
2.2. Search Strategy 12
2.3. Overview of the developments made in 1960s and early 1970s 15
2.3.1. Theories of FDI (1960-70s) 16
2.4. Overview of the developments made in 1970s to the early 1980s 22
2.4.1. Theories of FDI (1970-80s) 24
2.4.2. FDI Motivations 29
2.5. Overview of the developments made in 1980-90s 37
2.5.1. Theories of FDI developed in 1980-90s 38
2.6. Theories of FDI post 2000s 40
2.6.1. The Eclectic Paradigm (OLI) Revisited (2008) 43
2.6.2. Varieties of Capitalism (VoC) 44
2.7. Incorporation of VoC into IB Literature 52
2.8. Concluding Remarks 54
Chapter 3 : Literature Review and Meta-Analysis 56
3.1. Introduction 56
3.2. Literature Review 57

3.2.1. FDI and Institutions 60
3.2.2. FDI and Democracy 62
3.2.3. FDI and Civil & Political Liberties 64
3.2.4. FDI and influence of Political aspect of institutional Environment 65
3.2.5. FDI and influence of civil aspect of institutional Environment 67
3.2.6. FDI and indirect effect of institutions 68
3.3. Conceptual argumentation 69
3.3.1. Meta-Analysis – Motivations & Hypotheses 70
3.3.2. Research Design & Data 73
3.4. Methodology 75
3.4.1. Analysis using Actual effect sizes (random effects): 76
3.5. Conclusion 89
Chapter 4 : Theoretical Model 93
4.1. Introduction 93
4.2. Static Game between the Firm and the labour (trade) Union 96
4.2.1. Assumption in regards to Nature: 97
4.2.2. MNEs' Assumptions and Considerations 97
4.2.3. Labour (Trade) Union 104
4.3. Varieties of Unions, Union structures, and Union bargain structures (in terms of level and extent) 116
4.3.1. The effect of the type of union on their bargaining preferences 120
4.4. Bargaining Process I (taxes applied to income) 123
4.4.1. Comparative Statistics – Testable Hypothesis 127
4.5. Limitations, and Avenues for Further Research 139
4.6. Concluding Remarks 140
Chapter 5 : Methodology 145
5.1. Introduction 145
5.2. Research Objectives 145
5.3. Philosophical Perspectives 146
5.3.1. Epistemological Considerations 147
5.3.2. Ontological Consideration 148
5.3.3. Theoretical consideration 149
5.4. Sample Description 151
5.4.1. Home Countries 151

5.4.2. Host Countries 152
5.4.3. Research Period: 1990-2009 153
5.5. Data, Data Characteristics and Data Collection: 154
5.5.1. FDI data 155
5.5.2. Independent Variables 161
5.6. Missing data & related considerations 162
5.7. Methodology of Data Analysis 162
5.7.1. Variable based approach 162
5.7.2. Dataset and its characteristics 162
5.7.3. Regression analysis 163
5.8. Research legitimacy, Reliability, Validity and Replicability 163
5.9. Conclusion 167
Chapter 6 : Data Characteristics & Empirical Investigation 168
6.1. Introduction 168
6.2. Variables and their definitions 169
6.2.1. General sample description 169
6.2.2. Dependent Variable 170
6.2.3. Independent Variables 173
6.2.4. Variable selection 193
6.3. Preliminary Analysis of Data 193
6.3.1. Normality of distribution of the dependent Variables 194
6.4. Nonparametric statistics 195
6.5. Preliminary Empirical examination using K-Wallis Test – Eurostat 196
6.5.1. Effect of Time on the net FDI flows 197
6.5.2. The effect of Host countries' level of Income on net FDI flows 199
6.5.3. Civil and Political Liberties, Democracy, and Institutional Factors 201
6.6. Concluding Remarks 204
Chapter 7 : Empirical Investigation 206
7.1. Introduction 206
7.2. Practical Notes on the regression analysis 208
7.2.1. Dependent Variables 209
7.2.2. Independent variables 212
7.2.3. Review of the claims and hypotheses 213
7.3. Empirical exercise 218

7.3.1. Total net FDI flows 219
7.3.2. Sectoral net FDI flows 231
7.3.3. Sensitivity Analysis of the Effect of the level of Civil Liberties on Total FDI 240
7.3.4. Sensitivity Analysis of the Effect of the level of Civil Liberties on Sectoral FDI 246
7.4. Conclusion 257
Chapter 8 : Concluding Remarks 266
8.1. Introduction 266
8.2. Summary of Thesis Argument 266
8.3. Summary of Thesis Research Findings 269
8.4. Research Limitations 274
8.5. Research Contributions 276
8.5.1. Contributions to Research 276
8.6. Recommendations 278
References: 281
Appendices: 295
Appendix 1.1: Definitions 295
Appendix 3.1: Overview 308
Appendix 3.2: Variables 309
Appendix 3.3: Analysis using binary effect sizes (fixed effects): 310
Appendix 3.3.1: Data Collection 310
Appendix 3.3.2: Analysis Part 1a; ANOVA Analysis using pivot tables 311
Appendix 3.3.3: Analysis Part 1b; Logit estimator 312
Appendix 3.4: Average Calculations 314
Appendix 3.5: Split Analysis 315
Appendix 4.4.Bargaining Process II (taxes are applied to profits) 321
Appendix 4.4.1: Bargaining process between MNEs and Unions where taxes are applied to profits 321
Appendix 4.4.2: Comparative Statistics – Testable Hypothesis 326
Appendix 5.1: FDI Data classification 331
Appendix 5.1.A: Sectoral considerations – EUROSTAT data set 333
Appendix 5.1.B: Sectoral considerations – BEA data set 335
Appendix 5.1.C: An aggregated classification of net FDI flows data of Eurostat 338
Appendix 5.1.D: Sectoral considerations Level (2) 339
Appendix 5.1.E: The classification of net FDI flows from BEA 340
Appendix 6.1: Home Countries 341

Appendix 6.2: Host Countries....342
Appendix 6.3: List of Preliminary Variables....345
Appendix 6.4: Civil liberties and Political Rights Questionnaire used by Freedom House in construction of liberties indices....350
Appendix 6.5: Freedom House numerical ranking and their meanings....354
Appendix 6.6; Correlation tables for each factor considered....356
Appendix 6.6.A: Pairwise correlation of independent variables....356
Appendix 6.7: testing the normality of FDI data....363
Appendix 6.8: Kruskal-Wallis Test the non-parametric counterpart of ANOVA....369
Appendix 6.9: ICRG indicators and net FDI flows....371
Appendix 6.10: Economic Activity....374
Appendix 7.1: Pairwise correlation of the independent variables used in the empirical exercise....375
Appendix 7.2: Quantiles, Quantile Functions, and properties of Quantile functions....378
Appendix 7.3: Quantile Regression Models....380
Appendix 7.4: Quantile Regression Estimation and Inference....382
Appendix 7.5: Discussion and results of the regression analyses of aggregated FDI using models 2.1-2.3....383
Appendix 7.6: Discussion and results of the regression analyses of disaggregated FDI using models 2.1-2.3....393
Appendix 7.7: the results of the sensitivity analysis of aggregated FDI flows (table 7-12)....401
Appendix 7.8: the results of the sensitivity analysis of disaggregated FDI flows into host countries with higher level of civil liberties (table 7-13)....406
Appendix 7.9: the results of the sensitivity analysis of disaggregated FDI flows into host countries with lower level of civil liberties (table 7-14)....410
Appendix 7.10: Sensitivity analysis of aggregate FDI flows using model 1.3 and 2.3 without "Olwages"....414
Appendix 7.11: Sensitivity analysis using model 1.3 and Adam and Filippaios (2007) categorization....418
Appendix 7.12: Sensitivity Analysis using model 1.3 and Author's categorization....424
Appendix 7.13: Sensitivity Analysis using model 1.3 variation and Adam and Filippaios (2007) categorization....430

List of Abbreviations

FDI	: Foreign Direct Investment
VoC	: Varieties of Capitalism
LME	: Liberal Market Economy
CME	: Coordinated Market Economy
PR	: Political Rights (political rights and political liberties are used synonymously)
CL	: Civil liberties
MNE	: Multinational Enterprise
TNC	: Transnational corporation
IB	: International Business
Union	: Labour or trade union
NAICS	: North American Industry Classification System
ISIC	: International Standard Industrial Classification
SIC	: Standard Industrial Classification
NACE	: Statistical Classification of Economic Activities in the European Community
OECD	: Organization for Economic Cooperation and Development
BEA	: Bureau of Economic Analysis
EU	: European Union
WB	: The World Bank
IMF	: International Monetary Fund

List of Figures

Figure 2-1: A Flow Diagram of a Literature Review – Source: Booth et al. (2005) 13
Figure 3-1: Overview of the conceptual framework 73
Figure 4-1: Schematic view of the Bargaining tree 124

List of Tables

Table 3—1: Data sources and number of articles that were extracted using the search engines 74
Table 3—2: Indicative table of papers included and identified relationships 74
Table 3—3: Results of the regular calculations 79
Table 3—4: Moderating factors affecting the relationship between institutions and FDI flows. 82
Table 3—5: Moderating factors affecting the relationship between democracy and FDI flows. 84
Table 3—6: Moderating factors affecting the relationship between political liberties and FDI flows. 86
Table 3—7: Moderating factors affecting the relationship between civil liberties and FDI flows. 88
Table 4—1: Classification of bargaining level based on types of economies - Source: Hall and Soskice (2001) 119
Table 4—2: The effect of different levels of union and MNE bargaining power, and sectoral characteristics on the cost of FDI 130
Table 4—3: The effect of the level of civil liberty and union representation on the capital needed for the investment to take place. 135
Table 5—1: Key characteristics of Quantitative Research Methods - Source: Saunders et al. (2000) 151
Table 5—3: Sample of home countries 152
Table 5—4: preliminary data sources 155
Table 5—5: sources of data for the independent variable FDI (flows) 156
Table 6—1: Preliminary list of Home Countries considered from Eurostat 171
Table 6—2: Preliminary list of Home countries and the span of their FDI data 171
Table 6—3: List of selected Home countries and the span of their FDI data 172
Table 6—4: List of Home countries considered 172
Table 6—5: Concepts and their related variable sets 174
Table 6—6: Time related variables 176
Table 6—7: Host Country groupings based on their level of income. The classification is based on World Bank's country classification based on income. 177
Table 6—8: Preliminary Macro variables 178
Table 6—9: Preliminary Market Seeking (MS) variables considered 179
Table 6—10: Preliminary Consideration of possible proxies for Resource Seeking motives of MNEs 180
Table 6—11: Preliminary Consideration of Resource Seeking variables and their sources of data 181
Table 6—12: Preliminary Resource Seeking (RS) variables considered 181
Table 6—13: Preliminary Efficiency Seeking (ES) variables considered 182
Table 6—14: Preliminary Strategic Asset Seeking (SAS) variables considered 183
Table 6—15: Sources used for institutional variables in the literature 184
Table 6—16: Preliminary institutional variables considered from Freedom House 190
Table 6—17: Institutional (Political Risk) variables available from ICRG; Source ICRG (2011) 193
Table 6—18: The results of K-Wallis test for time effects 198
Table 6—19: Results of K-Wallis test for a time effect with five year window 199
Table 6—20: Results of K-Wallis test for a time effect with ten year window 200
Table 6—21: The effect of level of Income (based on World Bank classification) on FDI flows 201
Table 6—22: The effect of Political Rights (Freedom House index) on FDI flows 203
Table 6—23: The effect of Civil Liberties (Freedom House index) on FDI flows 203
Table 7—1: Dependent Variables Summary 210
Table 7—2: Sectoral aggregation layout 211
Table 7—3: Mean net FDI flows of 8 home countries into 140 host countries from 1990 to 2009 in two sectors of manufacturing and services 212
Table 7—4: The outlook of the way host countries are categorized based on their level of civil liberties using Freedom House rankings 217
Table 7—5: Regression models considered for the empirical investigation 218
Table 7—6: Breakdown of British net FDI flows in to our set of 140 countries for the period of 1990-2009, based on economic activity. 220
Table 7—7: Estimation of determinants of LMEs' aggregated FDI 223
Table 7—8: Estimation of determinants of CMEs' aggregated FDI 227
Table 7—9: Estimation of determinants of Northern aggregated FDI 231
Table 7—10: Estimation of determinants of home countries' sectoral FDI 239
Table 7—11: Models used for Sensitivity Analysis 242

Table 7—12: Estimation of determinants of home countries' aggregated FDI into host countries with various levels of civil liberties 245
Table 7—13: Estimation of determinants of home countries' sectoral FDI in host countries with high and moderately high level of civil liberties 250
Table 7—14: Estimation of determinants of home countries' sectoral FDI in host countries with moderately low and low level of civil liberties 256

Appendices:

Appendix 1.1: Definitions

Definition of an economy[1]

An economy consists of all the institutional units that are resident in a particular economic territory.

Units[2]

Different types of institutional units are explained in more detail in this section. Institutional units and local enterprise groups may be used in international accounts. Statistical units other than institutional units and enterprises are also described briefly in this section.

General principles on institutional units[3]

The main attributes of an institutional unit are that:

(a) it is entitled to own goods or assets in its own right; it is, therefore, able to exchange the ownership of goods or assets in transactions with other institutional units.

(b) it is able to take economic decisions and engage in economic activities for which it is itself held to be directly responsible and accountable at law.

(c) it is able to incur liabilities on its own behalf, to take on other obligations or future commitments, and to enter into contracts.

(d) either a complete set of accounts, including a balance sheet, exists for the unit, or it would be possible and meaningful, from both an economic and legal viewpoint, to compile a complete set of accounts if they were to be required. Institutional units are recognized in the cases of branches and notional resident units (as discussed in paragraphs 4.26–4.44) even though they may not fully satisfy criteria (a), (b), and (c).

There are two main types of units in the real world that may qualify as institutional units: (a) households—persons or groups of persons; and (b) corporations (including quasi-corporations), non-profit institutions, and government units—legal or social entities whose existence is recognized by law or society independently of the persons, or other entities, that may own or control them.

Residence[4]

The residence of each institutional unit is the economic territory with which it has the strongest connection, expressed as its center of predominant economic interest. Each institutional unit is a resident of one and only one economic territory determined by its center of predominant economic interest. Specific criteria for determining residence are given below. The definitions given below are designed to apply the concept of center of predominant economic interest. These definitions

[1] IMF, BPM 6th edition, 2009, p. 52, 4.11
[2] IMF, BPM 6th edition, 2009, p. 52, 4.12
[3] IMF, BPM 6th edition, 2009, p. 52, 4.13, 4.14
[4] IMF, BPM 6th edition, 2009, p. 70, 4.113

should be used in preference to a discretionary choice between different possible aspects of economic interest.

Economic Territory[5]

4.3 In its broadest sense, an economic territory can be any geographic area or jurisdiction for which statistics are required. The connection of entities to a particular economic territory is determined from aspects such as physical presence and being subject to the jurisdiction of the government of the territory.

Enterprise[6]

An enterprise is defined as an institutional unit engaged in production. Investment funds and other corporations or trusts that hold assets and liabilities on behalf of groups of owners are also enterprises, even if they are engaged in little or no production.[7] (As discussed in paragraphs 10.124–10.125, institutional units that hold assets on behalf of their owners are providers of financial services

to their owners.) An enterprise may be a corporation (including a quasi-corporation[8]), a nonprofit institution, or an unincorporated enterprise. Corporate enterprises and nonprofit institutions are complete institutional units. An unincorporated enterprise, however, refers to a part of an institutional unit—a household or government unit—only in its capacity as a producer of goods and services.

Establishment[9]

"An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added. The breaking up of enterprises into one or more establishments is useful because some enterprises are large and complex, with different kinds of economic activity undertaken in different locations. The establishment is particularly useful as a unit for production statistics. Because the establishments of a multiestablishment enterprise are part of the same legal entity, financial transactions and positions cannot always be attributed to a particular location or activity, so the use of the institutional unit concept is appropriate for statistics covering financial transactions and positions, such as the balance of payments and IIP."

Direct Investment[10]

References: Organization for Economic Cooperation and Development (OECD), *OECD Benchmark Definition of Foreign Direct Investment*, fourth edition. IMF, *Coordinated Direct Investment Survey Guide*.

Definition of direct investment[11]

[5] IMF, BPM 6th edition, 2009, p. 50
[6] IMF , BPM6, 6th edition, p.54, 4.23
[7] As discussed in paragraphs 10.124–10.125, (BPM6, 2009, p.192) institutional units that hold assets on behalf of their owners are providers of financial services to their owners.
[8] When an actual entity is split into separate institutional units [such as for joint administration zones, branches, notional resident units, and multiterritory enterprises, as noted in paragraphs 4.10 and 4.26– 4.44 (BPM6, p.97)], they should be split consistently in partner data for statistics in the economy of the counterparties.
[9] IMF, BPM 6th edition, 2009, p.58, 4.53
[10] IMF, BPM 6th edition, 2009, p.100,
[11] IMF, BPM 6th edition, 2009, p.100, 6.8

Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. As well as the equity that gives rise to control or influence, direct investment also includes investment associated with that relationship, including investment in indirectly influenced or controlled enterprises (paragraph 6.12), investment in fellow enterprises (see paragraph 6.17), debt (except selected debt set out in paragraph 6.28), and reverse investment (see paragraph 6.40). The Framework for Direct Investment Relationships (FDIR) provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. The definition of direct investment is the same as in the fourth edition of the *OECD Benchmark Definition of Foreign Direct Investment*, which provides additional details on the FDIR and the collection of direct investment data. Appendix 6a, Topical Summary—Direct Investment, provides references to paragraphs in which different aspects of direct investment are discussed in this *Manual*.

Definitions of direct investor and direct investment enterprise[12]

A **direct investor** *is an entity or group of related entities that is able to exercise control or a significant degree of influence over another entity that is resident of a different economy. A* **direct investment enterprise** *is an entity subject to control or a significant degree of influence by a direct investor*. In some cases, a single entity may be, at the same time, a direct investor, a direct investment enterprise, and a fellow enterprise (defined in paragraph 6.17(c)) in its relationships to other enterprises.

Definitions of control and influence—definitions of immediate and indirect relationships[13]

Control or influence may be achieved directly by owning equity that gives voting power in the enterprise, or indirectly by having voting power in another enterprise that has voting power in the enterprise. Accordingly, two ways of having control or influence are identified:

(a) **Immediate direct investment** *relationships arise when a direct investor directly owns equity that entitles it to* **10 percent or more** *of the voting power in the direct investment enterprise*.

• *Control is determined to exist if the direct investor owns more than 50 percent of the voting power in the direct investment enterprise.*

• *A significant degree of influence is determined to exist if the direct investor owns from 10 to 50 percent of the voting power in the direct investment enterprise.*

(b) **Indirect direct investment** *relationships arise through the ownership of voting power in one direct investment enterprise that owns voting power in another enterprise or enterprises, that is, an entity is able to exercise indirect control or influence through a chain of direct investment relationships.* For example, an enterprise may have an immediate direct investment relationship with a second enterprise that has an immediate direct investment relationship with a third enterprise. Although the first enterprise has no equity in the third enterprise, it may be able to exercise indirect control or influence, according the FDIR criteria specified in paragraph 6.14. In addition to direct investment relationships between two enterprises that arise because one enterprise controls or influences the other, there are also direct investment relationships between two enterprises that do not control or influence each other, but that are both under the control or influence of the same investor (i.e., fellow enterprises, as discussed in paragraph 6.17).

[12] IMF, BPM 6th edition, 2009, p.101, 6.11
[13] IMF, BPM 6th edition, 2009, p.101, 6.12, 6.13

In practice, effective control or influence may arise in some cases with less than these percentages. These definitions should be used in all cases, however, for international consistency and to avoid subjective judgments.

Definitions of subsidiaries, associates, fellow enterprises, and affiliates[14]

In regard to its relationship with a direct investor, a direct investment enterprise is either a subsidiary or an associate:

(a) *A subsidiary is a direct investment enterprise over which the direct investor is able to exercise control.*

(b) *An associate is a direct investment enterprise over which the direct investor is able to exercise a significant degree of influence, but not control.* Control and influence are defined in paragraph 6.12 and may arise from an immediate relationship or in indirect relationship through a chain of ownership. The terms subsidiary and associate refer to both incorporated and unincorporated enterprises. The FDIR makes no distinction on the basis of incorporation, so directly owned branches are always treated as subsidiaries. (IMF, BPM 6th edition, 2009, p.102)

Under the FDIR (Foreign Direct Investment Relationship), an entity is a direct investor in another entity where the second entity is[15]

(a) an immediate subsidiary of the direct investor;

(b) an immediate associate of the direct investor;

Affiliates[16] of an enterprise consist of:

(a) *its direct investor(s), both immediate and indirect;*

(b) *its direct investment enterprises, whether subsidiaries (including branches and other quasicorporations), associates, and subsidiaries of associates, both immediate and indirect; and*

(c) **fellow enterprises**, *that is, those enterprises that are under the control or influence of the same immediate or indirect investor, but neither fellow enterprise controls or influences the other fellow enterprise. Often the direct investor and fellow enterprises are all in different economies, but sometimes the direct investor is in the same economy as one of the fellow enterprises (in which case, it is not a direct investor in that fellow enterprise). This situation is more likely to arise in economies that do not use a local enterprise group as the statistical unit for direct investment purposes.* All affiliates are in a direct investment relationship with each other. The term affiliated enterprises is also used, because affiliates are almost always enterprises (the exception is a direct investor that is an individual, household, or government).

Beginning and ending direct investment relationships[17]

6.36 The whole of the transaction that reaches or surpasses the threshold of 10 percent or more of voting power is included under direct investment. Any transactions before that point are not

[14] IMF, BPM 6th edition, 2009, p.102, 6.15
[15] IMF, BPM 6th edition, 2009, p.102, 6.16
[16] IMF, BPM 6th edition, 2009, p.103, 6.17
[17] IMF, BPM 6th edition, 2009, p.106, 6.36

generally classified as direct investment (with the exception of reverse investment—defined in paragraph 6.37(b)—and investment in other affiliates). Any prior positions are shown as being reclassified at the time that the direct investment relationship comes into existence (reclassifications are discussed in paragraphs 9.13–9.20). For example, if the direct investor previously had 9 percent of voting power, then acquired 2 percent more, there would be a direct investment transaction by the purchaser involving 2 percent of voting power, and the reclassification entries in the other changes in financial assets and liabilities account would show a reduction of portfolio investment involving the previously held 9 percent and a corresponding increase in direct investment. Subsequent transactions up to and including a transaction that takes the voting power below 10 percent are classified as direct investment. Once the direct investment equity threshold has been crossed (either upward or downward), any debt positions between the parties should also be changed by a reclassification entry in the other changes in volume account. For Multinational enterprises: *See* Global enterprise groups Multiterritory enterprises.

Local and global enterprise groups

4.54 Groups of enterprises are sometimes identified in defining and classifying direct investment.

Although enterprises are the basic unit of economic statistics, a single owner or group of owners may have control of more than one enterprise, so they may act in a concerted way and the transactions between the enterprises may not be driven by the same concerns as "arm's-length" transactions, that is, those with unrelated enterprises.

4.55 Enterprise groups may be either global or local. A global enterprise group refers to an investor and all the enterprises under that investor, whereas the local (or territory-specific) enterprise group refers to an investor and the legal entities under that investor that are resident in the reporting economy. Business accounting may cover groups of related corporate entities (consolidated accounts) including entities that are resident in different economies. However, entities in different economies are not aggregated for macroeconomic statistics that have a focus on an economy. The concepts of global enterprise groups and local enterprise groups are used in the *OECD Benchmark Definition of Foreign Direct Investment*. The global enterprise group is also called a multinational enterprise.

4.56 Local enterprise groups may be used for compiling and presenting direct investment statistics. For example, if direct investment is initially channelled to a holding company and then on to a manufacturing subsidiary, then it may shed light to classify the direct investment in manufacturing rather than in a holding company operation, which is just the initial investment. The implications of combining entities in different institutional sectors need to be carefully considered.

**Does not provide a clear definition of either Global enterprise, or multinational enterprise, but seems to be adopting the definition consistent with the OECD benchmark definition.

Multiterritory enterprises (different than above)

4.41 Some enterprises may operate as a seamless operation over more than one economic territory. Although the enterprise has substantial activity in more than one economic territory, it is run as an indivisible operation with no separate accounts or decisions, so that no separate branches can be identified. Such enterprises may have operations including shipping lines, airlines, hydroelectric schemes on border rivers, pipelines, bridges, tunnels, and undersea cables. Some NPISHs also may operate in this way.

OECD Definitions:

Purpose and its Compliance with other definitions

"The *Benchmark Definition of Foreign Direct Investment* (*Benchmark Definition*)[18] sets the world standard for direct investment statistics. It is fully compatible with the underlying concepts and definitions of the *International Monetary Fund's (IMF) Balance of Payments and International Investment Position Manual 6th edition (BPM6)*. It also follows the general economic concepts set out by the *System of National Accounts, 2008(SNA, 2008).*[19] Within this overall framework, it is important to stress that the main focus of the *Benchmark Definition* is FDI statistics encompassing direct investment positions and related direct investment financial and income transactions (flows). The *Benchmark Definition* also provides a brief overview of the methodology of statistics on the Activities of Multinational Enterprises (AMNE)[20] which are closely related to those on FDI. Moreover, the *Benchmark Definition*, in terms of detail and breakdowns, goes beyond the aggregate statistics of the functional category "direct investment" of the balance of payments financial account and of the international investment position." [21]

"To support these standards for FDI statistics, the *Benchmark Definition* provides guidance on how to compile comprehensive breakdowns by partner country and by industrial activity. By setting the world standard for FDI measurement, the *Benchmark Definition* also complements the *Organisation for Economic Co-operation and Development (OECD) Handbook on Economic Globalisation Indicators* (*Globalisation Handbook*). This Benchmark Definition also recommends new breakdowns such as:

● FDI presented on an asset/liability basis in accordance with the SNA and BPM;

● FDI presented according to the revised directional principle (the revision resulting from the inclusion of a new treatment of fellow enterprises) and providing for the following analyses – segregating some types of pass-through funds, segregating FDI corresponding to purchases/sales of existing shares in the form of mergers and acquisitions (M&A), identification of partner country for direct investment positions by ultimate investing country (UIC) for inward FDI."[22]

An overview of foreign direct investment concepts

"Direct investment is a category of cross-border investment made by a resident in one economy (the *direct investor*) with the objective of establishing a lasting interest in an enterprise (the *direct investment enterprise*) that is resident in an economy other than that of the direct investor. The motivation of the direct investor is a strategic long-term relationship with the direct investment enterprise to ensure a significant degree of influence by the direct investor in the management of the direct investment enterprise. The "lasting interest" is evidenced when the direct investor owns at least 10% of the voting power of the direct investment enterprise. Direct investment may also allow the direct investor to gain access to the economy of the direct investment enterprise which it might otherwise be unable to do. The objectives of direct investment are different from those of portfolio investment whereby investors do not generally expect to influence the management of the enterprise.

Direct investment enterprises are corporations, which may either be subsidiaries, in which over 50% of the voting power is held, or associates, in which between 10% and 50% of the voting power is held, or they may be quasi-corporations such as branches which are effectively 100% owned by their respective parents. The relationship between the direct investor and its direct investment

[18] *OECD Benchmark Definition of Foreign Direct Investment* was first issued in 1983.
[19] System of National Accounts by the Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and World Bank. References to SNA reflect its content as of April 2008. Should relevant texts be subject to further revisions, subsequent versions should apply as reference once they come into effect.
[20] For a more detailed description see *Handbook on Economic Globalisation Indicators* , OECD 2005. AMNE statistics are also referred to as Foreign AffilaTe Statistics – FATS.
[21] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.14, 5..
[22] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.15, 6..

enterprises may be complex and bear little or no relationship to management structures. Direct investment relationships are identified according to the criteria of the Framework for Direct Investment Relationships (FDIR) including both direct and indirect direct investment.

Direct investment statistics cover all cross-border transactions and positions between enterprises which are a part of the same group as defined in the FDIR. According to the standard (core) and supplemental presentations, FDI statistics include direct investment positions (equity and debt), direct investment income flows (distributed earnings, reinvested earnings, interest income) and direct investment financial flows (equity and debt). That part of the difference between closing and opening FDI positions in a particular reporting period that cannot be explained by financial transactions is referred to as "other changes". These "other changes" arise from price changes, movements in foreign currency and changes in volumes. Market value is the preferred conceptual basis to measure both direct investment positions and transactions (flows). 14. Direct investment statistics are presented on an aggregate basis in terms of assets and liabilities and also, separately, on a directional (both for inward/outward FDI) basis with a geographical and industry breakdown. For both inward and outward FDI on the directional basis the allocation by partner country uses the *debtor/creditor* principle. The directional data are also classified and analysed according to industrial activity. Directional data for both geographic and industry analysis should be derived from the basic information compiled on FDI assets and liabilities. It is recommended that the geographic and industrial allocation required for the FDI directional presentation should be made by the compiler excluding FDI transactions and positions effected through any resident Special Purpose Entity (SPE) (see Section 6.2)."[23]

"15. Viewed from a reporting economy, cross-border positions/transactions involving passthrough capital (also referred to as "capital in transit") via non-resident SPEs distort the country and industry analysis. Therefore, where non-resident SPEs are involved in an FDI investment chain, compilers are strongly encouraged to provide further supplemental transactions and positions data on the basis of the first non-SPE counterpart in the host or investing economy (in the outward or inward chain) as appropriate. Acknowledging that there is no single definition of SPEs, the *Benchmark Definition* recommends that data be developed based on national definitions of SPEs. A typology of SPEs based on features of these identified worldwide is provided in Annex 7 to assist compilers when identifying such entities.

16. Direct investment statistics are also disaggregated by major industry sectors based on the International Standard Industrial Classification (ISIC), according to the principal activity of the direct investment enterprise (in the reporting economy for inward investments and in the host economy for outward investments).

17. Moreover, considering user needs for information by the type of FDI, which provides an important dimension for economic analysis, compilers are firstly encouraged to provide supplemental breakdowns for mergers and acquisitions as a sub-category of direct investment equity transactions classified by partner economy and industry. Secondly, they are encouraged to provide inward FDI position according to the ultimate investing country (UIC). Recommendations for other breakdowns are under study to complement these two supplemental FDI series recommended by this *Benchmark Definition.* These are for the geographical allocation and industry classification of outward FDI according to ultimate host country and FDI equity transactions by other types of FDI, namely Greenfield investments, extension of capital and financial restructuring."[24]

Foreign direct investment[25]

[23] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.17, 11-14.
[24] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.17-18, 15-17.
[25] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.48, 117..

"Foreign direct investment reflects the objective of establishing a lasting interest by a resident enterprise in one economy (*direct investor*) in an enterprise (*direct investment enterprise)* that is resident in an economy other than that of the direct investor. The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise. The direct or indirect ownership of 10% or more of the voting power[26] of an enterprise resident in one economy by an investor resident in another economy is evidence of such a relationship. Some compilers may argue that in some cases an ownership of as little as 10% of the voting power may not lead to the exercise of any significant influence while on the other hand, an investor may own less than 10% but have an effective voice in the management. Nevertheless, the recommended methodology does *not* allow any qualification of the 10% threshold and recommends its strict application to ensure statistical consistency across countries."

"Direct investment includes the initial equity transaction that meets the 10% threshold and all subsequent financial transactions and positions between the direct investor and the direct investment enterprise, as well as qualifying FDI transactions and positions between incorporated and unincorporated fellow enterprises included under the FDIR (see Section 3.4). Direct investment is not solely limited to equity investment but also relates to reinvested earnings and inter-company debt."[27]

"Direct investment includes inward and outward financial transactions/positions between directly and indirectly owned incorporated and unincorporated enterprises.[28] The extent of the direct investment relationship is determined according to the Framework for Direct Investment Relationships."[29]

List of Borderline Cases and Exclusions from FDI[30]

"1. List of borderline cases

1.1. SPEs and "capital in transit"

464. Financial corporations such as Special Purpose Entities (SPEs) or conduits that raise funds in open markets on behalf of their parent corporation or fellow enterprises are usually encompassed in the SNA definition of "Other financial corporations". Therefore, non-equity transactions/positions between these financial corporations should be included in FDI. A more detailed discussion of the SPEs and related issues may be found in Annex 7.

465. Fiscal SPEs are entities owned or controlled by general government that are resident in another territory and used for fiscal purposes. Such entities are resident in their economy of incorporation or registration, not in the economy of their owner. For example, a government may use a special purpose or other entity to issue securities to fund its expenditure. The *Benchmark Definition* recommends that fiscal SPEs should be treated as direct investment enterprises. All financial transactions and positions between them and their parent government should be recorded as direct investment.

[26] In general, ordinary shares are the same as voting power. However, there may be instances that the voting power is not represented by ordinary shares. In such cases, compilers must determine the voting power.
[27] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.49, 118..
[28] Direct investment enterprises are also referred to as "foreign affiliates" (subsidiaries, associates, unincorporated business) that are either directly or indirectly owned by the direct investor or their non-resident branches. See glossary for a definition of affiliates.
[29] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.49, 119..
[30] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.157-162, Annex3.

466. More generally, cross-border transactions/positions which are pass-through capital (also referred to as "capital in transit ") via structures put in place to facilitate the financing and transfer of investment for multinational enterprises are included in direct investment as they are integral parts of a direct investment relationship identified according to the Framework of Direct Investment Relationships (FDIR). Nevertheless, these transactions often transit through a country without producing the expected impact of FDI in its economy when the final destination of investments is in a different economy. Since these transactions may distort the analysis of direct investment positions/transactions, this edition of the *Benchmark Definition* recommends that countries *i)* in their standard FDI presentation exclude funds going through resident SPEs from the key FDI statistics but to present them as a separate series; and *ii)* on a supplemental basis FDI looking through all (resident and non-resident) SPEs to the first non-SPE in the inward or outward chain. These statistics should be geographically broken down by country of counterpart and by industry classification to facilitate the economic analysis of direct investment. The presentation of direct investment statistics excluding "capital in transit" through operating subsidiaries is subject to further research.

1.2. Round-tripping

467. Round-tripping refers to the channelling abroad by direct investors of local funds and the subsequent return of these funds to the local economy in the form of direct investment. From the perspective of the local economy, the simplest example of roundtripping occurs when a domestic investment is disguised as FDI through a subsidiary or associate located abroad, in the "routing economy" (*i.e.* the economy through which the funds are routed). For example in Figure A.3.1 a company A in the local economy provides FDI funds to a non-resident related company (company B) for investing back in another company (company C) in the local economy.

469. There are many incentives for round-tripping, such as:

● *Tax and fiscal advantages*: Some economies provide preferential policies to attract FDI, including low taxation, favourable land use rights, convenient administrative support, etc. Since it is not always easy for local enterprises to attract foreign investors, they may channel domestic capital abroad which is then repatriated as foreign capital for local investment to take advantage of the preferential treatments only available to foreign investors;

● *Property right protection:* Infrastructure for property right protection in some economies is not well established. Therefore, the enterprises in these economies may have the motivation to locate their wealth in related enterprises set up in overseas economies having better legal and institutional settings for property right protection. Besides, some investors may prefer to conceal their identities by investing through companies set up in offshore financial centres. Capital will then be brought back to host economies in the form of FDI if there are profitable investment opportunities.

● *Expectations on exchange control and exchange rate*: Some economies have control of financial movements and exchange rate. Expectations on changes in exchange control and exchange rate may generate round-tripping for greater flexibility in foreign exchange management.

● *Accessing better financial services*: Financial markets of some economies are not well developed. Enterprises resident in these economies have to access overseas financial markets for better financial services, such as listing of companies in overseas stock markets. The funds raised will be brought back to host economies in the form of FDI. Round-tripping may occur as part of this process.

470. As such, round-tripping of funds flowing between subsidiaries, associates or fellow companies have to be recorded as FDI transactions/positions. For the local economy, they appear as FDI assets for the local funds channelled to routing economies, and as FDI liabilities for the subsequent return

of the funds to the local economy. For the routing economy, they appear as FDI liabilities for the funds received from the local economy, and as FDI assets for the return of these funds to the local economy.

471. It may be argued that these round-tripping funds lead to an overstatement of the genuine magnitude of FDI. The *Benchmark Definition* recommends therefore separate supplementary breakdowns when this phenomenon affects significantly FDI data of a country. From the point of view of the routing economy, round-tripping may be partly linked with "capital in transit" transactions /positions; in this case, the *Benchmark Definition* recommends that round-tripping that takes the form of "capital in transit" would be excluded from the key FDI statistics but separately distinguished. From the point of view of each local economy, the geographical breakdown according to the Ultimate Host Country (UHC) and the Ultimate Investing Country (UIC) could provide users with very interesting information.

1.3. Investment funds

472. The *Benchmark Definition* recommends that, when a collective investment institution (CII) has voting power in a non-resident entity of 10% or more, this relationship should be considered as direct investment. Similarly, when a non-resident enterprise has voting power in a CII of 10% or more, this relationship should be considered as direct investment. More specifically, investment in, and investment by, hedge funds, private investment funds and distressed funds should be included in FDI data if the standard 10% threshold is met. 473. Some concerns have been expressed about the inclusion in FDI of the investments in and by retail mutual funds and master/feeder funds. Although recognising the relevance of such concerns, the *Benchmark Definition* recommends that these investments should not be an exception to the "10%" rule. A more detailed discussion of this issue may be found in Annex 8 which discusses collective investment institutions.

1.4. Payments associated with the acquisition of a right to undertake a direct investment

474. In many developing or transition economies, the government requires the payment of an agreed amount of money by direct investors for the right to undertake a direct investment in the host economy. Often, but not always, these operating or concession rights are related to the extraction of natural resources. In transition economies, compilers refer to these payments as "bonuses". They are legal transactions and should not be associated with poor governance.

475. The *Benchmark Definition* recommends that such bonus payments should be recorded as "direct investment: equity" when there is an intention to establish a direct investment enterprise (such as in the case of a contractual arrangement between the investor and the government).

1.5. Other borderline cases

476. In the process of globalisation of economic activities, cross border transactions are carried out that at first glance may be regarded as foreign direct investment when in fact they do not meet the criteria. For example:

a) An enterprise undertakes to build for a foreign client, usually a government, a complete manufacturing plant, to provide technical know-how, and to manage and operate a plant for a number of years, without an ongoing on-site managerial presence and without other criteria for the existence of a direct investment enterprise being met. It has complete control over day-to-day operations and receives a management fee, paid either in cash or in goods produced by the plant. However, the enterprise has no equity stake in the plant and is performing a crossborder service.

b) An enterprise has a long-term contract with a foreign company, provides it with technical know-how, and has considerable influence over the quality and quantity of output. The enterprise may

provide a loan to the foreign company and sometimes will have a member on the company's board. However, there is no equity stake. It is once again a cross-border service.

c) Some host countries have made agreements with a number of foreign enterprises where the host country supplies factory accommodation, electricity, staff accommodation, administration and labour. The foreign enterprise supplies all production machinery, fixtures and fittings for the building and production materials, and is responsible for the initial training of the labour force. The foreign enterprise then pays an agreed piecework rate for each item produced. Where the production machinery and fixtures and fittings remain the property of the foreign enterprise, there is technically a direct investment branch, though the branch's profits will be zero. There is no direct investment interest if the machinery becomes the property of the host country.

d) Some professional firms operate much like a multinational firm, but do not hold equity in one another. For example, unrelated (in an equity sense) accounting or management consulting firms may operate globally under a single name, refer business to one another and receive fees in return, share costs (or facilities) for such items as training or advertising, and may have a board of directors to plan business strategy for the group. This is not direct investment, and would be difficult or impossible to account for as such, but it does have much in common with direct investment.

e) Other cases might include foreign sales and representative offices, as well as foreign stations, ticket offices, and terminal or port facilities of domestic airlines or ship operators. Such offices or activities can be treated as direct investment only if they meet the requirements of residence and the attribution of production in an economy.

2. List of exclusions from FDI

2.1. Transactions/positions/income between related financial intermediaries

477. The *Benchmark Definition* recommends that all inter-company flows – with the exception of those pertaining to equity finance – between certain types of related financial intermediaries should be excluded from foreign direct investment (FDI) transactions and positions. Deposits and other amounts lent by a financial intermediary to its financial intermediary subsidiary or associate located abroad, as well as deposits and other borrowings between such companies, should be classified as "other investment" rather than direct investment. A similar treatment applies to investment between fellow enterprises which are financial intermediaries. Debt securities between related financial intermediaries are classified as "portfolio investment". On conceptual grounds, permanent debt between selected related financial intermediaries would appear to qualify as direct investment. However, the *Benchmark Definition* recommends that, on grounds of practicality and statistical significance, it should instead be recorded as either portfolio investment or other investment, depending on the instrument. 479. The definition of the scope of enterprises included under "financial intermediary" should be equivalent to the System of National Accounts (SNA) definitions. The SNA classifies financial corporations under three categories, namely *financial intermediaries*, *financial auxiliaries* and *other financial corporations*. Financial intermediaries are institutional units that incur liabilities on their own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. Financial auxiliaries are institutional units principally engaged in serving financial markets, but that do not take ownership of the financial assets and liabilities they handle. Other financial corporations are institutional units providing financial services, where most of their assets or liabilities are not available on open financial markets. The financial corporations sector can be divided into nine sub-sectors according to its market activity and the liquidity of its liabilities (see Box A.3.1 below). Hence, nonequity transactions/positions (and investment income) between two related financial intermediaries, as they are described and numbered in Box A.3.1, that are part of 2) deposit-taking corporations; 3) money market funds (MMFs); 4) non-MMF investment funds or 5) other financial intermediaries,

except insurance corporations and pension funds, would be excluded from FDI. While they are financial intermediaries, insurance corporations and pension funds are not treated in the same manner as other financial intermediaries for the purposes of this exclusion.

481. The following Table A.3.1 summarises the transactions/positions included in or excluded from FDI statistics for financial corporations (taking account of the particular treatment of FDI-related financial intermediaries):

Table A.3.1. **Overview of transactions/positions included in and excluded from FDI**

INVESTOR	INVESTEE	Financial intermediaries		Financial auxiliaries	Captive financial institutions and money lenders
		Except ICPFs	ICPFs		
Financial intermediaries Deposit-taking corporations, MMFs, non-MMF investment funds, other financial intermediaries (except ICPFs)	Equity finance	Included	Included	Included	Included
	Debt (including permanent debt)	**Excluded**	Included	Included	Included
ICPFs	Equity finance	Included	Included	Included	Included
	Debt (including permanent debt)	Included	Included	Included	Included
Financial auxiliaries	Equity finance	Included	Included	Included	Included
	Debt (including permanent debt)	Included	Included	Included	Included
Captive financial institutions and money lenders	Equity finance	Included	Included	Included	Included
	Debt (including permanent debt)	Included	Included	Included	Included

2.2. Financial derivatives

482. A financial derivative contract is a financial instrument that is linked to another specific financial instrument or indicator or commodity and through which specific financial risks (such as interest rate risk, foreign exchange risk, equity and commodity price risk, etc.) can be traded in their own right in financial markets. There are two broad types of financial derivatives: forwards (including futures and swaps, other than gold swaps) and options. Financial derivatives are excluded from FDI statistics."

Structures related to enterprises[31]

"An enterprise group consists of all the enterprises under the control of the same owner. When a group of owners has control of more than one enterprise, the enterprises may act in a concerted way and the transactions between them may not be driven by the same concerns as "arm's length" transactions. The Framework for Direct Investment Relationships can be used to determine which enterprises are under control or influence of the same owner.

There are two concepts of enterprise groups:

● A multinational enterprise group consists of all the enterprises located in different economies and under the control or influence of the same owner wherever located.

[31] OECD Benchmark Definition of Foreign Direct Investment Fourth Edition 2008, p.45, Box3.3.

● An economy-specific enterprise group consists of all the enterprises located in the same economy and under the control or the influence of the same owner also located in the same economy. Ownership links that are external to the economy are not recognised in the formation of local enterprise groups. A joint venture is a contractual agreement between two or more parties for the purpose of executing a business undertaking in which the parties agree to share in the profits and losses of the enterprise as well as the capital formation and contribution of operating inputs or costs. It is similar to a partnership (see Glossary), but typically differs in that there is generally no intention of a continuing relationship beyond the original purpose. A joint venture may not involve the creation of a new legal entity. Whether a quasi-corporation is identified for the joint venture depends on the arrangements of the parties and legal requirements. The joint venture is a quasi-corporation if it meets the requirements for an institutional unit, particularly by having its own records. Otherwise, if each of the operations is effectively undertaken by the partners individually, then the joint venture is not an institutional unit and the operations would be seen as being undertaken by the individual partners to the joint venture. Because of the ambiguous status of joint ventures, there is a risk that they could be omitted or double-counted, so particular attention needs to be paid to them."

Definition of Foreign Direct Investor, Foreign Direct investment Enterprise and framework of their relationship are given in pages 49-57 0f the OECD benchmark Definition of FDI 4th Ed, 2008.

Appendix 3.1: Overview

Considering the review of the literature covering institutional, corruption, democracy, Political liberty and Civil liberty, it is transparent that the literature does not provide a consistent and conclusive answer in regards to not only the determinants of FDI, but also the effect of each of these factors on FDI activity. Table below shows some of the findings reported in this context.

Determinants of FDI	Positive	Negative	Insignificant	Nonlinear
Institutional factors	Fathi, A. Norbert, F. and MacDonald, R. (2008); Pierre-Guillaume Méon and Khalid Sekkat (2004); Abdul Mottaleb, K. and Kalirajan, K. (2010)			
Corruption	Egger, P. and H. Winner (2005)	Gastanaga, V. M. and Nugent, J. B. (1998); Filippaios, F. and Stoian, C. (2008); Habib, M. and L. Zurawicki (2001); Shang-Jin Wei (2001); Shang-Jin Wei (1997); Drabek, Z. And Payne, W. (2001)		
Democracy	Fathi, A. Norbert, F. and MacDonald, R. (2008); Pierre-Guillaume Méon and Khalid Sekkat (2004); Abdul Mottaleb, K. and Kalirajan, K. (2010); Harms, P. and Ursprung, E. H. (2001)	Huntington, S. P., & Dominguez, J. I. (1975); Wintrobe (1998); Greider, W. 1998		
Civil and political liberties	Busse, M.(2004); Busse M., Hefeker C., (2005)			Asiedu, E. and D. Lien (2010); Adam, A. and F. Filippaios (2007); Li, Q. and A. Resnick (2003)
Political liberty & political aspects of institutions	Jensen, M., N., (2003); T. and Heshmati, A. (2003); Sethi, D., Guisinger, S. E., Phelan, S. E. & D. M. Berg (2003)		Sethi, D., Guisinger, S. E., Phelan, S. E. & D. M. Berg (2003) ; Wheeler, D. and Mody, A. (2002);	

			Asiedu, E. (2001)	
Civil liberties	Coughlin, C. C., J. V. Terza and V. Arromdee (1991)	Coates, D., J. C. Heckelman, et al. (2010)	Blanton, R. G. and Blanton, S. L.(2005)	

Appendix 3.2: Variables

The study characteristics are coded using the coding system below:

Type of Publication		Journal article (1) Working paper of University departments(2) Report or working paper of institutions such as World Bank and IMF (3)
Journal Cluster, Expanded clusters (JCE)		JCE (Journal Cluster, Expanded clusters) ECON (1) International Business and area studies (2) Finance (3) Business Ethics and Governance (4) Social Science (5) STRATEGIC MANAGEMENT(6) Politics (7)
Journal Cluster (American Vs. European)		EU(0) US (1) other (2)
Rank		Ranking of the publication
Other Publication Characteristic, Year		Publication year
DF (dataset Frequency)		Annual (1) quarterly (2) monthly (3) other (4)
DT1 (Data type)		Annual (1) average over number of yrs(2) other (3) Annual and average (4)
DT2 (Data Type)		Cross sectional (1) Time series (2) Panel (3) Panel and cross sectional (5)all (6) survey (7)
ANY		Absolute Number of Years
Decades		60s(1) 70s(3) 80s(5) 90s(10) 2000s(20); 60&70 (4); 60-80 (9), 70&80 (8); 60-90 (19), 70-90 (18), 80&90 (15);60 - 2000 (39), 70-2000 (38), 80-2000 (35), 90-2000 (30)
Uni/Bi lateral		Unilateral(1) Bilateral (2)
Level of Analysis		country level (1) firm level (2) country level and firm level (3) country level and industry level (4) industry level (5)
Number of Source countries		
Type of source country		developed (1) developing (2) transitional (3) developed and developing (4) developing and transitional (5) developed and transitional (6) All (7)
Number of host countries		
Type of host country		developed (1) developing (2) transitional (3) developed and developing (4) developing and transitional (5) developed and transitional (6) All(7)
Motivations		RS(1) MS(3) ES(5) SAS(10)
Type of Index used		Subjective (1) Objective(2) Both (3)
*Other Indices	Dichotomous	Dummies for Freedom House, ICRG, Transparency International, Political Risk Group (PRS), Polity, Business International (Economist Intelligence Service), Kaufmann (1999), World Bank, etc.

*The variable "other indices" is provided on the table to remark a number of dummy indices created to show what type of indexes were used in the papers in order to capture the effect of different factors (effect of political liberty, civil liberty, democracy, institutions, etc.).

Appendix 3.3: Analysis using binary effect sizes (fixed effects):

Appendix 3.3.1: Data Collection

The main characteristic of the first part of the analysis is that it considers that the effect sizes are all equal and hence just captures the difference in results in terms of direction and type of the relationships reported. Therefore in this part of the analysis the data collection is based on the assumption that the effect sizes are equal and that they only differ in terms of sign and direction. This fixed effect approach helps one to find whether there is an effect reported and if so what type of the relationship it is. The variable "other indices" is provided on the table to remark a number of dummy indices created to show what type of indexes were used in the papers in order to capture the effect of different factors (effect of political liberty, civil liberty, democracy, institutions, etc.). The coding scheme of the study characteristics used for reporting the effects is available from Appendix 3.2. Furthermore, the coding scheme used for the fixed effects is provided below:

Name of the variable	Characteristic of the Variable	Coding of the Variable
INST	Dummy variable	DPS(1);DNS(3);DPINS(5); DNINS(10); IndPS(20); IndNS(40); IndPINS(80); IndNINS(160)
CIV	Dummy variable	DPS(1);DNS(3);DPINS(5); DNINS(10); IndPS(20); IndNS(40); IndPINS(80); IndNINS(160)
POL	Dummy variable	DPS(1);DNS(3);DPINS(5); DNINS(10); IndPS(20); IndNS(40); IndPINS(80); IndNINS(160)

In essence the directions of effects reported in the considered 64 studies are coded for institutional factors, civil liberties and political liberties. Furthermore the studies characteristics are coded based on their characteristics (i.e. type of data used for empirical analysis, the publication year, span of time that is analysed in the research, etc.) in order to allow investigation of possible effects of research design on the results reported. Next two sections review the methods used in analysing the data, and discuss the findings of fixed effect analysis.

Appendix 3.3.2: Analysis Part 1a; ANOVA Analysis using pivot tables

Our sample consists of 64 observations and we would like to explore the effect that they have reported on the influence of institutional, political, and civil factors on FDI. In the this section of the analysis, the data consists of dichotomous values reflecting whether an effect from one of the factors; Institutions, Democracy, Civil Liberties, and Political Liberties, has been reported. Since the data provided is not continues, the first attempt was investigating whether there are patterns that could be traced using pivot tables. In other words this section has used the pivot tables to investigate the moderating effects based on the arguments mentioned before (i.e. the influence of firm motivations, and decades, etc.).

The idea behind the latter is based on ANOVA analysis that helps to investigate how many observations with certain characteristic, have been reporting certain outcomes (differences between groups).[32] We have examined the variations in the variables in order to exclude those variables that do not have significant variation in them because inclusion of such variables would lead to distortion of results. [33] This set of results underscores the arguments in favour of disaggregation of data which have been put forward before by Blonigen (2005) and the use of specific measures to pick up certain influences. As it is observable from the table below, the constructing measures of civil and political liberties provide more information about the FDI activity rather than aggregate measures such as institutions.

Variable	Institutional	Political	Civil
ToP			
JCE		***	***
JOrigin			
JRank		***	
Jpubyr			
JMT			
DFreq	***		
DInter			**

[32] For instance, amongst papers considering data from 1980s, our ANOVA analysis using pivot tables could show the ratio of the papers that have reported a direct positive relationship between FDI and institutions to those that have not, and hence one would roughly be able to infer that for instance the majority of papers considering the data from 80s decade have produced certain set of results.

[33] An example of the latter is the variable "level of Analysis" that is consist of 59 country level papers, 3 firm level, 1 country and industry level and 1 industry level paper. Some other variables such as number of source countries are excluded due to very limited number of observations.

DType			
NoYrs		***	***
DecT			***
uni_bi_lateral	*		
LOA_cfi	**		
No_count		***	***
No_SC			
Type_SC			
No_HC	*	***	***
Type_HC		***	***
No_Dev_ing			
No_Dev_ed	**	***	
No_Tr	***	***	***
MotivT			
RS_Motives			
MS_Motives			
ES_Motives			
SAS_Motives		*	
ToData_Sub-Obj	**		*

Table 3.3: Table ANOVA estimations; Asterisks indicate the level of significance, *** denotes significance at 1%, ** denotes significance at 5% and * at 10%.

Appendix 3.3.3: Analysis Part 1b; Logit estimator

Since our sample is inhabited by discontinues variables, one cannot use linear regressions in order to draw some conclusions from the sample. Therefore this section will be using "Logit" estimator to provide some information in regard to the factors influencing the relationship between institutions, civil and political liberties and FDI.

Our sample consists of 64 observations and we would like to explore the effect that they have reported on the influence of institutional, political, and civil factors on FDI. Due to the fact that not all studies cover all the same factors we would not have a multinomial relation. Therefore, we have decided to conduct the analysis using three basic dimensions: (1) Positive effect Versus Negative effect (2) Significant Versus Insignificant (3) Direct versus Indirect.

Therefore, three sets of regressions are run per factor (institutional factors, political factors, civil factors) using logit method.

Logit Institutional Direct $= \beta_0 + \beta_1 . factor1 + \cdots$

Logit Pol Direct $= \beta_0 + \beta_1 . factor1 + \cdots$

Logit Civil Direct $= \beta_0 + \beta_1 . factor1 + \cdots$

The results of the logit estimation of the following type regressions are provided below:

	Institutional	Political Liberties	Civil Liberties
Direct vs. Indirect	Decades (**)	NoYrs (**)	No Factors
Significant vs. Insignificant	No Factors	No_HC (**)	No Factors
Positive vs. Negative	Motiv_T (*) Type_HC (**) JCE (*)	No Factors	No Factors

Table 3.4: The results of the logit estimations (the asterisks denote the level of significance where * signifies %10, ** %5, and *** %10 level of significance).

We have tried all the factors in the number of regressions, and omitting the ones that contribute less and/or lead to collinearity, have tried to come up with the best possible model that fits the data well, and the reported variables are the ones reported from such models.

Investigating the direct versus indirect relationship reported, we find that for institutional context, the decade of analysis (decade from which the data is extracted), is a significant factor. The latter is in line with the argument provided by Busse (2004) on the effect of the decades on the results and the time line shifts in the way MNE's conduct their businesses. As for Political liberties, we find "number of years taken into account" is a significant factor, while we find no significant factors influencing the direct versus indirect relationship between civil liberties and FDI.

Investigating the factors that influence the results in terms of a significant versus insignificant relationship reported, we find that for Political liberties context, Number of

Host Countries (No_HC) is a significant factor. Whilst there are no significant factors are reported for institutional and civil liberties.

Investigating the Positive Versus Negative relationship reported, we find that three factors of firm Motivations (Motiv_T), Type of Host Country (Type_HC), and Journal Cluster (JCE), significantly influence the type of relationship reported (positive versus negative). However, we find no significant factor influencing the type of relationship (positive or negative) reported in political and civil liberties context. As it was discussed before, firms' motivation was expected to influence the decision theory of the firm in undertaking their FDI activity. Type of host country is also another factor that has been shown to be influencing the type of relationship, which is in line with the arguments put forward in the literature [i.e. Adam & Fillipaios (2007)].

In general there are more evidence from the factors influencing the type of relationship reported between institutions and FDI, in contrast to the relationship between civil and political liberties and FDI. The latter might very well be the result of the number of studies that have considered institutional factors in comparison to those considering political and civil liberties. Since the investigation of political and civil liberties as elements comprising the general democratic quality of a society which are rather both an element that leads to better quality of institutions and also are a product of good institutions in a society, has only become fashionable in recent year, thereby the number of studies considering these elements are less than the more fashionable institutional factors. The same argument can be made for the number of factors found influencing the relationship between political liberties and FDI (two factors reported), and civil liberties and FDI (no factors reported).

Appendix 3.4: Average Calculations

In conducting the average calculations, the same methodology is used. However there is a difference between the regular calculation and the average calculations and that is related to the number of observations that come from each single study. In the average calculation, all the observations that are stemming from the same study are averaged and an overall effect size is reported for each study. This averaging activity as predicted resulted in having much lower number of observations in specific contexts (institutions, political liberties, etc.), and a lower overall number of observations (63 observations). However it was conducted to investigate its differences with the normal calculations performed above.

Overall, the results of the average calculations were insignificant and therefore will not be covered here.

Average Calculations				
	$\bar{r}$	N	P	Probability
Institutions	0.367691	20	0.0554	0.956369
Democracy	0.58690685	17	0.3686	0.716976
Political Liberty	-0.7506543	22	-0.0342	0.973026
Civil Liberty	0.18800703	9	0.391	0.704892

Appendix 3.5: Split Analysis

Considering the relationship between institutions and FDI, we find that the use of the data from 1970s and post 2000s era leads to provision of a positive significant relationship between institutions and FDI. It is worthy to note that in contrary to the generally positive and increasing in magnitude trend observable, we find a negative insignificant effect of institutions on FDI during 1980s, and a positive significant effect of intuitions on FDI during 1990s. Considering the arguments of Busse (2004) regarding the shifts in the composition and volume of FDI in various decades, it is possible to relate the positive effect of institutions on FDI post 2000 to a shift of the industries more toward strategic asset seeking motives rather than other types of motivations.

		Institutions			
		r	P (t-value)	N	Probability
Decades	60s				
	70s	0.06611	12.8711318	12	2.20666E-08
	80s	-0.0495	-0.9052	38	0.371063146
	90s	0.15376	0.08456	125	0.932746481
	2000s	0.19732	2.17982	27	0.038164265
Motivations	RS	1.50638	0.0294793	22	0.976748124
	MS	0.13951	0.07345	125	0.941565436
	ES	0.17961	0.08914	85	0.929180346
	SAS	0.25188	5.30722	52	2.3305E-06
JCE	ECON	0.15711	6.80E-08	107	1
	IB	0.0098	0.12063	7	0.907373609
	Social Sciences	0.06611	12.8711	12	2.20672E-08
Data Type	Cross Section	3.2732	0.028078112	26	0.977814265
	Time Series	13.4215	0.06532	2	0.953438077
	Panel	0.11863	3.73905	74	0.000295662
	Panel & Cross Section	-0.1128	-1.5046	24	0.145474586
Type of Source	Developed	-0.1572	-50.6363217	3	2.23343E-12
	Developing				
	Transitional				
	Developed & Developing				
	Developing & Transitional				
	All	0.10465	3.57577	53	0.00070462
Type of Host C	Developed				
	Developing	0.1302	1.553213176	53	0.124837836
	Transitional	28.939	0.204	3	0.851408295
	Developed & Developing	0.01544	22.1535	24	1.73766E-17
	Developing & Transitional				
	All	0.10526	3.57047	45	0.000861903
Data sets used	Subjective & Objective	0.938	0.042781738	36	0.966111885
	Objective	0.08551	2.53393	88	0.013046893
	Freedom House				
	ICRG	-0.288	-0.1288	78	0.89784744
	POLITY				
	TI	0.09806	3.25204	54	0.00197729
	Kaufmann	0.12175	6.16456	39	3.05967E-07
	World Bank	-0.0933	-1.1047	45	0.275161453
	German Exporters Corruption index	-0.1128	-1.5046	24	0.145474586
	Global competitiveness report				
	Economic Freedom Network (see Gw	0.10645	3.57734	38	0.000967288
	OTHER (represents the use of measures ci	5.55649	0.03458	24	0.97270065
Date of Publica	1990s	0.0642	12.689	11	6.54009E-08
	2000s	0.1554	0.0835	115	0.933599153

Table 5: Table shows the results of the split analysis for Institutions. The inputs in red are significant.

.

Another important finding is that SAS motives are the only significant set of motives amongst the set of motivations considered, while RS motives have the greatest positive insignificant effect on the relationship. Since better quality of institutions leads to provision of copyrights laws as well as reducing the expropriation risk, one might intuitively argue that the latter would influence the decision of the firms that are mainly driven by Strategic Asset Seeking motives (SAS) and Resource seeking motives (RS), respectively.

Considering the relationship between democracy and FDI we find a generally positive effect of the use of data from different decades on the relationship which is increasing in magnitude. However the data from 1970s is the only significant moderator on the relationship. The latter might underscore the importance of democratic institutions on the MNEs' decision on investment in host countries.

		Democracy			
		r	P	N	Probability
Decades	60s				
	70s	0.2284	5.55053	10	0.00024392
	80s	0.6832	0.30163	39	0.764536635
	90s	0.6721	0.34328	46	0.728473026
	2000s	1.3685	0.60841	12	0.554257446
Motivations	RS	0.8931	0.51912	8	0.617728602
	MS	0.4084	0.58607	42	0.560965046
	ES	0.4943	0.32163	43	0.749291316
	SAS	0.2099	4.06137	15	0.001023397
JCE	ECON	1.0719	0.36121	31	0.72039263
	IB				
	Social Sciences				
Data Type	Cross Section	0.3032	0.15901	18	0.875431521
	Time Series				
	Panel	0.6319	0.45568	31	0.651796035
	Panel & Cross Section				
Type of Source	Developed				
	Developing				
	Transitional				
	Developed & Developing				
	Developing & Transitional				
	All	0.0025	3.81542	11	0.002865758
Type of Host C	Developed				
	Developing	0.7601	0.54366	17	0.59373408
	Transitional				
	Developed & Developing	-0.001	-12.283	4	0.000252338
	Developing & Transitional	3.5416	0.63684	8	0.542018848
	All	0.2421	2.0834	19	0.050360023
Data sets used	Subjective & Objective	0.7733	0.37665	39	0.708475271
	Objective	0.7947	0.36013	34	0.720977488
	Freedom House	1.4492	0.31307	13	0.7591935
	ICRG	1.3178	0.31404	26	0.755396608
	POLITY	0.5175	0.5211	25	0.60688268
	TI				
	Kaufmann				
	World Bank				
	German Exporters Corruption index				
	Global competitiveness report				
	Economic Freedom Network (see Gwa	.			
	OTHER (represents the use of measures created by other authors				
Date of Publica	1990s				
	2000s	0.6602	0.36409	50	0.717325393

Table 6: Table shows the results of the split analysis for Democracy. The inputs in red are significant.

In terms of firms' motivations, consideration of the firms with Strategic Asset Seeking (SAS) motivations leads to a significant positive relationship between democracy and FDI. Other motivations provide a positive insignificant effect on the relationship between democracy and FDI.

Considering the relationship between the level of political liberties and FDI, we find a negative significant effect of political liberties on FDI when data from 1970s is taken into account.[34]

		POLITICAL			
		r	P	N	Probability
Decades	60s				
	70s	-0.6309	-5.8172	6	0.00113384
	80s	-0.6768	-0.0555	51	0.95595699
	90s	0.18794	0.01439	83	0.98807613
	2000s	-0.2195	-0.5616	30	0.57856031
Motivations	RS	-0.1244	-0.3346	21	0.69711712
	MS	0.14521	0.01166	88	0.99072327
	ES	0.2175	0.01661	80	0.9867891
	SAS	-4.7345	-0.0595	14	0.95339486
JCE	ECON	-0.1199	-0.1739	60	0.86252946
	IB	1.74978	0.02925	12	0.97714604
	Social Sciences	-0.5052	-6.8343	3	0.00625241
Data Type	Cross Section	-0.5671	-0.4542	16	0.65578575
	Time Series				
	Panel	-0.8185	-0.0491	52	0.96102771
	Panel & Cross Section	-0.2957	-0.5904	12	0.56587551
Type of Source	Developed	1.09647	0.03005	29	0.97623303
	Developing				
	Transitional				
	Developed & Developing	-0.2929	-0.5991	13	0.55940235
	Developing & Transitional				
	All	-0.0218	-0.1997	6	0.84831136
Type of Host C	Developed				
	Developing	-0.342	-0.251	30	0.80352536
	Transitional	-0.185	-1.3273	3	0.27637952
	Developed & Developing	0.0216	4.41209	15	0.00050455
	Developing & Transitional	0.86639	0.34372	12	0.73260377
	All	1.26393	0.22046	25	0.82730339
Data sets used	Subjective & Objective	-0.2388	-0.2233	20	0.82556638
	Objective	0.58008	0.02904	63	0.97692449
	Freedom House	2.32137	0.49454	21	0.62605885
	ICRG	-0.141	-0.2082	55	0.83584189
	POLITY	-0.6132	-1.3055	13	0.07907036
	TI	2.71514	0.45717	25	0.65149683
	Kaufmann	-0.2325	-0.3503	12	0.73218548
	World Bank	-0.3154	-0.5416	20	0.59407689
	German Exporters Corruption index				
	Global competitiveness report				
	Economic Freedom Network (see Gwa				
	OTHER (represents the use of measures cr	-0.3914	-0.5874	17	0.56465624
Date of Publica	1990s				
	2000s	0.18654	0.01494	90	0.96811312

Table 7: table shows the results of the split analysis for Political liberties. The inputs in red are significant.

The latter is rather counter intuitive since political liberty by nature should be embedded in democracy and quality of institutions. Since the measures constructed for democracy and institutions are aggregate measures taking into account not only the quality of institutions in a country but also the level of civil and political liberties, the positive effect reported for the effect of the more aggregate measures could be the result of aggregation. The latter is

[34] This finding is in contrast to the results for the institutions and democracy.

in line with the arguments of Blonigen (2005) and underscore the importance of use of disaggregated measures. Apart from the latter, a possible explanation would be that since most of the firms have been resource seeking firms during 1970s, their behaviour had been more in line with repressing political liberties. In terms of the magnitude of the effects reported, the overall magnitude of the effect of decades on the relationship between political liberties and FDI has been decreasing over time leading to provision of a small insignificant effect from political liberties on FDI in post 2000s in contrast to the value reported for the 1970s.

Considering the effect of the firms' motives on the relationship the overall trend while generally insignificant, show a shift into a composition of motives that includes less RS motives and more ES and MS motives.

In terms of types of source country taken into account, the results show that the studies that consider the data from developed source countries seem to find a positive relationship between political liberties and FDI, while those considering the data from a composition of developed and developing countries, or developing and transitional countries, find a negative influence. In terms of types of host country taken into account, the results show that the studies that consider solely 'developing' or 'transitional' host countries find an insignificant negative relationship between political liberties and FDI, while those considering 'developed and developing' or 'developing and transitional' host countries generally find a positive relationship between political liberties and FDI. The latter underscores the argument put forward by Adam & Filippaios (2007) in terms of the differences in the composition of FDI when different types of source and host countries taken into account.

The general trend of the effect sizes reported for different decades shows that civil liberties has had a positive, while decreasing effect on FDI, considering 1970s-1990s. However we find that civil liberties tend to have a negative effect on the FDI considering the data from 2000s. Therefore reflecting on the effect sizes reported, we find that civil liberties have been sequentially repressed in last forty years. In details the positive effect of civil liberties is decreasing from 1970s to 1980s, and later on to 1990s and finally ends up into having a negative effect of civil liberties in post 2000 era.

		CIVIL			
		r	P	N	Probability
Decades	60s				
	70s	1.4503	2.6323	5	0.04640728
	80s	0.639	0.4345	23	0.66796747
	90s	0.5267	0.4581	43	0.64892003
	2000s	-0.287	-0.258	8	0.80329249
Motivations	RS	0.0588	3.1895	22	0.00423563
	MS	0.458	0.5454	46	0.58814758
	ES	0.6068	0.4307	39	0.66908644
	SAS				
JCE	ECON	0.52	0.4539	51	0.65179795
	IB				
	Social Sciences				
Data Type	Cross Section	0.3016	1.2019	9	0.26007192
	Time Series				
	Panel	0.6544	0.6089	34	0.5466117
	Panel & Cross Section	-0.288	-0.243	3	0.8240262
Type of Source	Developed	-0.048	-14.36	10	3.5843E-08
	Developing				
	Transitional				
	Developed & Developing	-0.288	-0.243	3	0.8240262
	Developing & Transitional				
	All				
Type of Host C	Developed				
	Developing	1.3638	2.0666	9	0.06874045
	Transitional	0.0014	0.0018	10	0.99859321
	Developed & Developing	0.19	30.362	12	8.0962E-13
	Developing & Transitional	0.387	0.1984	12	0.84603831
	All	-0.124	-0.178	7	0.86399148
Data sets used	Subjective & Objective	0.3115	0.1026	14	0.31970439
	Objective	0.1348	0.1524	43	0.87958432
	Freedom House	0.2365	0.1801	15	0.85945375
	ICRG	0.1135	0.0144	36	0.98862206
	POLITY	1.3734	2.0594	8	0.0734284
	TI	0.2073	12.244	13	1.6417E-08
	Kaufmann	0.2448	7.2	15	3.0734E-06
	World Bank	-0.239	-0.201	4	0.85050553
	German Exporters Corruption index				
	Global competitiveness report				
	Economic Freedom Network (see Gwa				
	OTHER (represents the use of measures cr	-0.239	-0.201	4	0.85050553
Date of Publica	1990s				
	2000s	0.52	0.4539	51	0.65179795

Table 8: table shows the results of the split analysis for Political liberties. The inputs in red are significant.

In other words, while MNEs would have preferred countries with high levels of civil liberties in 1970s, they preferred countries with lower level of civil liberties in 1980s, and finally countries that repress the level of civil liberties in post 2000s. This shift could be more in line with RS motives or ES motives of MNEs in this era. Indeed looking at the results provided for the effect of different types of motivation of the relationship between Civil liberties and FDI, we find that RS motives have the only significant motives, while ES motives have are the largest in magnitude follows by MS motives. Therefore our proposition based on the idea that the firms' activities could be explained more in the light

of their incentives and the way they coordinate their activities to achieve their goals proves to be fruitful in this context.

Appendix 4.4.Bargaining Process II (taxes are applied to profits)

This section develops the bargaining process between MNEs and unions, and explores the effect of civil liberties, and political rights on FDI activity, in a similar manner to 4.4, with the main alteration that in this model taxes are considered to be applied to profits instead of income. Furthermore we provide some testable hypotheses and in a similar manner to 4.4.1. The chief findings of this section are provided in the main text; however, most parts are included in the appendix due to space limitations. It is worth mentioning that this model is provided mainly as a sensitivity analysis in order to further explore the question at hand, while the model provided in 4.4 is the main model that explores the research question.

Appendix 4.4.1: Bargaining process between MNEs and Unions where taxes are applied to profits

In the previous section we reviewed the options available to firms in terms of labour market. We argued that in markets where the level of civil liberties are at a level where the labour law framework upholds the rights of employees, it is more profitable for firms to bargain with labour representatives instead of bargaining with employees individually. In such context, depending on the market structure of host countries, firms have the option of bargaining with National Unions (NU), or Autonomous Unions (AU) which are generally considered sectoral union in this research. Putting forward a set of general assumptions and relaxing two main assumptions in terms of labour market namely; first, both types of labour is available in the market; non-union employees and union employees; second, market is experiencing a level of unemployment (not all employees are employed in the competitive labour market), we provided a static model where the firm has the option of bargaining with NU or AU, and found that existence of unemployment in the market leads to provision of one set of incentives for the unions irrespective of their level. The firms' and unions' options were considered and the Nash solution to the bargaining process between the two was discussed.

In the light on existence of different types of taxation systems, it is possible to review the scenario where taxation is applied to profits of MNEs. The latter changes the production function of the firm to the one provided below:

$$\boldsymbol{P = (1-t).[Y(K, L_{EMNE}) - w_B.L_{EMNE}] - r.K = [K^g {L_{EMNE}}^d - w_B.L_{EMNE}](1-t) - r.K} \quad (1)$$

where 't' corresponds to both taxes paid in host country and home country. The taxation element is taxes imposed on the MNE as taxes on the profits earned in the host country. MNEs' profit function in case of no FDI (bargaining reaches no agreement and FDI doesn't take place) is: $\boldsymbol{P = \bar{P} = -r.K}$ (2)

However if an agreement is reached and FDI takes place, the profit function would be:

$$\boldsymbol{P - \bar{P} = [K^g {L_{EMNE}}^d - w_B.L_{EMNE}](1-t) - r.K - (-r.K)} \quad (3)$$

Hence the main incentive of the firm from the investment is as follows:

$$\boldsymbol{P - \bar{P} = [K^g {L_{EMNE}}^d - w_B.L_{EMNE}](1-t)} \quad (4)$$

Where	$Y(.)$	is the Cobb-Douglas production function
	t	is the taxes imposed on MNE (it is assumed that taxes are applied to profits earned by MNE in the host country and that they are imposed by the host country)
	K	is the capital needed for the investment considering the cost of FDI
	L_{EMNE}	is the labour (employees) employed by MNE at host country
	w_B	is the wage that is agreed upon by MNE and union if an agreement is reached
	$\bar{P}$	is the average profit earned by MNE.
	C_s	is the sunk cost of the project.

Thus, the option to invest for the firm is:

$$\boldsymbol{P - \bar{P} = [K^g {L_{EMNE}}^d - w_B.L_{EMNE}](1-t)} \quad (5)$$

And the option to draw a contract with the firm for union is:

$$\boldsymbol{V - \bar{V} = L_{EMNE}.W_B - L_{EMNE}.w_a = L_{EMNE}.(w_B - w_a)} \quad (6)$$

The Nash equilibrium of the bargaining process is: $(V-\bar{V})^{a}(P-\bar{P})^{1-a}$, and hence it is possible to work out the optimal wage and labour determination using:

$$\{\boldsymbol{w^{*}, L^{*}}\} = \boldsymbol{Arg}\max_{w.L}[(\boldsymbol{V-\bar{V}})^{a}(\boldsymbol{P-\bar{P}})^{1-a}] \quad (7)$$

Substituting (57) and (58) into (59), we will have:

$$\{\boldsymbol{w^{*}, L^{*}}\} = \boldsymbol{Arg}\max_{w.L}[(\boldsymbol{L_{EMNE}.(w_B-w_a)})^{a}[\boldsymbol{K^{g}{L_{EMNE}}^{d}-w_B.L_{EMNE}}](\boldsymbol{1-t})]^{1-a}] \quad (8)$$

The derivative of the (20) in terms of (L_{EMNE}) is:

$$\boldsymbol{a(w_B-w_a).[L_{EMNE}(w_B-w_a)]^{a-1}.[K^{g}{L_{EMNE}}^{d}-w_B.L_{EMNE}](1-t)]^{1-a}+(1-a)\big[K^{g}(1-t).{L_{EMNE}}^{d-1}.d-w_B(1-t)\big].\big[K^{g}(1-t).{L_{EMNE}}^{d}-w_B(1-t)\big]^{1-a-1}.(L_{EMNE}.(w_B-w_a))^{a}} \quad (9)$$

For simplicity in this section we consider$K^{g}(1-t)=M$; L as $L_{EMNE}$and $w_B$as w unless stated otherwise. Considering ${}^{d}/_{dL}=0$, (61) will provide the extrema[35] of the function with respect to L as follows:

$$\boldsymbol{a(w_B-w_a).[L_{EMNE}(w_B-w_a)]^{a-1}.[K^{g}{L_{EMNE}}^{d}-w_B.L_{EMNE}](1-t)]^{1-a}=(a-1)\big[K^{g}(1-t).{L_{EMNE}}^{d-1}.d-w_B(1-t)\big].\big[K^{g}(1-t).{L_{EMNE}}^{d}-w_B(1-t)\big]^{1-a-1}.(L_{EMNE}.(w_B-w_a))^{a}} \quad (10)$$

$$\boldsymbol{\frac{a}{a-1}.\big[K^{g}{L_{EMNE}}^{d}(1-t)-w_B.L_{EMNE}(1-t)\big]=L.K^{g}{L_{EMNE}}^{d-1}.d(1-t)-w_B.L_{EMNE}.(1-t)} \quad (11)$$

$$\boldsymbol{\frac{a}{a-1}.K^{g}{L_{EMNE}}^{d}=L_{EMNE}.K^{g}{L_{EMNE}}^{d-1}.d.(1-t)-w_B.L_{EMNE}.(1-t)} \quad (12)$$

$$\boldsymbol{w_B=K^{g}{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{a}{a-1}-1}=K^{g}{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{1}{a-1}}} \quad (13)$$

And after simplification on both sides we have:

$$\boldsymbol{w_B=K^{g}{L_{EMNE}}^{d-1}.(a-ad+d)} \quad (14)$$

The derivative of the (60) in terms of (w_B) is:

[35] Assuming there exists such extrema

$$a.L_{EMNE}[(w_B - w_a).L_{EMNE}]^{a-1}.[K^g.{L_{EMNE}}^d.(1-t) - w_B.L_{EMNE}.(1-t)]^{1-a} + (1-a)(-L)(1-t)\left[K^g.{L_{EMNE}}^d.(1-t) - w_B.L_{EMNE}.(1-t)\right]^{1-a-1}.[L_{EMNE}(w_B - w_a)]^a \quad (15)$$

Considering ${}^{d}/_{dw} = 0$, (67) will provide the extrema[36] of the function with respect to *w* as follows:

$$a.L_{EMNE}[(w_B - w_a).L_{EMNE}]^{a-1}.[K^g.{L_{EMNE}}^d.(1-t) - w_B.L_{EMNE}.(1-t)]^{1-a} = (1-a)(L)(1-t)\left[K^g.{L_{EMNE}}^d.(1-t) - w_B.L_{EMNE}.(1-t)\right]^{1-a-1}.[L_{EMNE}(w_B - w_a)]^a \quad (16)$$

$$a.\left[K^g.{L_{EMNE}}^d.(1-t) - w_B.L_{EMNE}.(1-t)\right] = (1-a)(1-t).L_{EMNE}(w_B - w_a) \quad (17)$$

Solving for $w_B$gives:

$$w_B = w_a(1-a) + aK^g{L_{EMNE}}^{d-1} \quad (18)$$

From the two derivatives we have worked out w_B(optimal wage bargained for). Now it is possible to use $w_B = w_B$ from the two equations (66) and (70).

$$w_B = K^g{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{a}{a-1}-1} = K^g{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{1}{a-1}} \quad (19)$$

$$w_B = w_a(1-a) + aK^gL^{d-1} \quad (20)$$

And we know $w_B = w_B$ hence

$$K^g{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{a}{a-1}-1} = K^g{L_{EMNE}}^{d-1}.\frac{\frac{a}{a-1}-d}{\frac{1}{a-1}} = w_a(1-a) + aK^gL^{d-1} \quad (21)$$

After simplification we have:

$$L_{EMNE} = [w_a(1-a).(K^g(d-ad))^{-1}]^{\frac{1}{d-1}} \quad (22)$$

Substituting (26) into (25) we have:

$$w_B = w_a(1-a) + aK^g[[w_a(1-a).(K^g(d-ad))^{-1}]^{\frac{1}{d-1}}]^{d-1} \quad (23)$$

$$w_B = w_a(1-a) + a.w_a.\frac{1}{d} \quad (24)$$

[36] Assuming there exists such extrema

$$\boldsymbol{w_B = w_a(1 - a + \frac{a}{d})} \quad \textbf{(25)}$$

Now that we have obtained the optimal level of wages based on the power of union and the productivity share of labour, it is possible to analyse the sensitivity of the level of capital that has to be invested based on these factors using the equation (56) provided as the firms' option to invest as follows:

$$P = \left[K^g {L_{EMNE}}^d - w_B . L_{EMNE}\right](1 - t) - rK \quad \textbf{(56)}$$

Substituting w_B from (74) into (72) gives:

$$P = \left[K^g {L_{EMNE}}^d - K^g {L_{EMNE}}^{d-1} . (a - ad + d) . L_{EMNE}\right](1 - t) - rK$$

$$P = \left[K^g {L_{EMNE}}^d (1 - (a - ad + d))\right](1 - t) - rK$$

$$P = \left[K^g {L_{EMNE}}^d (1 - a + ad - d)\right](1 - t) - rK$$

Considering the derivative of the firms' profit function with respect to capital, $\frac{d}{dK} = 0$, we will have: $\boldsymbol{r = (1 - t) . g . K^{g-1} . {L_{EMNE}}^d . (1 - a + ad - d)}$ **(26)**

Here "r" signifies the minimum level of capital that has to be invested for the FDI to occur (in other words the minimum level of capital that is needed for the project to be operational). Substituting (74) into (78) gives:

$$\boldsymbol{r = (1 - t) . g . K^{g-1} . ([w_a(1 - a) . (K^g(d - ad))^{-1}]^{\frac{1}{d-1}})^d . (1 - a + ad - d)} \quad \textbf{(27)}$$

$$\boldsymbol{r = (1 - t) . g . K^{g-1} . ([w_a . (K^g d)^{-1}]^{\frac{1}{d-1}})^d . (1 - a + ad - d)} \quad \textbf{(28)}$$

$$\boldsymbol{r = (1 - t) . g . K^{g-1} . {w_a}^{\frac{d}{d-1}} . K^{\frac{gd}{1-d}} . d^{\frac{d}{1-d}} . (1 - a + ad - d)} \quad \textbf{(29)}$$

$$\boldsymbol{K^{g-1} K^{gd/(1-d)} = r . d^{\frac{d}{d-1}} . [{w_a}^{\frac{d}{d-1}} . (1 - a + ad - d)(1 - t) . g]^{-1}} \quad \textbf{(30)}$$

$$\boldsymbol{K^{(g-1+d)/(1-d)} = r . d^{\frac{d}{d-1}} . [{w_a}^{\frac{d}{d-1}} . (1 - a + ad - d)(1 - t) . g]^{-1}} \quad \textbf{(31)}$$

$$\boldsymbol{K = [r . d^{\frac{d}{d-1}} . \left[{w_a}^{\frac{d}{d-1}} . (1 - a + ad - d)(1 - t) . g\right]^{-1}]^{(1-d)/(g-1+d)}} \quad \textbf{(32)}$$

$$\boldsymbol{K = [r^{-1} . d^{\frac{d}{d-1}} . {w_a}^{\frac{d}{1-d}} . (1 - a + ad - d)(1 - t) . g]^{(d-1)/(g-1+d)}} \quad \textbf{(33)}$$

Note that since we assumed diminishing returns to scale: $d < 1$, $g < 1$ and $d + g < 1$.

In order to explore the effect of other factors such as the level of bargaining power of firm and union on the bargaining table, the level of taxes imposed on the profits in the host country, and finally the level of minimum wage (welfare), on the capital that has to be invested for the project to be operational, it is possible to use the derivative of (29) with respect to these factors.

Appendix 4.4.2: Comparative Statistics – Testable Hypothesis

Appendix 4.4.2.A: Effect of changes in union power on the bargaining process on the minimum capital that needs to be invested for the FDI to occur

To determine the effect of changes in 'a' on the minimum level of capital that has to be invested for the FDI to occur, the derivative of the (85) with respect to 'a' has to be considered.

$$\frac{dK}{da} = d/da\{[r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g]^{(d-1)/(g-1+d)}\} \quad (34)$$

Referring to $r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-t).g$ as b, we will have:

$$\frac{dK}{da} = \frac{d}{da}\{[b-ab-db+adb]^{\frac{d-1}{g-1+d}}\} \quad (35)$$

$$\frac{dK}{da} = \frac{d-1}{g-1+d}.[b-ab+adb-db]^{\frac{d-1}{g-1+d}}.(db-b) \quad (36)$$

Constraints: $0 \leq g < 1; 0 \leq d < 1; g+d < 1; r > 0;\ t > 0;\ (1-t) > 0;\ w_a \geq 0.$

$\frac{dK}{da} = 0$	$r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g.(d-1) = 0$ $or\ (b(1-d) = 0)$	$a = 1$ $d = 1$ $w_a = 0$ $d = 0$	Union has all the power Against the assumption $d < 1$ Minimum wage (welfare) is zero Productivity share of labour is zero

Table 4.5: The effect of changes in union power on the bargaining process

Considering the information provided on table above and remembering the constraints, we find that the rate of change of capital that needs to be invested for FDI to occur is irresponsive of bargaining power if the sunk cost of investment is zero ($r = 0$), minimum wage or welfare is zero ($w_a = 0$), or union has all the power in the bargaining process with the foreign firm ($a = 1$). In other words when union has all the power on bargaining table, firms' initial necessary level of capital that has to be invested for FDI to occur is not responsive to changes in bargaining power. Furthermore, the derivative of the level of capital that needs to be invested for FDI to occur with respect to union power shows that the rate of change of capital with respect to union power is determined by the sign of:

$$\frac{dK}{da} = \frac{d-1}{g-1+d}.r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g.(d-1) \quad (37)$$

Since; $0 \leq g < 1; 0 \leq d < 1; g + d < 1; r > 0;\ t > 0;\ (1-t) > 0;\ w_a \geq 0$; we find that the rate of change of capital that is needed for FDI to occur with respect to union power is determined by the sign of: $(1 - a + ad - d)\ (d - 1)$

Exploring the effect of the union power (level of civil liberty) on the initial cost of FDI, we find that if the level of civil liberty is high in the host country, the initial cost of FDI is insensitive to the union power. In contrast if the level of civil liberty is moderately high, or low, the initial cost of FDI is negatively affected by union power. In other words, the level of civil liberties in host countries with higher level of liberties does not affect the initial cost of FDI, while the level of civil liberties in countries with lower level of liberties tends to persuade FDI investment through lower cost of investment that should be made for FDI to occur.

If	For	
$a = 1$	$0 \leq d < 1$	$\frac{dK}{da} = 0$
$a = 1/2$	$0 \leq d < 1$	$\frac{dK}{da} < 0$
$a = 0$	$0 \leq d < 1$	$\frac{dK}{da} < 0$

Finally, the results indicate that the labour/capital share of production has no bearing on the effect of the level of civil liberties on initial cost of FDI.

Appendix 4.4.2.B: The effect of taxes on the Minimum level of capital that has to be invested for FDI to occur

To determine the effect of changes in tax applied to the MNEs' production in foreign country (taxes applied to the income earned by MNE in host country) on the minimum level of capital that has to be invested for the FDI to occur, the derivative of (14) with respect to 't' has to be considered.

$$\frac{dK}{dt} = \frac{d}{dt}\{\left[r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g\right]^{\frac{d-1}{g-1+d}}\} \quad (38)$$

Referring to $r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)g$ as b, we'll have:

$$\frac{dK}{dt} = \frac{d}{dt}\{[b(1-t)]^{\frac{d-1}{g-1+d}}\} \quad (39)$$

$$\frac{dK}{dt} = \frac{d-1}{g-1+d}[b.(1-t)]^{\frac{d-1-g+1-d}{g-1+d}}.(-1) \quad (40)$$

$$\frac{dK}{dt} = \frac{1-d}{g-1+d}[b.(1-t)]^{\frac{d-1-g+1-d}{g-1+d}} \quad (41)$$

Constraints: $r > 0;\ g < 1; d < 1; g + d > 1; t > 0; (1-t) > 0;\ w_a \geq 0$

Considering the derivative of the minimum capital that has to be invested with respect to taxes, the minimum capital is insensitive to the level of taxes on profit if: union has all the power in the bargaining process ($a = 1$), or productivity share of labour or capital is zero ($g = 0$ or $d = 0$), or the minimum wage (welfare) is zero.

$\frac{dK}{dt} = 0$	$r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)g = 0$	$a = 1$ $d = 0$ $g = 0$ $w_a = 0$

Table 4.7: Effect of taxes on the minimum capital that has to be invested

In other to explore the effect of taxes on profit in the host countries on the minimum level of capital that has to be invested for FDI to occur further, we consider the sign of the derivative of minimum capital with respect to taxes. The first component of the derivative

is negative $\frac{1-d}{g-1+d} < 0$, and the sign of second component is determined by the sign of $1 - a + ad - d$.

If	For	
$a = 1$	$0 \leq d < 1$	$\frac{d}{dt}K = 0$
$0 < a < 1$	$0 \leq d < 1$	$\frac{d}{dt}K < 0$
$a = 0$	$0 \leq d < 1$	$\frac{d}{dt}K < 0$

Therefore the level of taxes on profit (level of political rights) in host countries with high level of civil liberties does not affect initial cost of FDI and thereby FDI activity. In contrast the level of political rights conceptualized as taxes on profit, in case of moderately free and repressed countries negatively affects initial cost of FDI and thus positively influences FDI. Moreover, we find that the effect of political rights on initial cost of FDI is not sensitive to the sectoral composition and therefore dependency of production to labour.

Appendix 4.5.2.C: The effect of Welfare on the Minimum level of capital that has to be invested for FDI to occur

To determine the effect of changes in alternative wages earned by unemployed (could be interpreted as welfare in some cases) 'w_a' on the minimum level of capital that has to be invested for the FDI to occur, the derivative of the (29) with respect to 'w_a' has to be considered.

$$\frac{dK}{dw_a} = \frac{d}{dw_a}\left\{\left[r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g\right]^{\frac{d-1}{g-1+d}}\right\} \quad (42)$$

Referring to $r^{-1}.d^{\frac{d}{d-1}}.(1-a+ad-d)(1-t).g$ as b, we'll have:

$$\frac{dK}{dw_a} = \frac{(d-1)}{g-1+d}\left(b.w_a^{\frac{d}{1-d}}\right)^{\frac{d-1-g+1+d}{g-1+d}}.\left(\frac{db}{1-d}\right) \quad (43)$$

$$\frac{dK}{dw_a} = \frac{(d-1)}{g-1+d}\left(b.w_a^{\frac{d}{1-d}}\right)^{\frac{d-1-g+1+d}{g-1+d}}.\left(\frac{d}{1-d}.b\right) \quad (44)$$

Constraints: $0 \leq g < 1; 0 \leq d < 1; g + d < 1; r > 0;\ t > 0;\ (1-t) > 0;\ w_a \geq 0.$

The table below shows that the rate of change of the capital is insensitive to minimum wage (welfare) if: union has all the power in the bargaining process ($a = 1$), or productivity share of labour or capital is zero ($g = 0$ or $d = 0$), or the minimum wage (welfare) is zero. The results are intuitive. In case where minimum wage is zero or union has all the power, the bargaining over process would not be affected by minimum wage (welfare).

$\frac{dK}{dw_a} = 0$	$bw_a^{\frac{d}{1-d}} =$ $r^{-1}.d^{\frac{d}{d-1}}.w_a^{\frac{d}{1-d}}.(1-a+ad-d)(1-t).g = 0$	$a = 1$ $g = 0$ $d = 0$ $w_a = 0$
	$d(r^{-1}.d^{\frac{d}{d-1}}.(1-a+ad-d)(1-t).g) = 0$	$d = 0$ $g = 0$ $d = 0$ $a = 1$

Table 4.6: The effect of the welfare (minimum wage paid for unemployment) on bargaining process

In order to explore the effect of welfare wages in the host countries on the minimum level of capital that has to be invested for FDI to occur further, we consider the sign of the derivative of minimum capital with respect to welfare wages.

Since; $0 \leq g < 1; 0 \leq d < 1; g + d < 1; r > 0;\ t > 0;\ (1-t) > 0;\ w_a \geq 0$, we find that the sign of the derivative is determined by the sign of $(1 - a + ad - d)$, hence;

If	for	
$a = 1$	$0 \leq d < 1$	$\frac{dK}{dw_a} = 0$
$0 < a < 1$	$0 \leq d < 1$	$\frac{dK}{dw_a} > 0$
$a = 0$	$0 \leq d < 1$	$\frac{dK}{dw_a} > 0$

Therefore the level of welfare wage in host countries with high level of civil liberties does not affect initial cost of FDI and FDI activity. However, when moderately free and repressed countries are considered, we find that the level of welfare wage of these host countries positively affect initial cost of FDI, and thus influences FDI activity in a negative manner. Furthermore, the effect of the level of welfare wages of host countries on initial cost of FDI is not sensitive to sectoral composition, as we find no evidence of the sensitivity of initial cost of FDI to labour/capital share of production.

Appendix 5.1: FDI Data classification

Based on the information above, this research has strived to provide an extended dataset that covers data post 1990s up to the present. To do so, first the concordance tables of different classifications and their relationships were reviewed. Through this process, we learned that certain revisions of the North American system, European System and the International System (provided by World Bank), were compliant with one another. Mainly that the European industrial classification, NACE Rev. 1.1, was in compliant with the International industrial classification system, ISIC Rev.3.1 and North American industrial classification NAICS 2002. Unfortunately the NACE Rev. 1.1 covers the data up to 2009, after this point the new data is categorised under NACE 1.2 which covers only three years of 2009, 2010, and 2011. Therefore, we chose to use the data for 1990-2009 as our main time span.

Once the industrial classifications were decided upon (NACE Rev. 1.1; ISIC Rev. 3.1; NAICS 2002) the FDI data from the mentioned sources were reviewed. We find that the Bureau of Economic Analysis (BEA) mainly covers the information regarding the U.S. FDI abroad. World Bank provides data on an extensive set of countries; however data on OFDI is mainly at country level (aggregate). The most extensive set of data is provided by EUROSTAT that provides data on the FDI activities of a number of countries for the period under NACE Rev.1.1, which corresponds to ISIC Rev.1.3 and NAICS 2002. Eurostat database provides the possibility of collecting data from a singular source without taking on the task of going through hundreds of indices from different data sets, and risking lack of inconsistency in the underlying sub-measures in the process of providing a combinatorial dataset on OFDI. These considerations led to the decision to use the data

from EUROSTAT for OFDI (our dependent variable). List of countries for which data on FDI is collected is provided on appendices 6.1 and 6.2.

A closer review of the data collected from Eurostat shows that the dataset provides data on U.S. FDI on aggregate level (Total FDI). Since our premises are mainly built upon a comparison between Liberal and coordinated market economies in a more disaggregated level (Sectoral level), the sectoral FDI activity of U.S. as the most pronounced example of the liberal market economies is of enormous importance in the empirical examination of the conceptual arguments and the model that is built upon them.

The review of the sources mentioned in table (#) indicates that the only extensive source of data for U.S. FDI is Bureau of Economic Analysis (BEA). The BEA provides data on U.S. FDI based on the current version of NAICS industrial classification which is different from NAICS 2002. In a closer review of the classifications we have found that it is not possible to map each and every sector in NACE 1.1 to the current version of NAICS classification.[37] Thus, we have created a second data set with only U.S. FDI as the dependent variable. This data set will be referred to as BEA data set in the rest of this thesis. The classification that is used for BEA data set is explained in the following section, and the data set and its characteristics will be reviewed in the following chapter.

[37] Since in many cases a single industry classification in classification system 'A' is related to two different composed industry classifications in the classification system 'B' (the other industry classification system).

Appendix 5.1.A: Sectoral considerations – EUROSTAT data set

The choice of sectors is influenced by the aspects of industrial activity that they proxy for, as well as their level of aggregation. In this respect, two main levels of data are provided. The first level of industrial classification considered is a general level that considers a more aggregated level of industrial classification by considering the higher level of industrial activity. The table below tabulate the information regarding these sectors:

Level of Aggregation: Level 1	Dummy	Eurostat Code	NACE Rev 1.1	Corresponding NACE Rev 1.1 classes
Total	1	"9999"		
Agriculture and Fishing	2	"0595"	Sec A&B	01.11-05.02
Mining and Quarrying	3	"1495"	Sec C	10.10.14.50
Manufacturing	4	"3995"	Sec D	15.11-37.20
Electricity, Gas and Water	5	"4195"	Sec E	40.10-41.00
Construction	6	"4500"	Sec F	45.11-45.50
Trade and Repairs	7	"5295"	Sec G	50.10-52.74
Hotels and Restaurants	8	"5500"	Sec H	55.10-55.52
Transports, Storage & Communication	9	"6495"	Sec I	60.10-64.20
Financial Intermediation	10	"6895"	Sec J	65.11-67.20
Real Estate, Renting & Business Activity	11	"7395"	Sec K	70.11-74.87
Computer & Related Activities	12	"7200"	div 72	72.10-72.60
Research & Development	13	"7300"	div 73	73.10-73.20
Other Business Activities	14	"7400"	div 74	74.11-74.87

Table 5.7: Sectoral specifications

As it is visible from the table, the industrial activities chosen cover almost all aspects of economy in a more disaggregated way, in comparison to the body of literature on the subject. Furthermore, we consider classification of the sectors based on the more aggregated classification based on classifying them into four categories; Total; Agriculture; Manufacturing; and Services. Details of this classification are available from Appendix 5.1.C.

The second level of disaggregation provides a more detailed data on the FDI flows in the sub sectors. However, due to low number of observations, this level of analysis is abandoned in the section 7, in the empirical analysis. The classification is provided in the Appendix 5.1.D.

Appendix 5.1.B: Sectoral considerations – BEA data set

In this subsection we discuss the process of creating a new aggregate system. Bureau of Economic Analysis (BEA) provides the U.S. FDI aboard based on two different classifications for the period 1990-2009. First industry classification is the SIC classification base on which the data from 1990-1999 is provided. The second classification is NAICS based on which the data from 1999-2009 is provided. With the intention of providing a consistent sectoral classification for the full period we have constructed a new industry classification which is built upon the two existing classification, however it is more aggregate in order to avoid double counting. Table (5.8) tabulates the aggregation system of SIC.

SIC (1990-1999)	NAICS (1999-2009)
SIC	NAICS
All Industries	
Petroleum	All Industries
Manufacturing	Mining
Total	Utilities
Food & Kindred Products	Manufacturing
Primary & fabricated Metals	Total
Chemicals & Allied products	Food
Industrial machinery & equipment	Primary & fabricated metals
Electrical equipment, appliances, & components	Chemicals
Transportation equipment	Machinery
Other manufacturing	Computers and Electronic products
Wholesale trade	Electrical equipment, appliances, & components
Depository Institutions	Transportation equipment
Finance(except deposit institutions), insurance and Real estate	Other manufacturing
Servic es	Wholesale trade
Other Industries	Information
	Depository Institutions
	Finance(except deposit institutions), insurance
	Professional, Scientific and technical services
	Holding Companies (nonbank)
	Other Industries

Table 5.7: The SIC and NAICS classification systems

Our industrial classification is created by consideration of a higher level of aggregation than any of the two classifications in order to compose aggregate sectoral classification (the level of aggregation is higher than any of the two considered classification systems) so

that we will be able to avoid double counting the observations. Table (5.8) tabulates the resulting classification system.

NEW Aggregate			
Years	1990-1998		1999-2000
Source	BEA		BEA
Original Classification	SIC		NAICS
All Industries			
Mining & Utilities	Petroleum	&	Mining
			Utilities
Manufacturing			
Total			
Food	Food & Kindred Products	&	Food
Primary & fabricated Metals	Primary & fabricated Metals		Primary & fabricated Metals
Chemicals	Chemicals & Allied products	&	Chemicals
Industrial machinery & equipment	Industrial machinery & equipment	&	Machinery
Electrical equipment, appliances, & components	Electrical equipment, appliances, & components	&	Electrical equipment, appliances, & components
			Computers and Electronic products
Transportation equipment	Transportation equipment	&	Transportation equipment
Other manufacturing	Other manufacturing	&	Other manufacturing
Wholesale trade	Wholesale trade	&	Wholesale trade
Depository Institutions	Depository Institutions	&	Depository Institutions
Finance	Finance(except deposit institutions), insurance and Real estate	&	Finance(except deposit institutions), insurance
			Holding Companies (nonbank)
Services	Services	&	Professional, Scientific and technical services
			Information
Other Industries	Other Industries	&	Other Industries

Table 5.9: The constructed classification system

The classification above in the sectoral analysis will be based on classification of net FDI flow data from BEA in three levels of aggregation (Total; second degree of aggregation based on: total, Agriculture, manufacturing, and Services; and finally the sectoral level are provided from appendix 5.1.E.

Appendix 5.1.C: An aggregated classification of net FDI flows data of Eurostat

FDI data Sector Dummies					
	Level 1	Dummy	Eurostat Code	NACE Rev 1.1	Corresponding NACE Rev 1.1 classes
Total	Total	1	"9999"		
Agriculture	Agriculture and Fishing	2	"0595"	Sec A&B	01.11-05.02
Manufacturing	Mining and Quarrying	3	"1495"	Sec C	10.10.14.50
Manufacturing	Manufacturing	4	"3995"	Sec D	15.11-37.20
Manufacturing	Electricity, Gas and Water	5	"4195"	Sec E	40.10-41.00
Manufacturing	Construction	6	"4500"	Sec F	45.11-45.50
Services	Trade and Repairs	7	"5295"	Sec G	50.10-52.74
Services	Hotels and Restaurants	8	"5500"	Sec H	55.10-55.52
Services	Transports, Storage & Communication	9	"6495"	Sec I	60.10-64.20
Services	Financial Intermediation	10	"6895"	Sec J	65.11-67.20
Services	Real Estate, Renting & Business Activity	11	"7395"	Sec K	70.11-74.87
Services	Computer & Related Activities	12	"7200"	div 72	72.10-72.60
Services	Research & Development	13	"7300"	div 73	73.10-73.20
Services	Other Business Activities	14	"7400"	div 74	74.11-74.87

Appendix 5.1.D: Sectoral considerations Level (2)

The second level of sectoral analysis consists of a further breakdown of the sectoral levels. This provides an opportunity to see how FDI in subsectors is influenced by the level of civil and political liberties ceteris paribus. The sub-sectoral considerations draw a number of subsectors from each of the sectors above with the exemption of the three sectors for which no subsector was provided (they were the lowest level of sectoral information available). These sectors are: computer & Related Activities (NACE code: 7200); Research & Development (NACE code: 7300); and Other Business Activities (NACE code: 7400).

Level 2	Dummy	Eurostat Code	NACE Rev 1.1	Corresponding NACE Rev 1.1 classes
Food Products	1	"1605"	Subsec DA	15.11-16.00
Total textiles & wood activities	2	"2295"	Subsec DB, DD, DE	17.11-18.30 & 20.10-22.33
Total petroleum, chemicals, rubber & plastic products	3	"2595"	Sum (div 23, 24, 25)	23.10-23.30, 24.11-24.70, 25.11-25.24
Total metal & mechanical products	4	"2995"	Sum (Subsec DJ and DK)	27.10-28.75 & 29.11-29.72
Total Machinery, computers, RTV & communication equipment	5	"3295"	Sum (div 30, 32)	30.01-30.02 & 32.10-32.30
Motor Vehicles	6	"3400"	div 34	34.10.34.30
TOTAL vehicles & other transport equipment	7	"3593"	Sum (div 34, 35)	34.10-34.30 & 35.11-35.50
Sale, maintenance and repair of motor vehicles and motor cycles; retail sale of automotive fuel	8	"5000"	div 50	50.10-50.50
Retail trade, except of motor vehicles and motor cycles; repair of personal and household goods	9	"5200"	div 52	52.11-52.74
Telecommunications	10	"6420"	group 64.2	"64.20"
Computer activities	11	"7200"	div 72	72.10-72.60
Research & Development	12	"7300"	div 73	73.10-73.20
Other Business Activities	13	"7400"	div 74	74.11-74.87
RECREATIONAL, CULTURAL & SPORTING ACTIVITIES	14	"9200"	see O, div 92	92.11-92.34

Appendix 5.1.E: The classification of net FDI flows from BEA

BEA (Author's aggregation scheme)	BEA(Original BEA aggregation scheme)	Original sectors
USA FDI Abroad; Second degree of Aggregation	USA FDI Abroad; Sectoral	
Total	All Industries	1
Manufacturing	Mining&Utilities	2
Total Manufacturing	Total_Manufacturing	3
Agriculture	Manu_Food	4
Manufacturing	Manu_Primary&Fabricated metals	5
Manufacturing	Manu_Chemicals	6
Manufacturing	Manu_Industrial Machinery	7
Manufacturing	Electrical Equipment	8
Manufacturing	Manu_Transportation Equipment	9
Manufacturing	Manu_Other Manufacturing	10
Services	Wholesale	11
Services	Depository Institutions	12
Services	Finance	13
Services	Services	14
Services	Other Industries	15

Appendix 6.1: Home Countries

List of the preliminary set of home countries considered in this research is provided in the table below. Note than the final set of home countries is limited to 8 (and in some cases 6) home countries drawn from this set of home countries, based on the availability and extent of available empirical data.

No:	List of Home countries
1	USA
2	UK
3	Sweden
4	Spain
5	Norway
6	Netherlands
7	Japan
8	Italy
9	Ireland
10	Germany
11	France
12	Finland
13	Denmark

Appendix 6.2: Host Countries

The set of 140 host countries provided below are the chosen host countries for the analysis.

No:	Host countries		
1	Albania	71	Lebanon
2	Algeria	72	Liberia
3	Angola	73	Libya
4	Argentina	74	Lithuania
5	Armenia	75	Luxembourg
6	Australia	76	Madagascar
7	Austria	77	Malawi
8	Azerbaijan	78	Malaysia
9	Bahamas	79	Mali
10	Bahrain	80	Malta
11	Bangladesh	81	Mexico
12	Belarus	82	Moldova
13	Belgium	83	Mongolia
14	Bolivia	84	Morocco
15	Botswana	85	Mozambique
16	Brazil	86	Namibia
17	Brunei Darussalam	87	Netherlands
18	Bulgaria	88	New Zealand
19	Burkina Faso	89	Nicaragua
20	Burma/Myanmar	90	Niger
21	Cameroon	91	Nigeria
22	Canada	92	North Korea
23	Chile	93	Norway
24	China (except Hong Kong)	94	Oman

25	Colombia	95	Pakistan
26	Congo	96	Panama
27	Costa Rica	97	Papua New Guinea
28	Côte d'Ivoire	98	Paraguay
29	Croatia	99	Peru
30	Cuba	100	Philippines
31	Cyprus	101	Poland
32	Czech Republic	102	Portugal
33	Democratic Republic of the Congo	103	Qatar
34	Denmark	104	Romania
35	Dominican Republic	105	Russia
36	Ecuador	106	Saudi Arabia
37	Egypt	107	Senegal
38	El Salvador	108	Serbia
39	Estonia	109	Sierra Leone
40	Ethiopia	110	Singapore
41	Finland	111	Slovakia
42	France	112	Slovenia
43	Gabon	113	Somalia
44	Gambia, The	114	South Africa
45	Germany (including former GDR from 1991)	115	South Korea
46	Ghana	116	Spain
47	Greece	117	Sri Lanka
48	Guatemala	118	Sudan
49	Guinea	119	Suriname
50	Guinea-Bissau	120	Sweden

51	Guyana	121	Switzerland
52	Haiti	122	Syria
53	Honduras	123	Taiwan
54	Hong Kong	124	Tanzania
55	Hungary	125	Thailand
56	Iceland	126	Togo
57	India	127	Trinidad and Tobago
58	Indonesia	128	Tunisia
59	Iran	129	Turkey
60	Iraq	130	Uganda
61	Ireland	131	Ukraine
62	Israel	132	United Arab Emirates
63	Italy	133	United Kingdom
64	Jamaica	134	United States
65	Japan	135	Uruguay
66	Jordan	136	Venezuela
67	Kazakhstan	137	Vietnam
68	Kenya	138	Yemen
69	Kuwait	139	Zambia
70	Latvia	140	Zimbabwe

Appendix 6.3: List of Preliminary Variables

Concept	No.Obs	Selected Variables	Definition	Source
Macro	21028	exchangerate_realeffective	Real effective exchange rate index (2005 = 100)	World Bank
Macro	29372	interest_rate_real	Real interest rate (%)	World Bank
Macro	29596	interest_rate_lending	Lending interest rate (%)	World Bank
Macro	33866	tradeserv_percgdp	Trade in services (% of GDP)	World Bank
Macro	37030	trade_percgdp	Trade (% of GDP)	World Bank
Macro	32480	exp_gdsservs_percanngr	Exports of goods and services (annual % growth)	World Bank
Macro	18858	tx_other_percrev	Other taxes (% of revenue)	World Bank
Macro	5698	tx_on_export_perc	Taxes on exports (% of tax revenue)	World Bank
Macro	20048	tx_goodsservices_percrev	Taxes on goods and services (% of revenue)	World Bank
Macro	19530	tx_goodsservices_percva	Taxes on goods and services (% value added of industry and services)	World Bank
Macro	20216	tx_inc_prof_cg_percrev	Taxes on income, profits and capital gains (% of revenue)	World Bank
Macro	20482	tx_inc_prof_cg_perctottx	Taxes on income, profits and capital gains (% of total taxes)	World Bank
Macro	18410	tx_inttrade_percrev	Taxes on international trade (% of revenue)	World Bank
MS	37632	gdpusdcons	GDP (constant 2000 US$)	World Bank
MS	37716	gdppercannlgrwth	GDP growth (annual %)	World Bank
MS	37590	gdpprcapitausdcons	GDP per capita (constant 2000 US$)	World Bank
MS	37674	gdpprcapitapercannlgrwth	GDP per capita growth (annual %)	World Bank
MS	37310	gdpprcapitapppintlusdcons	GDP per capita, PPP (constant 2005 international $)	World Bank

MS	37352	gdppppintlusdcons	GDP, PPP (constant 2005 international $)	World Bank
RS	12600	prod_crudeoil	Production of Crude Oil; Volume (million tonnes of oil equivalent)	GMID
RS	13888	prod_gas	Production of Natural Gas; Volume (million tonnes of oil equivalent)	GMID
RS	38192	prod_elec	Production of Electricity; Volume (KWH)	GMID
ES	9142	cost_exp_usd_percont	Cost to export (US$ per container)	World Bank
ES	9142	cost_imprt_usd_percont	Cost to import (US$ per container)	World Bank
ES	17710	custom_duti_perctotrev	Customs and other import duties (% of tax revenue)	World Bank
ES	19236	emp_comp_percexpense	Compensation of employees (% of expense)	World Bank
ES	23142	emp_agri_perctotemp	Employment in agriculture (% of total employment)	World Bank
ES	23156	emp_indus_perctotemp	Employment in industry (% of total employment)	World Bank
ES	23156	emp_serv_perctotemp	Employment in services (% of total employment)	World Bank
ES	36792	emptopopu_percratio	Employment to population ratio, 15+, total (%)	World Bank
ES	11900	firing_cost	Firing cost (weeks of wages)	World Bank
ES	28668	lbrforce_t	Labour force, total	World Bank
ES	12124	lbr_primeduc_perc_tot	Labour force with primary education (% of total)	World Bank
ES	12012	lbr_sndeduc_perc_tot	Labour force with secondary education (% of total)	World Bank
ES	12110	lbr_terteduc_perc_tot	Labour force with tertiary education (% of total)	World Bank
ES	38710	lbr_particip_rate_tot	Labour participation rate, total (% of total population ages 15+)	World Bank
ES	4354	adult_lit_rate_tot	Literacy rate, adult total (% of people ages 15 and above)	World Bank
ES	14056	emp_pt_percemp_t	Part time employment, total (% of total employment)	World Bank
ES	23100	unemp_perc_totlf	Unemployment, total (% of total labour force)	World Bank

ES	16618	unemp_primeduc_perc_tot	Unemployment with primary education (% of total unemployment)	GMID
ES	16436	unemp_sndeduc_perc_tot	Unemployment with secondary education (% of total unemployment)	GMID
ES	16576	unemp_terteduc_perc_t	Unemployment with tertiary education (% of total unemployment)	GMID
ES	20034	emp_wgnsale_perc_t	Wage and salaried workers, total (% of total employed)	GMID
ES	20776	wageperhour_manu_usd_fixed	Wage Per Hour in Manufacturing (Local Currency; Constant Prices-Real Value)	ILO
ES	17850	wageperhour_usd_fixed	Minimum Wage (Constant 2011 Prices) [GMID]	OECD
ES	19782	productivity_pperson	Productivity per person employed (USD)	OECD
ES	14672	days_not_worked	Days Not Worked by economic activity: Total	ILO
ES	7882	un_members_admind	Union Members (administrative data); Annual	OECD
ES	9044	employees_tot_admind	Total Employees (administrative data); Annual	OECD
ES	8596	trade_un_dens	Trade Union Density (OECD.Stat)	OECD
SAS	33992	airtranspf~t	Air transport, freight (million ton-km)	World Bank
SAS	29386	hitech_exp~t	High-technology exports (% of manufactured exports)	World Bank
SAS	19012	internet_s~d	Fixed broadband Internet subscribers	World Bank
SAS	32956	internet_u~s	Internet users	World Bank
SAS	23394	patent_~nres	Patent applications, nonresidents	World Bank
SAS	22652	patent_~_res	Patent applications, residents	World Bank
SAS	20538	infra_rail~t	Rail lines (total route-km)	World Bank
SAS	21532	infra_rail~p	Railways, goods transported (million ton-km)	World Bank

SAS	20048	infra_rail~d	Railways, passengers carried (million passenger-km)	World Bank
SAS	23310	rdspvdperc_t	Roads, paved (% of total roads)	World Bank
SAS	24402	rds_networ~t	Roads, total network (km)	World Bank
SAS	13986	rnd_expend~p	Research and development expenditure (% of GDP)	World Bank
SAS	10668	rnd_resempl	Researchers in R&D (per million people)	World Bank
SAS	23968	trdmrka~nres	Trademark applications, direct nonresident	World Bank
SAS	24024	trdmrka~_res	Trademark applications, direct resident	World Bank
SAS	12054	trdmrkapp_~d	Trademark applications, Madrid	World Bank
SAS	26600	trdmarkapp~t	Trademark applications, total	World Bank
Inst	36792	democ	Polity IV democracy index	Polity IV
Inst	36792	autoc	Polity IV autocracy index	Polity IV
Inst	36792	polity	Polity IV Polity index	Polity IV
Inst	36470	polity2	Polity IV Polity 2 index	Polity IV
Inst	38486	FHPR	Freedom House Political Rights index	Freedom House
Inst	38486	FHCL	Freedom House Civil Liberties index	Freedom House
Inst	37492	gov_stab	ICRG government stability index	ICRG
Inst	37492	socioecon_~d	ICRG Socioeconomic Index	ICRG
Inst	37492	invest_prof	ICRG Investment profile index	ICRG
Inst	37492	inter_conf	ICRG Internal Conflict index	ICRG
Inst	37492	exter_conf	ICRG External Conflict index	ICRG
Inst	37492	corrup	ICRG Corruption index	ICRG
Inst	37492	milit_in_p~t	ICRG Military in Politics index	ICRG
Inst	37492	rel_in_polit	ICRG Religion in Politics	ICRG

			index	
Inst	37492	law_order	ICRG Law and Order index	ICRG
Inst	37492	ethnic_tens	ICRG Ethnic Tensions index	ICRG
Inst	37492	democ_acco~t	ICRG Democratic Accountability index	ICRG
Inst	37492	bureauc_qual	ICRG Bureaucratic Quality index	ICRG

Appendix 6.4: Civil liberties and Political Rights Questionnaire used by Freedom House in construction of liberties indices

POLITICAL RIGHTS

A. ELECTORAL PROCESS

1. Is the head of government or other chief national authority elected through free and fair elections?

2. Are the national legislative representatives elected through free and fair elections?

3. Are the electoral laws and framework fair?

B. POLITICAL PLURALISM AND PARTICIPATION

1. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system open to the rise and fall of these competing parties or groupings?

2. Is there a significant opposition vote and a realistic possibility for the opposition to increase its support or gain power through elections?

3. Are the people's political choices free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies, or any other powerful group?

4. Do cultural, ethnic, religious, or other minority groups have full political rights and electoral opportunities?

C. FUNCTIONING OF GOVERNMENT

1. Do the freely elected head of government and national legislative representatives determine the

policies of the government?

2. Is the government free from pervasive corruption?

3. Is the government accountable to the electorate between elections, and does it operate with openness and transparency?

ADDITIONAL DISCRETIONARY POLITICAL RIGHTS QUESTIONS

1. For traditional monarchies that have no parties or electoral process, does the system provide for genuine, meaningful consultation with the people, encourage public discussion of policy choices, and allow the right to petition the ruler?

2. Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favour of another group?

Political Liberties Questions; Source: *FREEDOM IN THE WORLD 2012: THE ARAB UPRISINGS AND THEIR GLOBAL REPERCUSSIONS, pp.34.*[38]

Next page consists of information with regard to the components of Civil Liberties Index from Freedom House. All the information provided in this section is extracted from Freedom House (Freedom in the World, 2012).

[38] www.freedomhouse.org.

CIVIL LIBERTIES

D. FREEDOM OF EXPRESSION AND BELIEF

1. Are there free and independent media and other forms of cultural expression? (*Note*: In cases where the media are state-controlled but offer pluralistic points of view, the survey gives the system credit.)

2. Are religious institutions and communities free to practice their faith and express themselves in public and private?

3. Is there academic freedom, and is the educational system free of extensive political indoctrination?

4. Is there open and free private discussion?

E. ASSOCIATIONAL AND ORGANIZATIONAL RIGHTS

1. Is there freedom of assembly, demonstration, and open public discussion?

2. Is there freedom for nongovernmental organizations? (*Note*: This includes civic organizations, interest groups, foundations, etc.)

3. Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining? Are there free professional and other private organizations?

F. RULE OF LAW

1. Is there an independent judiciary?

2. Does the rule of law prevail in civil and criminal matters? Are police under direct civilian control?

3. Is there protection from political terror, unjustified imprisonment, exile, or torture, whether by groups that support or oppose the system? Is there freedom from war and insurgencies?

4. Do laws, policies, and practices guarantee equal treatment of various segments of the population?

G. PERSONAL AUTONOMY AND INDIVIDUAL RIGHTS

1. Do citizens enjoy freedom of travel or choice of residence, employment, or institution of higher education?

2. Do citizens have the right to own property and establish private businesses? Is private business activity unduly influenced by government officials, the security forces, political parties/organizations, or organized crime?

3. Are there personal social freedoms, including gender equality, choice of marriage partners, and size of family?

4. Is there equality of opportunity and the absence of economic exploitation?

Civil Liberties Questions; Source: *FREEDOM IN THE WORLD 2012: THE ARAB UPRISINGS AND THEIR GLOBAL REPERCUSSIONS, pp.34.* [39]

[39] www.freedomhouse.org.

Appendix 6.5: Freedom House numerical ranking and their meanings

GENERAL CHARACTERISTICS OF EACH POLITICAL RIGHTS AND CIVIL LIBERTIES RATING	
POLITICAL RIGHTS	
Rating of 1	Countries and territories with a rating of 1 enjoy a wide range of political rights, including free and fair elections. Candidates who are elected actually rule, political parties are competitive, the opposition plays an important role and enjoys real power, and minority groups have reasonable self-government or can participate in the government through informal consensus.
Rating of 2	Countries and territories with a rating of 2 have slightly weaker political rights than those with a rating of 1 because of such factors as some political corruption, limits on the functioning of political parties and opposition groups, and foreign or military influence on politics.
Ratings of 3, 4, 5	Countries and territories with a rating of 3, 4, or 5 include those that moderately protect almost all political rights to those that more strongly protect some political rights while less strongly protecting others. The same factors that undermine freedom in countries with a rating of 2 may also weaken political rights in those with a rating of 3, 4, or 5, but to an increasingly greater extent at each successive rating.
Rating of 6	Countries and territories with a rating of 6 have very restricted political rights. They are ruled by one-party or military dictatorships, religious hierarchies, or autocrats. They may allow a few political rights, such as some representation or autonomy for minority groups, and a few are traditional monarchies that tolerate political discussion and accept public petitions.
Rating of 7	Countries and territories with a rating of 7 have few or no political rights because of severe government oppression, sometimes in combination with civil war. They may also lack an authoritative and functioning central government and suffer from extreme violence or warlord rule that dominates political power
CIVIL LIBERTIES	
Rating of 1	Countries and territories with a rating of 1 enjoy a wide range of civil liberties, including freedom of expression, assembly, association, education, and religion. They have an established and generally fair system of the rule of law (including an independent judiciary), allow free economic activity, and tend to strive for equality of opportunity for everyone, including women and minority groups.
Rating of 2	Countries and territories with a rating of 2 have slightly weaker civil liberties than those with a rating of 1 because of such factors as some limits on media independence, restrictions on trade union activities, and discrimination against minority groups and women.

Ratings of 3, 4, 5	Countries and territories with a rating of 3, 4, or 5 include those that moderately protect almost all civil liberties to those that more strongly protect some civil liberties while less strongly protecting others. The same factors that undermine freedom in countries with a rating of 2 may also weaken civil liberties in those with a rating of 3, 4, or 5, but to an increasingly greater extent at each successive rating.
Rating of 6	Countries and territories with a rating of 6 have very restricted civil liberties. They strongly limit the rights of expression and association and frequently hold political prisoners. They may allow a few civil liberties, such as some religious and social freedoms, some highly restricted private business activity, and some open and free private discussion.
Rating of 7	Countries and territories with a rating of 7 have few or no civil liberties. They allow virtually no freedom of expression or association, do not protect the rights of detainees and prisoners, and often control or dominate most economic activity.
Countries and territories generally have ratings in political rights and civil liberties that are within two ratings numbers of each other. For example, without a well-developed civil society, it is difficult, if not impossible, to have an atmosphere supportive of political rights. Consequently, there is no country in the survey with a rating of 6 or 7 for civil liberties and, at the same time, a rating of 1 or 2 for political rights.	

Appendix 6.6; Correlation tables for each factor considered

Appendix 6.6.A: Pairwise correlation of independent variables

(a) Macroeconomic Variables

Macro													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	0.14	1											
3	-0.08	0.16	1										
4	0	-0.06	-0.03	1									
5	-0.05	-0.06	-0.04	0.64	1								
6	-0.06	-0.07	-0.03	-0.01	0.02	1							
7	0.11	0.01	0.08	0.21	0.15	-0.01	1						
8	0.03	-0.12	0.04	-0.06	0	-0.12	0.01	1					
9	-0.12	0.04	0.07	-0.1	-0.12	0.08	-0.18	-0.26	1				
10	-0.18	-0.05	0.02	0.07	0.09	-0.02	-0.2	-0.09	0.66	1			
11	-0.17	-0.03	-0.07	0.02	0.03	-0.07	-0.03	-0.2	-0.15	-0.2	1		
12	-0.18	-0.07	-0.1	0.02	0.09	-0.07	-0.1	-0.24	-0.47	-0.34	0.81	1	
13	0.2	0	0.03	0.14	-0.17	-0.03	0.3	0.35	-0.28	-0.38	-0.12	-0.3	1

Macro-economic Variables	Affiliated number on the table	Macro-economic Variables	Affiliated number on the table
exchangerate_realeffective	1	tx_on_export_perc	8
interest_rate_real	2	tx_goodsservices_percrev	9
interest_rate_lending	3	tx_goodsservices_percva	10
tradeserv_percgdp	4	tx_inc_prof_cg_percrev	11
trade_percgdp	5	tx_inc_prof_cg_perctottx	12
exp_gdsservs_percanngr	6	tx_inttrade_percrev	13
tx_other_percrev	7		

(B) Market Seeking Variables

MS						
	gdpusdcons	gdppercannlgrwth	gdpprcapitausdcons	gdpprcapitapercannlgrwth	gdpprcapitapppintlusdcons	gdppppintlusdcons
gdpusdcons	1					
gdppercannlgrwth	-0.03	1				
gdpprcapitausdcons	0.39	-0.02	1			
gdpprcapitapercannlgrwth	0	0.96	-0.01	1		
gdpprcapitapppintlusdcons	0.27	-0.01	0.93	-0.02	1	
gdppppintlusdcons	0.96	-0.01	0.33	0.03	0.24	1

(C) Resource Seeking Variables

RS				
	prod_crudeoil	prod_gas	prod_coal	prod_elec
prod_crudeoil	1			
prod_gas	0.69	1		
prod_coal	0.41	0.35	1	
prod_elec	0.53	0.73	0.75	1

(D) Efficiency Seeking Variables

ES																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1																						
2	0.92	1																					
3	0.22	0.25	1																				
4	0.06	0.15	0.47	1																			
5	0.26	0.35	0.4	0.19	1																		
6	-0.25	-0.33	-0.45	-0.3	-0.58	1																	
7	-0.18	-0.25	-0.27	-0.08	-0.91	0.25	1																
8	0.06	0.12	0.26	0.27	0.34	-0.15	-0.35	1															
9	-0.13	-0.12	0	-0.21	0.22	-0.03	-0.23	0.08	1														
10	-0.09	0.05	0.09	0.35	0.31	-0.14	-0.25	0.46	-0.02	1													
11	0.12	-0.03	-0.14	-0.32	-0.31	0.41	0.1	-0.49	-0.16	-0.72	1												
12	0.04	-0.07	-0.24	-0.27	-0.42	-0.16	0.51	-0.23	0.15	-0.46	0.05	1											
13	0.11	0.2	0.21	0.08	0.27	-0.33	-0.16	0.23	0.1	-0.16	-0.04	0.13	1										
14	-0.16	-0.3	-0.43	-0.31	-0.66	0.55	0.62	-0.06	-0.01	-0.01	0.54	0.33	-0.25	1									
15	0.05	0.13	0.05	-0.06	-0.04	-0.5	0.27	0.17	0.06	0.04	-0.24	0.21	0.39	-0.21	1								
16	-0.27	-0.39	-0.32	-0.28	-0.85	0.54	0.71	-0.42	-0.09	-0.43	0.45	0.42	-0.28	0.68	-0.04	1							
17	-0.19	-0.23	-0.38	-0.35	-0.57	0.08	0.61	-0.33	-0.11	-0.18	0.07	0.37	0.02	0.3	0.41	0.58	1						
18	-0.22	-0.26	-0.37	-0.37	-0.59	0.1	0.62	-0.32	-0.09	-0.12	0.02	0.31	0.04	0.25	0.46	0.54	0.96	1					

19	-0.18	-0.26	-0.21	-0.28	-0.6	0.07	0.62	-0.33	-0.15	-0.15	0.07	0.41	0.11	0.29	0.36	0.59	0.87	0.86	1				
20	-0.06	0.07	-0.05	-0.04	0.05	-0.08	-0.02	0.03	0.24	0.02	-0.09	-0.09	0.08	0.02	0.06	-0.08	-0.08	-0.08	-0.1	1			
21	0.09	0.13	0.21	-0.35	-0.23	0.17	0.09	-0.18	0.88	0.01	0.01	0.16	0.04	0.25	0.26	0.11	0.21	0.17	0.27	0.09	1		
22	0.04	0.16	0.05	-0.14	-0.14	-0.1	0.18	0.08	1	-0.05	-0.11	0.37	0.12	-0.34	0.07	0.11	0.07	0.01	0.21	0.39	0.9	1	
23	-0.17	-0.23	-0.15	-0.09	-0.26	-0.11	0.29	-0.36	-0.28	-0.11	0.09	0.09	0.26	0.38	0.16	0.34	0.34	0.46	0.28	-0.18	-0.07	-0.32	1

ES variables	Affiliated number on the table	ES variables	Affiliated number on the table
cost_exp_usd_percont	1	lbr_particip_rate_tot	13
cost_imprt_usd_percont	2	adult_lit_rate_tot	14
custom_duti_perctotrev	3	emp_pt_percemp_t	15
emp_comp_percexpense	4	emp_wgnsale_perc_t	16
emp_agri_perctotemp	5	wageperhour_manu_usd_fixed	17
emp_indus_perctotemp	6	wageperhour_usd_fixed	18
emp_serv_perctotemp	7	productivity_pperson	19
firing_cost	8	days_not_worked	20
lbrforce_t	9	un_members_admind	21
lbr_primeduc_perc_tot	10	employees_tot_admind	22
lbr_sndeduc_perc_tot	11	trade_un_dens	23
lbr_terteduc_perc_tot	12		

(E) Strategic Asset Seeking Variables

SAS variables	airtranspfreight	hitech_exp_perc_t	internet_subs_fbrdbnd	internet_users	patent_app_nonres	patent_app_res	infra_raillines_t	infra_railwgdstransp	infra_railwpasscarried	rdspvdperc_t	rds_network_t	rnd_expend_percgdp	rnd_resempl
airtranspfreight	1												
hitech_exp_perc_t	0.3	1											
internet_subs_fbrdbnd	0.7	0.17	1										
internet_users	0.73	0.18	0.94	1									
patent_app_nonres	0.91	0.24	0.77	0.81	1								
patent_app_res	0.6	0.2	0.59	0.56	0.66	1							
infra_raillines_t	0.77	0.2	0.62	0.6	0.81	0.43	1						
infra_railwgdstransp	0.68	0.22	0.66	0.67	0.75	0.36	0.88	1					
infra_railwpasscarried	0.23	0.1	0.44	0.48	0.37	0.41	0.56	0.59	1				
rdspvdperc_t	0.23	0.24	0.08	0.09	0.04	0.09	0.07	0.03	0.06	1			
rds_network_t	0.76	0.17	0.65	0.63	0.84	0.46	0.93	0.79	0.71	0.05	1		
rnd_expend	0.41	0.39	0.3	0.32	0.32	0.39	0.21	0.14	0.08	0.38	0.21	1	

_percgdp													
rnd_resempl	0.36	0.36	0.21	0.23	0.24	0.31	0.18	0.14	0	0.35	0.16	0.89	1

(F) Institutional Variables

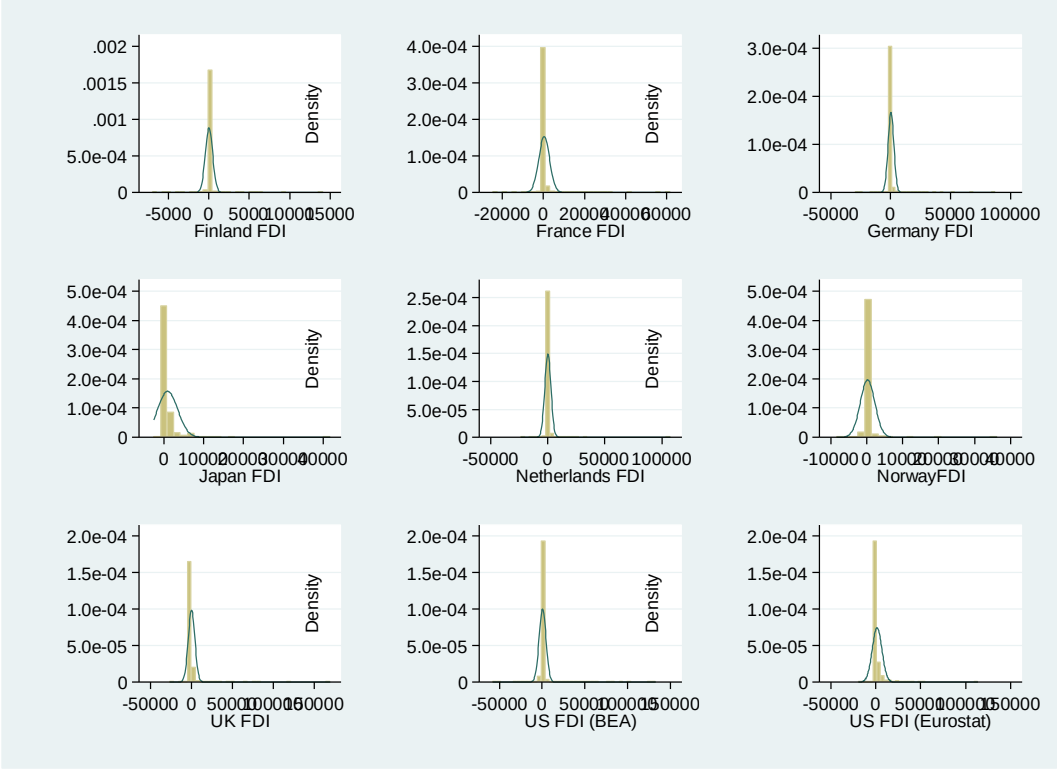
Institutional variables	FHPR	FHCL	gov_stab	socioecon_cond	invest_prof	inter_conf	exter_conf	corrup	milit_in_polit	rel_in_polit	law_order	ethnic_tens	democ_account	bureauc_qual
FHPR	1													
FHCL	0.93	1												
gov_stab	-0.01	-0.05	1											
socioecon_cond	-0.38	-0.45	0.21	1										
invest_prof	-0.42	-0.5	0.52	0.6	1									
inter_conf	-0.41	-0.45	0.36	0.52	0.45	1								
exter_conf	-0.43	-0.43	0.19	0.33	0.31	0.59	1							
corrup	-0.52	-0.54	0.01	0.51	0.22	0.47	0.39	1						
milit_in_polit	-0.61	-0.64	0.17	0.61	0.51	0.66	0.49	0.57	1					
rel_in_polit	0.03	0.04	-0.01	-0.02	-0.03	-0.02	-0.01	-0.02	-0.04	1				
law_order	-0.37	-0.42	0.31	0.62	0.43	0.72	0.4	0.62	0.64	-0.01	1			
ethnic_tens	-0.27	-0.29	0.25	0.37	0.27	0.62	0.4	0.36	0.46	-0.03	0.54	1		
democ_account	-0.81	-0.8	0.05	0.37	0.45	0.43	0.4	0.52	0.6	-0.04	0.42	0.25	1	
bureauc_qual	-0.57	-0.61	0.16	0.69	0.49	0.55	0.4	0.67	0.71	-0.03	0.66	0.35	0.61	1

Appendix 6.7: testing the normality of FDI data

Part (1): Graphical Inference

In this section we first consider the data from EUROSTAT data set. Graphs provided in below show the distribution of FDI data from EUROSTAT using Histograms. The green bell curve indicates the normal distribution bell curve. It is visible from all variables that the data is seemingly non-normally distributed. However, the graphical justification of normality is rather simplistic and in order to examine the type and degree of non-normality of data we will conduct a number of tests in the next section.

Histogram of dependent (Home Countries' FDI) variables



Skewness Kurtosis test (Home Countries' FDI) variables

Skewness/Kurtosis tests for Normality							
						joint	
Source	Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj	chi2(2)	Prob>chi2
BEA	USFDI	1.20E+04	0.00000	0.00000	.	.	.
EUROSTAT	us_fdio_l1	1.60E+03	0.00000	0.00000	.	.	.
EUROSTAT	uk_fdio_us~1	5.60E+03	0.00000	0.00000	.	.	.
EUROSTA	sweden_fdi~1	6.60E+03	0.00000	0.00000	.	.	.

T							
EUROSTAT	spain_fdio~1	903	0.00000	0.00000	.	.	0.00000
EUROSTAT	norway_fdi~1	563	0.00000	0.00000	.	.	0.00000
EUROSTAT	netherland~1	4.90E+03	0.00000	0.00000	.	.	.
EUROSTAT	japan_fdio~1	705	0.00000	0.00000	.	.	0.00000
EUROSTAT	italy_fdio~1	5.10E+03	0.00000	0.00000	.	.	.
EUROSTAT	ireland_fd~1	3.50E+03	0.00000	0.00000	.	.	.
EUROSTAT	germany_fd~1	7.90E+03	0.00000	0.00000	.	.	.
EUROSTAT	france_fdi~1	5.10E+03	0.00000	0.00000	.	.	.
EUROSTAT	finland_fd~1	5.60E+03	0.00000	0.00000	.	.	.
EUROSTAT	denmark_fd~1	3.50E+03	0.00000	0.00000	.	.	.

Part (2): Statistical testing of normality

The graphical representation of the distribution of data is helpful, but not necessarily sufficient to judge the normality of the data. Therefore, in this section we present the Shapiro-Wilk test of normality, its hypotheses, test statistic, and its results with reference to our dependent variable (net FDI flows).

For a random sample consisting of $X_1, X_2, \dots, X_n$with size n and unknown distribution function $F(x)$, the test statistic of Shapiro-Wilk test of normality is as follows:

$$\boldsymbol{W = \frac{1}{\sum_{i=1}^{n}(X_i - \bar{X})^2}\left[\sum_{i=1}^{k} a_i\left(X^{(n-i+1)} - X^{(i)}\right)\right]^2} \quad (45)$$

where	$X^{(1)} \leq X^{(2)} \leq \cdots \leq X^{(n)}$	Is the order of sample from smallest to the largest
	$\bar{X}$	Is the sample mean
	$X^{(i)}$	Denotes the ith order statistic
	$a_1, a_2, \dots, a_k$	are the Shapiro-Wilk coefficients based on the sample size n, and $k$being approximately $n/2$

The underlying assumption of Shapiro-Wilk test is that the sample is a random sample. The hypotheses are as follows:

H_0: $F(x)$ is a normal distribution function with unspecified mean and variance

H_1: $F(x)$ is non-normal

Consequently the null hypothesis is rejected at $\propto$ level of significance if the test statistic (W) is less than the value reported for the $\propto$ quantile given Shapiro-Wilk table on quantiles of Shapiro-Wilk test. In essence if we consider the computation of Pearson correlation coefficient between order statistics[40] in the sample with the scores a_i, it is possible to view the test statistic (W) as the square of a correlation coefficient which relates to what order

[40] $X^{(i)}$

statistic would be if the variable is normally distributed. As a rule of tomb, an order statistic close to 1.0 is considered as an indicator that data is normally distributed, and an order statistic far below 1.0 (close to zero) refers to non-normality in the data. The table below tabulates the results of Shapiro-Wilk tests conducted.

Shapiro-Wilk W test for normal data						
Source	Variable	Obs	W	V	z	Prob>z
BEA	US FDI	1068	0.49166	340.409	14.477	0.00000
EUROSTAT	UK FDI	1202	0.19648	599.275	15.956	0.00000
EUROSTAT	Norway FDI	548	0.23712	278.783	13.590	0.00000
EUROSTAT	Netherlands FDI	905	0.25004	431.899	14.966	0.00000
EUROSTAT	Japan FDI	523	0.40608	208.057	12.857	0.00000
EUROSTAT	Germany FDI	2653	0.22910	1181.603	18.179	0.00000
EUROSTAT	France FDI	1228	0.28803	545.018	15.733	0.00000
EUROSTAT	Finland FDI	1212	0.28803	535.017	15.678	0.00000

Table 6.19; results of Shapiro-Wilk normality tests

Considering the Shapiro-Wilk hypothesis, and decision criteria, we find that all independent variables are non-normally distributed. For further information we have conducted a Skewness/Kurtosis test available from Appendix 6.7.b.

The FDI data is based on annual net flow of FDI from the 8 home countries into 140 host countries. The net FDI flow implies that the data can be negative and hence the common method of dealing with non-normality of data in the context of time series and panel data sets which is using the logarithmic value of the indices instead of the original reported value will lead to omitting a number of observations Table below provides some information on the changes that are made in terms of number of observations if the logarithm of the independent variables is used.

Source	Variable	Obs	Mean	Std. Dev.	Min	Max
BEA	US FDI	1068	2559.172	8541.792	-26702	132749
Eurostat	UK FDI	1202	1274.58	7737.168	-25910	169686.4
Eurostat	Norway FDI	548	244.7106	2054.302	-8261.429	36330
Eurostat	Netherlands FDI	905	810.8281	4467.23	-23432.86	107462.5
Eurostat	Germany FDI	523	519.9144	3309.911	-29527.27	87284.45
Eurostat	Japan	2653	1045.105	2780.916	-2632.5	41810
Eurostat	France	1228	992.6818	4389.329	-24587.14	61824.29

Eurostat	Finland	1212	84.39261	775.2117	-5257.5	14102.22
BEA	log(US FDI)	801	6.768999	1.907347	0	11.79622
Eurostat	log(UK FDI)	925	5.276535	2.230783	0.1053606	12.04171
Eurostat	log(Norway FDI)	206	5.118516	1.912683	0.356675	10.5004
Eurostat	log(Netherlands FDI)	704	5.491997	1.913005	-0.0953102	11.5849
Eurostat	log(Germany FDI)	1648	4.206144	2.508992	-0.0953102	11.37693
Eurostat	log(Japan)	442	5.587984	2.04848	-0.0953102	10.64089
Eurostat	log(France)	938	4.702434	2.426891	-0.0953102	11.03205
Eurostat	log(Finland)	480	3.784274	1.999033	-0.0953102	9.554088

Table 6.20; the summary of the dependent variables in natural and logarithmic formats

The Shapiro-Wilk test of normality on the logarithmic independent variables still supports the evidence of non-normality of data in most cases.

Source	Variable	Obs	W	V	z	Prob>z
BEA	US FDI	1068	0.49166	340.409	14.477	0.00000
Eurostat	UK FDI	1202	0.19648	599.275	15.956	0.00000
Eurostat	Norway FDI	548	0.23712	278.783	13.590	0.00000
Eurostat	Netherlands FDI	905	0.25004	431.899	14.966	0.00000
Eurostat	Germany FDI	523	0.40608	208.057	12.857	0.00000
Eurostat	Japan	2653	0.22910	1181.603	18.179	0.00000
Eurostat	France	1228	0.28803	545.018	15.733	0.00000
Eurostat	Finland	1212	0.28803	535.017	15.678	0.00000
BEA	log(US FDI)	801	0.99447	2.849	2.569	0.00510
Eurostat	log(UK FDI)	925	0.99481	3.050	2.753	0.00295
Eurostat	log(Norway FDI)	206	0.99360	0.980	-0.047	0.51875
Eurostat	log(Netherlands FDI)	704	0.99222	3.564	3.102	0.00096
Eurostat	log(Germany FDI)	1648	0.97822	21.654	7.766	0.000000
Eurostat	log(Japan)	442	0.98142	5.593	4.115	0.00002
Eurostat	log(France)	938	0.99028	5.782	4.334	0.00001
Eurostat	log(Finland)	480	0.98696	4.229	3.460	0.00027

Table 6.21; results of Shapiro-Wilk normality tests of both natural and logarithmic dependent variables

Therefore, in order to empirically investigate the factors influencing the net FDI flows' level and composition, we will have to use statistical instruments that do not assume

normality of dependent variable. Such methods are explained and employed in the next few sections.

Appendix 6.8: Kruskal-Wallis Test the non-parametric counterpart of ANOVA

In order to examine our FDI data further, we can explore whether there are statistically significant differences in the flow of FDI over categorical variables adopting tests of variance (i.e. ANOVA and Kruskal-Wallis rank test). The most common test used for analysis of variance in this context would be ANOVA test. However, ANOVA tests' assumptions include assumption of normality, and since our FDI variables are non-normally distributed, it is not possible to use ANOVA test. The non-parametric counter part of ANOVA test is the Kruskal-Wallis rank test. At this juncture, we use the opportunity to briefly review the Kruskal-Wallis test, with the intention to provide some information with regard to the assumptions, and the mechanism based on which it tests variance. Kruskal-Wallis test is the extension of the two-sample Wilcoxen test for location to the case of k mutually independent samples from continuous populations. [Nonparametric statistical inference, Gibbons, Chakraborti (2001), pp.357]

The assumptions of Kruskal-Wallis test are as follows:

1 All samples are random samples from their respective populations.

2 In addition to independence within each sample, there is mutual independence among the various samples.

3 The measurement scale is at least ordinal.

4 Either the k population distribution functions are identical, or else some of the populations tend to yield larger values than other populations do.

Source: Conover (1999, pp.289)

Given the set of assumptions above, consider that there exist "k mutually independent random samples measured on at least one ordinal scale and drawn from any continuous distributions that are identical except for central location, as measured by, the medians M_1, M_2, M_3, …., M_k. The null hypothesis that these medians are equal" [Gibbons (1993, pp.47)]:

$$H_0 :: \mathrm{M1} = \mathrm{M2} = \mathrm{M3} = \ldots . = \mathrm{Mk}$$

$$H_A: \text{M1} \neq \text{M2} \neq \text{M3} \neq \ldots. \neq \text{Mk}$$

The alternative hypothesis is that medians are not all the same. Note that under the null hypothesis, given the assumption that k distributions are the same except for possible differences in location, all distributions are identical.

The test procedure is as follows: The observations are all pooled together and sorted in N ranks (from 1 to N sorted based on their value) and ordered in a single array while the track of the samples from which the observations came from is kept. " Note that the sample sizes need not be the same. The sample sizes are n_1,n_2,n_3, …, n_k, and the overall number of overall observations is N= n_1+n_2+…+n_k. Then the individual rank sums are generated by summing up the individual observation ranks coming from each sample, producing R_1, R_2, …, R_k as the sum of the ranks for samples 1 to k. It follows that R_i is the sum of the n_i ranks assigned to sample I and that $R_1 + R_2 + R_3 + \ldots + R_k$ = 1+2+3+ …. +N = N (N+1)/2. Under the null hypothesis, the ranks embodying the sum of R_i are the random sample of n_i of possible ranks, and therefore the average rank sums $\bar{R}_i = \frac{R_i}{n_i}$ to be equal tp each other and to the expected rank of any observation that is [N(N+1)/2]/N=(N+1)/2. The test statistic then is a function of weighted sum of squares of deviations of actual average rank sums from the expected average rank sum" [Gibbons (1993, pp.46)]. The Kruskal-Wallis test statistic is denoted by 'Q' or 'H' and is as follows:

$$\boldsymbol{H = \frac{12}{N(N+1)} \sum_{i=1}^{k} \frac{1}{n_i} \left(\bar{R}_i - \frac{n_i(N+!)}{2} \right)^2} \qquad \textbf{(46)}$$

The test is generally used for multiple comparisons of $k \geq 3$ mutually independent samples and for large sample sizes, H is approximately follows a chi square distribution with k-1 degrees of freedom. Above we briefly explained the ranking process, assumptions, null and alternative hypotheses of the Kruskal-Wallis test.[41] To evaluate our data set and determine if there are statistically significant differences in the experimental conditions we perform a statistical test of the analysis of variance (K-Wallis). The decision criteria is based on the value of chi squared reported for a given degrees of freedom (k-1) given 95% and 90% levels of confidence. The next section provides the results of K-Wallis tests performed.

[41] For a more detailed review of the test and its characteristics please review the following three core texts: Nonparametric statistical inference [Gibbons and Chakaraborti (2001)] ; Practical nonparametric statistics [Conover (1999)]; and Nonparametric statistics an Introduction [Gibbons (1993)]

Appendix 6.9: ICRG indicators and net FDI flows

	US (BEA)				US (Eurostat)				UK			
	Without Ties		With Ties		Without Ties		With Ties		Without Ties		With Ties	
ICRG components	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability
Government Stability	523.309 with 223 d.f.	0.0001	523.848 with 223 d.f.	0.0001	303.323 with 278 d.f.	0.1421	303.409 with 278 d.f.	0.1413	415.844 with 256 d.f.	0.0001	430.128 with 256 d.f.	0.0001
Socioeconomic Condition	590.420 with 219 d.f.	0.0001	591.028 with 219 d.f.	0.0001	608.915 with 306 d.f.	0.0001	609.088 with 306 d.f.	0.0001	444.263 with 272 d.f.	0.0001	459.524 with 272 d.f.	0.0001
Investment Profile	558.500 with 209 d.f.	0.0001	559.076 with 209 d.f.	0.0001	423.466 with 306 d.f.	0.0001	423.586 with 306 d.f.	0.0001	415.796 with 262 d.f.	0.0001	430.079 with 262 d.f.	0.0001
Internal Conflict	523.958 with 211 d.f.	0.0001	524.497 with 211 d.f.	0.0001	335.333 with 291 d.f.	0.0376	335.429 with 291 d.f.	0.0373	387.070 with 247 d.f.	0.0001	400.367 with 247 d.f.	0.0001
External Conflict	414.447 with 169 d.f.	0.0001	414.874 with 169 d.f.	0.0001	302.957 with 263 d.f.	0.0455	303.043 with 263 d.f.	0.0452	375.037 with 215 d.f.	0.0001	387.920 with 215 d.f.	0.0001
Corruption	488.257 with 137 d.f.	0.0001	488.760 with 137 d.f.	0.0001	403.990 with 204 d.f.	0.0001	404.105 with 204 d.f.	0.0001	326.843 with 179 d.f.	0.0001	338.070 with 179 d.f.	0.0001
Military in Politics	270.111 with 105 d.f.	0.0001	270.389 with 105 d.f.	0.0001	352.664 with 170 d.f.	0.0001	352.764 with 170 d.f.	0.0001	207.248 with 144 d.f.	0.0004	214.368 with 144 d.f.	0.0001
Religion in politics	297.377 with 107 d.f.	0.0001	297.683 with 107 d.f.	0.0001	285.664 with 166 d.f.	0.0001	285.745 with 166 d.f.	0.0001	222.852 with 143 d.f.	0.0001	230.507 with 143 d.f.	0.0001
Ethnic Tensions	299.046 with 114 d.f.	0.0001	299.354 with 114 d.f.	0.0001	219.058 with 186 d.f.	0.0489	219.120 with 186 d.f.	0.0486	261.030 with 156 d.f.	0.0001	269.996 with 156 d.f.	0.0001
Law and Order	311.053 with 126 d.f.	0.0001	311.373 with 126 d.f.	0.0001	337.545 with 188 d.f.	0.0001	337.641 with 188 d.f.	0.0001	231.801 with 163 d.f.	0.0003	239.764 with 163 d.f.	0.0001
Democratic Accountability	342.107 with 122 d.f.	0.0001	342.460 with 122 d.f.	0.0001	358.555 with 201 d.f.	0.0001	358.657 with 201 d.f.	0.0001	267.465 with 172 d.f.	0.0001	276.652 with 172 d.f.	0.0001
Bureaucratic Quality	248.815 with 76 d.f.	0.0001	249.071 with 76 d.f.	0.0001	435.272 with 127 d.f.	0.0001	435.396 with 127 d.f.	0.0001	187.914 with 111 d.f.	0.0001	194.369 with 111 d.f.	0.0001

	Germany				Netherlands				France			
	Without Ties		With Ties		Without Ties		With Ties		Without Ties		With Ties	
ICRG components	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability
Government Stability	476.728 with 331 d.f.	0.0001	488.541 with 331 d.f.	0.0001	441.773 with 212 d.f.	0.0001	456.601 with 212 d.f.	0.0001	441.836 with 236 d.f.	0.0001	450.778 with 236 d.f.	0.0001
Socioeconomic Condition	455.744 with 343 d.f.	0.0001	467.037 with 343 d.f.	0.0001	401.646 with 216 d.f.	0.0001	415.127 with 216 d.f.	0.0001	499.704 with 277 d.f.	0.0001	509.818 with 277 d.f.	0.0001
Investment Profile	541.855 with 346 d.f.	0.0001	555.281 with 346 d.f.	0.0001	389.692 with 205 d.f.	0.0001	402.772 with 205 d.f.	0.0001	477.046 with 261 d.f.	0.0001	486.702 with 261 d.f.	0.0001
Internal Conflict	498.590 with 351 d.f.	0.0001	510.945 with 351 d.f.	0.0001	376.612 with 195 d.f.	0.0001	389.252 with 195 d.f.	0.0001	447.806 with 258 d.f.	0.0001	456.869 with 258 d.f.	0.0001
External Conflict	483.535 with 310 d.f.	0.0001	495.516 with 310 d.f.	0.0001	414.265 with 165 d.f.	0.0001	428.170 with 165 d.f.	0.0001	392.456 with 221 d.f.	0.0001	400.399 with 221 d.f.	0.0001
Corruption	401.368 with 228 d.f.	0.0001	411.313 with 228 d.f.	0.0001	289.125 with 132 d.f.	0.0001	298.829 with 132 d.f.	0.0001	369.396 with 169 d.f.	0.0001	376.873 with 169 d.f.	0.0001
Military in Politics	269.120 with 211 d.f.	0.0042	275.789 with 211 d.f.	0.0018	192.975 with 96 d.f.	0.0001	199.452 with 96 d.f.	0.0001	231.276 with 133 d.f.	0.0001	235.957 with 133 d.f.	0.0001
Religion in politics	247.980 with 199 d.f.	0.0104	254.124 with 199 d.f.	0.005	208.823 with 102 d.f.	0.0001	215.832 with 102 d.f.	0.0001	230.928 with 138 d.f.	0.0001	235.602 with 138 d.f.	0.0001
Ethnic Tensions	291.453 with 218 d.f.	0.0006	298.675 with 218 d.f.	0.0002	232.724 with 112 d.f.	0.0001	240.535 with 112 d.f.	0.0001	254.859 with 145 d.f.	0.0001	260.017 with 145 d.f.	0.0001
Law and Order	302.256 with 220 d.f.	0.0002	309.746 with 220 d.f.	0.0001	218.076 with 115 d.f.	0.0001	225.396 with 115 d.f.	0.0001	269.911 with 153 d.f.	0.0001	275.374 with 153 d.f.	0.0001
Democratic Accountability	267.180 with 237 d.f.	0.0866	273.801 with 237 d.f.	0.0505	214.459 with 113 d.f.	0.0001	221.657 with 113 d.f.	0.0001	309.808 with 174 d.f.	0.0001	316.078 with 174 d.f.	0.0001
Bureaucratic Quality	262.227 with 168 d.f.	0.0001	268.725 with 168 d.f.	0.0001	169.360 with 72 d.f.	0.0001	175.044 with 72 d.f.	0.0001	183.186 with 90 d.f.	0.0001	186.893 with 90 d.f.	0.0001

	Japan				Finland				Norway			
	Without Ties		With Ties		Without Ties		With Ties		Without Ties		With Ties	
ICRG components	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability	chi-squared	probability	chi-squared with ties	probability
Government Stability	280.580 with 208 d.f.	0.0006	280.643 with 208 d.f.	0.0006	379.174 with 273 d.f.	0.0001	528.251 with 273 d.f.	0.0001	234.208 with 259 d.f.	0.8636	251.070 with 259 d.f.	0.6265
Socioeconomic Condition	271.050 with 206 d.f.	0.0016	271.111 with 206 d.f.	0.0016	411.766 with 298 d.f.	0.0001	573.657 with 298 d.f.	0.0001	279.852 with 254 d.f.	0.1272	300.000 with 254 d.f.	0.0251
Investment Profile	251.602 with 188 d.f.	0.0013	251.659 with 188 d.f.	0.0013	415.891 with 284 d.f.	0.0001	579.403 with 284 d.f.	0.0001	209.402 with 236 d.f.	0.893	224.478 with 236 d.f.	0.6944
Internal Conflict	239.355 with 183 d.f.	0.0032	239.409 with 183 d.f.	0.0032	335.985 with 277 d.f.	0.0088	468.082 with 277 d.f.	0.0001	207.568 with 243 d.f.	0.9518	222.512 with 243 d.f.	0.8229
External Conflict	265.272 with 171 d.f.	0.0001	265.332 with 171 d.f.	0.0001	337.570 with 242 d.f.	0.0001	470.290 with 242 d.f.	0.0001	224.525 with 235 d.f.	0.6771	240.690 with 235 d.f.	0.3855
Corruption	186.451 with 147 d.f.	0.0154	186.493 with 147 d.f.	0.0153	336.380 with 194 d.f.	0.0001	468.633 with 194 d.f.	0.0001	201.907 with 196 d.f.	0.3711	216.443 with 196 d.f.	0.151
Military in Politics	152.392 with 99 d.f.	0.0005	152.426 with 99 d.f.	0.0005	179.082 with 158 d.f.	0.1202	249.490 with 158 d.f.	0.0001	130.914 with 151 d.f.	0.8795	140.340 with 151 d.f.	0.7224
Religion in politics	160.458 with 106 d.f.	0.0005	160.494 with 106 d.f.	0.0005	164.976 with 155 d.f.	0.2767	229.839 with 155 d.f.	0.0001	139.489 with 135 d.f.	0.378	149.532 with 135 d.f.	0.1855
Ethnic Tensions	119.565 with 113 d.f.	0.3182	119.592 with 113 d.f.	0.3176	212.608 with 168 d.f.	0.0112	296.197 with 168 d.f.	0.0001	149.937 with 160 d.f.	0.7045	160.731 with 160 d.f.	0.4689
Law and Order	142.361 with 119 d.f.	0.0711	142.393 with 119 d.f.	0.0708	250.723 with 175 d.f.	0.0002	349.298 with 175 d.f.	0.0001	160.911 with 167 d.f.	0.6182	172.496 with 167 d.f.	0.3692
Democratic Accountability	184.475 with 131 d.f.	0.0015	184.516 with 131 d.f.	0.0014	187.001 with 197 d.f.	0.684	260.522 with 197 d.f.	0.0016	151.418 with 178 d.f.	0.9265	162.319 with 178 d.f.	0.7942
Bureaucratic Quality	112.376 with 80 d.f.	0.0099	112.402 with 80 d.f.	0.0099	191.947 with 120 d.f.	0.0001	267.414 with 120 d.f.	0.0001	123.661 with 130 d.f.	0.6399	132.564 with 130 d.f.	0.421

Appendix 6.10: Economic Activity

Classification based on BEA & ISIC		Eurostat		Country							
Economic Activity	Dummy	Economic Activity	Dummy	US (BEA)	UK	Japan	Germany	Netherlands	France	Finland	Norway
Total (All Industries)	1	Total	1	2559.1723	1274.58	1045.105	519.9144	810.8281	992.6818	84.39261	244.7106
Mining & Utilities	2	Agriculture and Fishing	2	45.078022	-5.73764		0.715753	1.678138	0.818452	-1.69753	
Total Manufacturing	3	Mining and Quarrying	3	341.82673	266.5961		13.35856	50.66673	6.162191	-0.6291	
Food	4	Manufacturing	4	40.443362	647.9663	465.6829	341.1105	708.8371	157.3445	94.60981	63.75
Primary & Fabricated metals	5	Electricity, Gas and Water	5	7.652815	75.92966		36.96167	13.99759	23.91219	-1.09269	175
Chemicals	6	Construction	6	81.678038	16.35799		-0.18567	12.45051	11.92683	2.66297	
Industrial Machinery	7	Trade and Repairs	7	6.2872596	240.9393		15.48372	99.02272	113.2921	8.885163	41.25
Electrical Equipment	8	Hotels and Restaurants	8	64.727085	8.5055		0.290308	-0.41742	7.595705	0	0
Transportation Equipment	9	Transports, Storage & Communication	9	27.681586	313.6718		124.8166	27.56779	164.9109	15.04183	8.125
Other Manufacturing	10	Financial Intermediation	10	98.930876	752.0675		366.9626	382.9579	396.9281	53.10794	8.75
Wholesale	11	Real Estate, Renting & Business Activity	11	94.493278	133.1427		541.1328	86.50859	1877.945	23.60945	108.125
Depository Institutions	12	Computer & Related Activities	12	84.302817	23.56179		12.92792	39.40072	31.56803	3.637864	0
Finance	13	Research & Development	13	1740.6898	3.659213		0.583631	-1.36283	0.839371	0	
Services	14	Other Business Activities	14	183.79141	69.66507		328.3246	35.31717	940.0146	6.345776	45
Other Industries	15			335.21516							
Total				440.05382	444.8243	895.52398	258.6489	247.5662	388.8163	33.1208	239.7094
chi-squared =				615.933 with 14 d.f.	952.798 with 13 d.f.	38.779 with 1 d.f.	580.281 with 13 d.f.	652.131 with 13 d.f.	882.127 with 13 d.f.	134.739 with 13 d.f.	5.029 with 9 d.f.
probability =				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.8317
chi-squared with ties =				616.567 with 14 d.f.	985.688 with 13 d.f.	38.787 with 1 d.f.	594.995 with 13 d.f.	673.910 with 13 d.f.	899.967 with 13 d.f.	187.740 with 13 d.f.	5.413 with 9 d.f.
probability =				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.7969

Appendix 7.1: Pairwise correlation of the independent variables used in the empirical exercise

Table below shows the pairwise correlation of the independent variables without any manipulations. It is possible to observe a number of cases where several explanatory variables are considerably correlated with one another. Although the Quantile Regression method does not assume explicitly restrictive properties in terms of correlation between covariates, in this research we try to reduce the correlation between the covariates that are considerably correlated, in order to avoid high level of multicollinearity in the sample.

	lgdp	lprod_elec	linterestRL	lwageperhour_usd_fixed	ltxinctot	lairfreight	lrndexp	ltradepgdp	lstktrdtot_percgdp	lemp_comp	FHPR	FHCL	gov_stab	law_order	bureauc_qual	corrup
lgdp	1															
lprod_elec	0.94	1														
linterestRL	-0.36	-0.34	1													
lwageph	0.42	0.38	-0.55	1												
ltxinctot	0.38	0.33	-0.34	0.61	1											
lairfreight	0.73	0.66	-0.39	0.49	0.45	1										
lrndexp	0.49	0.51	-0.48	0.75	0.3	0.43	1									
ltradepgdp	-0.21	-0.19	-0.13	0.04	0.02	-0.03	0.12	1								
lstktrdtot_percgdp	0.61	0.61	-0.55	0.58	0.37	0.66	0.51	0.03	1							
lemp_comp	-0.51	-0.53	0.1	-0.36	-0.14	-0.25	-0.4	0.08	-0.33	1						

FHPR	-0.22	-0.27	0.19	-0.63	-0.23	-0.19	-0.46	-0.16	-0.2	0.37	1					
FHCL	-0.2	-0.26	0.26	-0.69	-0.25	-0.21	-0.49	-0.23	-0.21	0.37	0.93	1				
gov_stab	0.1	0.12	-0.24	0.1	0.01	0.14	0.05	0.18	0.16	-0.07	-0.01	-0.05	1			
law_order	0.37	0.42	-0.47	0.67	0.28	0.36	0.62	0.2	0.43	-0.33	-0.37	-0.42	0.31	1		
bureauc_qual	0.49	0.52	-0.52	0.85	0.46	0.54	0.65	0.2	0.54	-0.4	-0.57	-0.61	0.16	0.66	1	

Table below shows the correlations of covariates where the highly correlated variables are orthogonalized. The orthogonalization allows us to use the same variables without suffering from sever multicollinearity in the sample.

	lgdp	Olprod_elec	linterestRL	Olwageph	ltxinctot	Olairfreight	lrndexp	ltradepgdp	Olstktrdtot	Olemp_comp	FHPR	FHCL	gov_stab	law_order	bureauc_qual	corrup
lgdp	1															
Olprod_elec	0	1														
linterestRL	-0.36	0.01	1													
Olwageph	0.12	0.02	-0.08	1												
ltxinctot	0.38	-0.1	-0.34	0.09	1											
Olairfreight	0	-0.07	-0.23	0.18	0.29	1										
lrndexp	0.49	0.02	-0.48	0.25	0.3	0.2	1									
ltradepgdp	-0.21	0.21	-0.13	-0.28	0.02	0.17	0.12	1								
Olstktrdtot	0	0.17	-0.49	0.22	0.2	0.42	0.34	0.38	1							
Olemp_comp	0	-0.18	-0.08	-0.19	0.09	0.15	-0.16	-0.08	-0.05	1						

FHPR	-0.22	-0.17	0.19	-0.25	-0.23	-0.04	-0.46	-0.16	-0.2	0.31	1					
FHCL	-0.2	-0.17	0.26	-0.22	-0.25	-0.08	-0.49	-0.23	-0.24	0.3	0.93	1				
gov_stab	0.1	0.04	-0.24	-0.12	0.01	0.08	0.05	0.18	0.25	-0.06	-0.01	-0.05	1			
law_order	0.37	0.21	-0.47	0.12	0.28	0.19	0.62	0.2	0.42	-0.23	-0.37	-0.42	0.31	1		
bureauc_qual	0.49	0.19	-0.52	0.26	0.46	0.3	0.65	0.2	0.46	-0.19	-0.57	-0.61	0.16	0.66	1	
corrup	0.26	0.13	-0.26	0.29	0.3	0.26	0.56	0.13	0.35	-0.21	-0.52	-0.54	0.01	0.62	0.67	1

Appendix 7.2: Quantiles, Quantile Functions, and properties of Quantile functions

In order to describe the distribution of a random variable $Y = \{y_1, y_2, \dots, y_n\}$, it is possible to consider its Cumulative Distribution Function (CDF) which refers to; for each value of y, the proportion of the population for which $Y \leq y$. CDF can also be used to calculate the proportion of population for any range of y. For a continuous random variable "Y", it is possible to define its probability density function as follows: $P(a \leq Y \leq b) = \int_{y=a}^{b} f_Y$ for given choices of a and b.[42] The empirical CDF for $Y = \{y_1, y_2, \dots, y_n\}$ is denoted by; $\hat{F}(y)$, and refers to the proportion of the sample values less than or equal to y. Now consider two countries of USA and Germany. Supposing the net FDI flows of USA is more than Germany by c amount, it is possible to explore the relationship between the distributions by a shift in location as follows; $F^{USA} = F^{Germany}(y - c)$. Similarly if the difference between the distributions is of both location (suppose c) and scale (suppose b), it is possible to explore the relationship between the distributions by writing; $F^{USA} = F^{Germany}(by - c)$ for constants $b$and $c > 0$. However, if the distributions become more asymmetrical, the more complex summery measures are needed (in contrast to conditional mean functions) to accommodate statistical inference. This can be accomplished by considering quantile functions. Considering CDF (denoted by F), the pth quantile of distribution denoted by $Q^{(p)}(F)$ is the value of y such that $F(y) = p$, or in other words it is the value of inverse of the CDF at p. It follows that p is the proportion of population with an attribute below $Q^{(p)}$. In a formal manner, Hao and Naiman (2007) define the pth quantile function of F, $Q^{(p)}(F)$, as the minimum set of values y such that $F(y) \geq p$. Furthermore authors define the empirical pth sample quantile as; $\hat{Q}^{(p)}(F) = Q^{(p)}(\hat{F})$.

In section 6.4 we briefly discussed the order statistics procedure. The sample quantiles are closely related to the order statistics as the sample $Y = \{y_1, y_2, \dots, y_n\}$, is ranked and the data values are ordered[43] ($y_1 \leq y_2 \leq \cdots \leq y_n$). For a sample $Y = \{y_1, y_2, \dots, y_n\}$ with size n, the (i/n)th sample quantile is given by $y_{(i)}$.[44]

[42] It is established that $f(y) = F'(y)$.
[43] if there are repeated values, they are reported multiple times
[44] For instance for a sample including 100 observations, they are ordered and the (10/100)th sample quantile, that is 10th percentile, is given by $\hat{Q}^{(.1)} = y_{10}$.

For a large sample with probability density function f and quantile function $Q^{(p)}$, the distribution of $\hat{Q}^{(p)}$ is approximately normal with mean $Q^{(p)}$ and variance $\frac{p(1-p)}{n.f(Q^{(p)})^2}$. The two distributional measures of scale and shape are determined as follows: First, in quantile based measures of central location instead of mean, median or .5 quantile is used. The scale in mean based measures of central location is measured using standard deviation. In quantile based approach, the spread of distribution is in contrast to the latter measured using the quantile based scale measures (QSC) at selected p using $QSC^{(p)} = Q^{(1-p)} - Q^{P}$, for $p < .5$. Second, the measure of shape, skewness is determined based on the quantile based measure of skewness (QSK) as follows; $QSK^{(p)} = (Q^{(1-p)} - Q^{(.5)})/(Q^{(.5)} - Q^{(p)}) - 1$ for $p < .5$, in contrast to the mean based approach that considers the cubic function of deviations from the mean.

	Mean based measures	Quantile based measures
Measure of Central Location	mean	Median or .5th quantile
Mean	μ: mean	Mean: $Q^{(p)}$
Variance	Variance = $E(X^2) - \mu^2$	variance $\frac{p(1-p)}{n.f(Q^{(p)})^2}$
Measure of Scale	δ: Standard Deviation from the mean obtained from $\sqrt{E(X^2) - \mu^2}$	quantile based scale measures (QSC) at selected p using $QSC^{(p)} = Q^{(1-p)} - Q^{P}$, for $p < .5$.
Measure of shape: Skewness	Skewness=$E\left[\left(\frac{X-\mu}{\delta}\right)^3\right] = \mu^3/\delta^3$	quantile based measure of skewness (QSK) as follows; $QSK^{(p)} = (Q^{(1-p)} - Q^{(.5)})/(Q^{(.5)} - Q^{(p)}) - 1$ for $p < .5$,

Table 7.1; Comparison between mean based measures and quantile based measures

Given the information above it is possible to comment on some general properties of the quantile based approach. The use of quantiles allow one to adopt a measure of central location (median) that is far less sensitive (or rather insensitive) to the outliers (fat tails), which provides a great advantage to quantile regression models in comparison to the conditional mean models. Furthermore, it is possible to show that the "influence of

individual data points is bounded for sample quantiles and is unbounded for the sample mean" (Hao and Naiman, 2007, p.70). For further reading on the properties of quantile based measures and quantile functions please review Hao and Naiman (2007) and Koenker and Basset (1978). In the next section we have put forward a brief review of the mechanisms and processes that embody the quantile regression analysis with the intention to provide the reader with some information regarding the empirical approach that is conducted in this chapter.

Appendix 7.3: Quantile Regression Models

In order to model the relationship between dependent variable and the independent variables, we review the regression type models. Based on the measure of central location and other properties of conditional mean functions and quantile based functions, the regression models that are based on them differ. Considering the Linear Regression Model (LRM) as the regression model that uses the conditional mean function, and the Quantile Regression model (QRM) that uses quantile function it is possible to observe that both regression models, at least in the context of this research explore the relationship between the dependent variable and the explanatory variables. We discussed that the LRM as a regression model using conditional mean function, models the conditional mean of dependent variable without taking into account the full conditional distributional characteristics of the dependent variable and proposed QRM as a type of regression model that allows consideration of full distribution at different quantiles. Furthermore, we discussed a number of advantages that QRMs have in comparison to the LRMs. Below we discuss the machinery of these models and focus on QRMs.

A standard linear regression model has the following form:

$$\boldsymbol{y_i = \beta_0 + \beta_1 x_i + \varepsilon_i} \qquad (47)$$

Where the error term ε_i is assumed to be identically, independently and normally distributed (I.I.N) with zero mean, $E(\varepsilon) = 0$, and variance[45] of δ^2. It follows that underlying assumptions are $E(x|\varepsilon) = E(\varepsilon) = 0$ and $Cov(x|\varepsilon) = E(x\varepsilon) = 0$. Following a standard method of moments approach and considering the assumption $E(\varepsilon) = 0$, it is

[45] Homoscedasticity assumption which dictates $Var(y|x) = constant = \delta^2$. The deviation from the homoscedasticity is treatable in the context of LRM by allowing for simultaneous modelling of conditional mean and scale.

possible to write $E(y_i|x_i) = \beta_0 + \beta_1 x_i$. The linear regression based on the model above attempts to solve the following minimization problem: $Min \sum_i (y_i - (\beta_0 + \beta_1 x_i))^2$ which is the sum of square vertical distances of x and y from the fitted line ($y = \hat{\beta}_0 + \hat{\beta}_1 x$). Therefore the estimation of the distance between the data points and the fitted lines is done using mean of distribution in a way that minimises the average squared distance over the population. The derived coefficients are as follows:

$$\widehat{\boldsymbol{\beta}}_{\boldsymbol{0}} = \bar{\boldsymbol{y}} - \widehat{\boldsymbol{\beta}}_{\boldsymbol{1}}\boldsymbol{x} \quad (48)$$

$$\widehat{\boldsymbol{\beta}}_{\boldsymbol{1}} = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sum_{i=1}^{n}(x_i - \bar{x})^2} \quad (49)$$

In contrast to LRM that considers the effect of the explanatory variables on the conditional mean of the distribution of dependent variable, the general QRM estimates the differential effect of explanatory variables on the different quantiles of the conditional distribution of the dependent variable. The quantile regression model can be expressed in the following form:

$$\boldsymbol{y_i} = \boldsymbol{\beta_0^{(p)}} + \boldsymbol{\beta_1^{(p)}}\boldsymbol{x_i} + \boldsymbol{\varepsilon_i^{(p)}} \quad (50)$$

where $0 < p < 1$ is the proportion of population that has values less than the quantile at p. For QRM the pth conditional quantile given x_i, is $Q^{(p)}(y_i|x_i) = \beta_0^{(p)} + \beta_1^{(p)} x_i$ and for different values of quantile p, the error terms are related and differ by a constant given x_i. The quantile regression estimation in contrast to LR estimation measures the data points distances to the fitted line using a weighted sum of vertical distances by applying the weights, p and $1 - p$, to the points above and below the fitted line, respectively. Therefore pth quantile regression estimators $\beta_0^{(p)}$and $\beta_1^{(p)}$ will be the values that minimise the weighted sum distance between the fitted values $\hat{y}_i = \hat{\beta}_0^{(p)} + \hat{\beta}_1^{(p)} x_i$ and the y_i using the discussed weights. This is accomplished by choosing pth quantile regression estimators $\beta_0^{(p)}$and $\beta_1^{(p)}$as the solutions to the following minimisation problem:

$$\sum_{i=1}^{n} \boldsymbol{d_p}(\boldsymbol{y_i}, \hat{\boldsymbol{y}}_i) = \boldsymbol{p}.\sum_{y_i \geq \boldsymbol{\beta_0^{(p)}} + \boldsymbol{\beta_1^{(p)}} x_i} |\boldsymbol{y_i} - \boldsymbol{\beta_0^{(p)}} - \boldsymbol{\beta_1^{(p)}}\boldsymbol{x_i}| + (\boldsymbol{1} - \boldsymbol{p}) \sum_{y_i \leq \boldsymbol{\beta_0^{(p)}} + \boldsymbol{\beta_1^{(p)}} x_i} |\boldsymbol{y_i} - \boldsymbol{\beta_0^{(p)}} - \boldsymbol{\beta_1^{(p)}}\boldsymbol{x_i}| \quad (51)$$

Appendix 7.4: Quantile Regression Estimation and Inference

In this section we discuss the estimation method, standard errors, confidence interval, and hypothesis testing process considered for the empirical investigations provided in the following sections.

It is possible to adopt either an asymptotic procedure, or a Monte-Carlo estimation method for estimation of quantile regression models. However, since the assumptions of asymptotic procedure are more extensive and often violated, and if met, the solution for the standard error of the constructed scale and skewness shift for asymptotic procedure prove to be more complicated than the Monte-Carlo estimation method, we have considered the use of a Monte-Carlo estimation method (Bootstrap method). In particular, we use the Bootstrap which is a Monte-Carlo Estimation method that estimates the sampling distribution of a parameter estimate using the sample size n from the population. The Bootstrap estimation method however, differs from the Monte-Carlo estimation method. The latter assumes a known distribution and draws samples of size n from that distribution to estimate parameter estimates. The empirical distribution of the parameter estimates in turn are used to approximate the desired sampling distribution. The Bootstrap method in contrast does not assume any hypothetical distribution at the outset, and instead draws sample of size n (they are also referred to as bootstrap samples) from the data set (with replacement). The number of resamples is generally chosen to be between "50 to 200 for the estimation of standard deviation and 500 to 2000 for the estimation of confidence interval". (Hao and Naiman, 2007)

In order to estimate standard deviation it is possible to compute the value of $\hat{Q}_k^{(.25)}$ using kth bootstrap sample, $\tilde{y}_1^{(k)}, \tilde{y}_2^{(k)}, \dots \tilde{y}_n^{(k)}$and repeating it for K=200 times to produce $\hat{Q}_k^{(.25)}, k = 1, \dots., K$, which is considered as drawn from the sampling distribution of $\hat{Q}_k^{(.25)}$. The desired standard deviation then can be computed using the standard deviation of $\hat{Q}_k^{(.25)}, k = 1, \dots., K$. In producing the confidence intervals variety of approaches are used. For instance a common approach uses the estimate of $\hat{Q}_k^{(.25)}$ from the sample along with the estimated standard error and normal approximation to give $100(1-\propto)\%$ confidence interval of the form $\hat{Q}_k^{(.25)} \mp z_{\frac{\propto}{2}}.standard\ deviation$. For more information on different methods of estimating standard deviation and confidence interval please refer to Hao and

Naiman (2007). Furthermore, an extensive review of the mathematical discussion on the quantile regressions and the estimation of the standard deviation and confidence intervals is available from Koenker and Basset (1978).

Appendix 7.5: Discussion and results of the regression analyses of aggregated FDI using models 2.1-2.3

The models 2.1, 2.2 and 2.3 discussed in the next few pages are similar to the first set of models (1.1-1.3) with the distinction that they entail an independent variable that reflects the host countries level of investment in research and development (lrndexp). This variable is one of the independent variables that reflect the SAS motives of firms from investment aboard. However, it is not exclusively considered due to low number of observations. Since we consider the host countries' level of expenditure on research and development to influence SAS FDI considerably, the replicated models entailing the 'expenditure on R&D' independent variable are provided and discussed.

The three regressions provided in table 7.10, cover the LMEs (US and UK) total FDI flows from 1990-2009. Of firms' motives, the effect of Market seeking motives reflected by market size (GDP) shows a positive significant effect on both LMEs' FDI flows for the period, across all models. This suggests Market Seeking (MS) behaviour of firms from LMEs.

Considering the effect of Resource seeking motives reflected by production of electricity we find a negative effect reported for US in all models while the effect is only reported to be significant in model 1.3. Furthermore, the effect of RS motives on UK FDI is positive and insignificant across models. Therefore, the evidence suggests that existence of resource production entities in the host countries affect LMEs FDI in an insignificant manner, while the effect is negative in case of US FDI and positive in case of UK FDI.

Of ES variables, *Wage per hour* has a positive and insignificant effect on UK FDI, while a negative insignificant effect is reported in case of US FDI, indicating that US firms are more sensitive to the level of wages in the host markets. The effect of Strategic Asset Seeking (SAS) motives on FDI activity is captured through the consideration of the effect of the *quality of transportation* in the host countries (*lairfrieght*) on total FDI activity. The results indicate presence of a positive and significant effect of SAS motives on UK FDI

while a positive insignificant effect is reported in case of US FDI. The latter indicates that the quality of transportation and in general the host countries' infrastructure has a positive effect on LME firms' FDI. The second SAS variable, *expenditure on R&D*, has a positive and insignificant effect on US FDI in models 2.1 and 2.2, while an insignificant and negative effect is observed in case of UK FDI, indicating a greater extent of centralization in British firms in comparison to their American counterparts.

Of macroeconomic variables the effects of host countries' *interest rate lending* on US FDI is insignificant and negative, while a positive insignificant effect is reported in case of British firms . The second macroeconomic variable, *taxes on income and profit*, shows a positive effect on LMEs' FDI flows. The first of the trade related variables, *trade as a percentage of GDP*, demonstrates a positive effect on LMEs' FDI activity with significant effects reported only in case of US FDI (models 2.1 and 2.2). The second trade related variable, *stock traded as a percentage of GDP*, similarly shows a positive effect on LMEs' FDI with significant results reported in case of UK FDI.

The effect of civil liberties on LMEs' FDI is negative and significant, across models 2.1-2.3, empirically confirming our theoretical finding, and in line with hypothesis (1) that an increase in the level of civil liberties in the host countries, leads to a decrease in aggregate (total) FDI from LMEs, providing further support for findings of Coates et al. . Considering the effect of political rights on LMEs' FDI, we find a positive effect reported for both countries, with significant results reported only for US FDI. This is in line with hypothesis (2) provided in section 7.2.3. Therefore we find that higher political rights in the host countries positively affect LMEs' net FDI flows. Our finding supports the view of Jensen (2003), Addison and Heshmati (2003), Sethi, Guisinger et al. (2003), Wheeler and Mody (1992) and Adam and Filippaios (2007) who reported a positive relationship between the level of political liberties of the host countries on the FDI, and in contrast to the findings of Asiedu (2001) and Li and Resnick (2003).

Of institutional independent variables, the effect of *government stability* on LMEs' FDI is positive, with significant effect reported only in case of UK FDI. The effect of *bureaucratic quality* on LMEs' FDI is positive with significant results reported only for British FDI. The effect of *law and order* on LMEs' FDI however, varies from a positive significant effect reported for US FDI, to a negative insignificant effect reported for UK FDI.

Table 7.10		Estimation of Determinants of LMEs' FDI (Total FDI)					
		Model 2.1		Model 2.2		Model 2.3	
Variable name	STATA label	US	UK	US	UK	US	UK
GDP	lgdp	0.946***	0.623***	1.034***	0.956***	1.210***	1.149***
		(0.173)	(0.107)	(0.216)	(0.178)	(0.242)	(0.235)
Production of Electricity	Olprod_elec	-0.568*	0.130	-0.515**	-0.050	-0.442*	0.307
		(0.331)	(0.200)	(0.236)	(0.326)	(0.226)	(0.241)
Interest rate lending	lintrstRL	-0.396	-0.170	-0.115	0.016	0.400	0.310
		(0.329)	(0.231)	(0.281)	(0.262)	(0.347)	(0.246)
Wage per hour	Olwageph	0.047	0.157	-0.112	0.062	-0.182	0.146
		(0.214)	(0.146)	(0.222)	(0.244)	(0.276)	(0.121)
Taxes on income (total)	ltxinctot	0.813**	1.145***	0.748	0.368	0.641*	-0.030
		(0.376)	(0.248)	(0.525)	(0.385)	(0.326)	(0.438)
Air freight	Olairfreight	0.255	0.603***	0.301	0.643***	0.421***	0.569***
		(0.169)	(0.145)	(0.276)	(0.146)	(0.153)	(0.135)
Expenditure on research & Development	lrndexp	0.298	0.145	0.223	-0.080	-0.295	-0.421
		(0.232)	(0.264)	(0.263)	(0.260)	(0.494)	(0.319)
Trade percentage of GDP	ltradepgdp	0.454*	0.010	0.850*	0.470	0.674	0.779**
		(0.248)	(0.289)	(0.446)	(0.399)	(0.475)	(0.365)
Stock traded (total)	Olstktrdtot	0.230	0.406*	0.219	0.485**	0.267	0.256
		(0.342)	(0.222)	(0.439)	(0.214)	(0.255)	(0.177)
Political Rights	FHPR			0.489*	0.361	0.407***	0.157
				(0.255)	(0.237)	(0.137)	(0.208)
Civil Liberties	FHCL			-0.624*	-0.769**	-0.584***	-0.548**
				(0.326)	(0.298)	(0.171)	(0.273)
Government Stability	gov_stab					0.053	0.164*
						(0.072)	(0.090)
Law & Order	law_order					0.345*	-0.127
						(0.181)	(0.111)
Bureaucratic Quality	bureauc_qual					0.401	0.769***
						(0.349)	(0.252)
Constant	_cons	-22.147***	-14.340***	-25.958***	-21.858***	-33.996***	-30.834***
		(6.411)	(3.928)	(6.762)	(5.442)	(8.358)	(7.590)

N	227.000	277.000	223.000	269.000	223	226
Pseudo R2	0.2854	0.366	0.32	0.3935	0.3715	0.4178

Note: t-statistics are provided in parentheses.
Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10
Source: Author's estimations in STATA

The three regressions provided in table 7.11, cover the CMEs (Germany; Netherlands; France; and Japan) total FDI flows from 1990-2009. Of firms' motives, the effect of Market seeking motives reflected by market size (GDP) shows a positive significant effect on all CMEs' FDI flows for the period, across all models. Thus the evidence suggests a significant Market Seeking (MS) behaviour in CMES' FDI activity, similar to that observed in case of LMEs. Considering the effect of Resource seeking motives reflected by production of electricity we find a negative and significant effect on CMEs' FDI across all models. Therefore, we find that existence of resource production entities in the host markets affects the FDI from CMEs in a significant manner, suggesting a strong Resource Seeking behaviour in CMEs FDI.

Of ES independent variables, *wage per hour* shows an overall positive insignificant effect on CMEs' FDI. Of SAS independent variables, the effect of quality of transportation reflected by *air freight* is negative and insignificant on German FDI and Dutch FDI. The effect of *air freight* on French FDI is negative and significant, while in contrast we observed a positive and significant effect of *air freight* on Japanese FDI (except model 2.1). Interestingly the findings of analysis of results of the effect of *expenditure on R&D* on CMEs' FDI confirms our arguments on structure of MNEs (centralised versus decentralised) and consequently underlines the effect of the differences in the way CMEs coordinate their activities with respect of R&D and production. In particular we observe that French FDI is affected by *expenditure on R&D* in a positive and significant manner, while quality of infrastructure has a negative and significant effect of French FDI, indicating a more decentralised structure of French firms in comparison to other CMEs, in which R&D activities are relocated to host countries where expenditure on R&D is higher, thus demonstrating a mixed SAS- ES type behaviour of French firms abroad when aggregate FDI flows are considered. This type of behaviour is observed in a less significant manner in German firms indicating a lower degree of decentralisation with respect to R&D activities. In contrast to French and German firms, the behaviour of Japanese firms demonstrate a centralised structure in which production activities are mainly allocated to

affiliates abroad whilst the R&D activities are mainly conducted at the head quarters. This effect is much weaker in case of Dutch FDI. Considering our initial arguments in favour of using disaggregated FDI flows in section 7.2.3, we claimed that the use of disaggregated data enables one to provide detailed information on the effect of determinants of FDI flows in case of each industry/sector. Consequently we will revisit the findings of this section in section 7.3.2 in order to compare the effects observed in this section with those provided from a sectoral analysis in order to investigate whether such considerations provide better understanding of the forces that affect FDI flows.

Of macroeconomic independent variables, the effect of *interest rate lending* on CMEs' aggregate FDI flows, we find an overall insignificant effect on FDI flows from Germany and Japan. The effect of *interest rate lending* on Dutch and French FDI is positive and significant. The overall effect of second macroeconomic variable, *taxes on income and profit percentage of total taxes*, is insignificant on German, Dutch and French FDI while a positive significant effect is reported in case of Japanese FDI. Considering the trade related variable, we find *trade as a percentage of GDP*, to have an overall positive and significant effect on all CMEs' FDI. The second trade related variable, *stock traded as a percentage of GDP*, has a positive and significant effect on French and Dutch FDI while the effects reported on German and Japanese FDI are insignificant.

The effect of the host countries' level of civil liberties on FDI is negative and significant in case of all CMEs. The effects of civil liberties on CMEs FDI is similar to that observed for LMEs, and in line with hypothesis (1) provided in section 7.2.3. Therefore our findings support the view of Coates et al. (2010) and in contrast to studies that have found a positive relationship between the level of civil liberties and FDI including Coughlin, et al.(1991) and those who have found a positive insignificant relationship such as Blanton and Blanton (2007).

The effect of the host countries' level of political rights on FDI is positive in case of French and Japanese FDI with significant results reported for Japan. This is in line with hypothesis (2) provided in section 7.2.3. Our findings thus are in support of the view of Jensen (2003), Addison and Heshmati (2003), Sethi, Guisinger et al. (2003), Wheeler and Mody (1992) and Adam and Filippaios (2007) who reported a positive relationship between the level of political liberties of the host countries on the FDI. Furthermore, the effect of political rights on German and Dutch FDI is insignificant and negative across

models, indicating that German and Dutch firms are more prone to invest in host countries' with lower level of political rights. This is in support of the findings of Asiedu (2001) and Li and Resnick (2003).

Of institutional independent variables, the effect of *government stability* on German and Dutch FDI is positive and insignificant, while in contrast a negative effect is observed for French and Japanese FDI with significant results reported for French FDI. The effect of the second institutional variable, *bureaucratic quality* is positive and significant on Japanese FDI and negative and significant in case of French FDI. Finally, the effect of the third institutional variable, *law and order*, is positive and significant on German and French FDI, while it has a positive and insignificant effect on Dutch FDI and a negative insignificant effect on Japanese FDI.

Table 7.11		Estimation of Determinants of CMEs' FDI (Total FDI)											
		Model 2.1				Model 2.2				Model 2.3			
Variable name	STATA label	Germany	Netherlands	France	Japan	Germany	Netherlands	France	Japan	Germany	Netherlands	France	Japan
GDP	lgdp	0.861***	0.738***	1.122***	1.178***	1.289***	1.206***	1.221***	0.995***	1.283***	1.348***	1.163***	1.092***
		(0.112)	(0.137)	(0.118)	(0.168)	(0.130)	(0.123)	(0.120)	(0.160)	(0.124)	(0.187)	(0.128)	(0.302)
Production of Electricity	Olprod_elec	-0.664***	-1.039***	-0.904***	-0.295	-0.427***	-0.775***	-0.796***	-0.580**	-0.518**	-0.548**	-0.942***	-0.303
		(0.221)	(0.233)	(0.210)	(0.200)	(0.146)	(0.221)	(0.195)	(0.293)	(0.241)	(0.220)	(0.178)	(0.435)
Interest rate lending	lintrstRL	-0.171	0.110	0.290	-0.129	0.048	0.400**	0.444***	-0.073	0.128	0.621***	0.427**	0.120
		(0.186)	(0.165)	(0.267)	(0.305)	(0.161)	(0.173)	(0.128)	(0.384)	(0.181)	(0.197)	(0.184)	(0.354)
Wage per hour	Olwageph	0.194	0.141	0.250	0.319	0.131	0.152	0.122	-0.025	0.036	0.172	0.036	0.112
		(0.177)	(0.102)	(0.189)	(0.233)	(0.130)	(0.174)	(0.135)	(0.205)	(0.120)	(0.109)	(0.132)	(0.249)
Taxes on income (total)	ltxinctot	0.583**	0.596	0.406**	0.382*	-0.302	-0.393	-0.070	0.619*	-0.284	-0.312	0.190	0.307
		(0.240)	(0.549)	(0.170)	(0.215)	(0.228)	(0.421)	(0.241)	(0.366)	(0.248)	(0.343)	(0.238)	(0.377)
Air freight	Olairfreight	-0.423***	-0.233	-0.575***	0.409***	-0.122	0.042	-0.277***	0.543*	-0.173	0.041	-0.174	0.527*
		(0.115)	(0.155)	(0.090)	(0.125)	(0.102)	(0.116)	(0.094)	(0.282)	(0.149)	(0.156)	(0.150)	(0.293)
Expenditure on research & Development	lrndexp	0.567***	0.730***	0.492***	-0.146	-0.044	0.226	0.485***	-0.020	-0.216	-0.011	0.308	-0.073
		(0.201)	(0.214)	(0.128)	(0.209)	(0.157)	(0.171)	(0.187)	(0.200)	(0.187)	(0.167)	(0.230)	(0.477)
Trade percentage of GDP	ltradepgdp	0.993***	0.656***	0.945***	0.851**	1.481***	1.355***	1.149***	0.601**	1.304***	1.446***	1.054***	0.719
		(0.298)	(0.219)	(0.331)	(0.400)	(0.320)	(0.287)	(0.292)	(0.277)	(0.258)	(0.291)	(0.339)	(0.540)

Stock traded (total)	Olstktrdtot	-0.129	0.109	0.568***	0.219	0.119	0.339**	0.343**	0.319	0.079	0.288***	0.337	0.206
		(0.113)	(0.153)	(0.202)	(0.157)	(0.123)	(0.132)	(0.166)	(0.200)	(0.076)	(0.106)	(0.274)	(0.402)
Political Rights	FHPR					-0.131	-0.017	0.176	0.465***	-0.081	-0.061	0.224	0.471**
						(0.168)	(0.102)	(0.142)	(0.174)	(0.091)	(0.110)	(0.147)	(0.195)
Civil Liberties	FHCL					-0.380**	-0.469***	-0.612***	-0.381*	-0.429***	-0.439***	-0.620***	-0.246
						(0.181)	(0.100)	(0.174)	(0.221)	(0.125)	(0.139)	(0.149)	(0.216)
Government Stability	gov_stab									0.040	0.074	-0.093**	-0.153
										(0.065)	(0.076)	(0.042)	(0.099)
Law & Order	law_order									0.377***	0.180	0.338***	-0.104
										(0.127)	(0.111)	(0.070)	(0.319)
Bureaucratic Quality	bureauc_qual									-0.038	0.091	-0.330**	0.611*
										(0.273)	(0.174)	(0.158)	(0.362)
Constant	_cons	-22.403***	-18.904***	-30.329***	-30.798***	-32.118***	-30.581***	-31.368***	-25.996***	-33.367***	-37.303***	-30.127***	-28.747***
		(4.219)	(4.386)	(4.132)	(6.134)	(4.608)	(3.874)	(4.349)	(4.706)	(4.330)	(6.159)	(4.976)	(9.974)
N		341	274	357	194	334	268	349	187	307	325	266	347
Pseudo R2		0.3911	0.3656	0.4405	0.3484	0.4392	0.4270	0.4734	0.3738	0.4348	0.4316	0.4870	0.3907

Note: t-statistics are provided in parentheses.
Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10
Source: Author's estimations in STATA

The three regressions provided in table 7.12, cover the Northern countries (Norway and Finland) total FDI flows from 1990-2009. Of firms' motives, the effect of Market seeking motives reflected by market size (GDP) is positive and significant on Northern firms' FDI. The effect of Resource seeking motives reflected by production of electricity is negative on Northern countries' FDI with significant results reported for Finish FDI.

Of ES independent variables, the effect of wages on Northern firms' FDI is generally positive and insignificant. Of SAS variables, the effect of host countries' quality of transportation is negative and significant on Finish FDI. However, in contrast the effect of quality of transportation on Norwegian FDI is positive and insignificant. The second SAS variable, host countries' investment on research and development shows a significant positive effect on Northern FDI.

Of macroeconomic variable, the *interest rate lending* has an insignificant negative effect on Finish FDI, and an insignificant positive effect on Norwegian FDI. The second macroeconomics variable, *taxes on income and profit*, shows a negative significant effect on Finish FDI and a negative insignificant effect on Norwegian FDI. Considering the trade related variables, we find the *trade as a percentage of GDP* to have a positive significant effect on Northern FDI. Furthermore, we find the second trade related variable, *stock traded as a percentage of GDP*, to have a positive insignificant effect on Northern FDI.

The effect of host countries' level of *civil liberties* on Northern FDI is negative and insignificant, supporting the results of our theoretical model and the empirical findings of Coates, et al. (2010). Furthermore the results are in line with hypothesis (1) and similar to the empirical results reported for LMEs and CMEs' aggregate FDI flows.

The effect of host countries' level of *political rights* on Northern FDI is insignificant and negative in case of Finish FDI, in line with findings of Asiedu (2001). In contrast we observe a positive insignificant effect of political rights on Norwegian FDI, in support of the view of Wheeler and Mody (1992) and Sethi et al. (2003).

Of institutional variables, the effect of *government stability* on Finish FDI is positive and insignificant, while a negative and insignificant effect is observed in case of Norwegian FDI. The second institutional variable, *bureaucratic quality* has a positive

insignificant effect on Northern FDI. Finally, the third institutional variable, *law and order*, has a negative effect on Northern FDI.

Table 7.12		Estimation of Determinants of Northern FDI (Total FDI)					
		Model 2.1		Model 2.2		Model 2.3	
Variable name	STATA label	Finland	Norway	Finland	Norway	Finland	Norway
GDP	lgdp	0.368***	0.472	0.643***	0.647*	0.605**	0.734*
		(0.133)	(0.348)	(0.193)	(0.346)	(0.286)	(0.397)
Production of Electricity	Olprod_elec	-0.614*	-0.565	-0.450*	-0.649**	-0.613	-0.183
		(0.328)	(0.808)	(0.260)	(0.321)	(0.397)	(0.520)
Interest rate lending	lintrstRL	-0.367	0.888	-0.328	0.901*	-0.587	1.046
		(0.379)	(0.903)	(0.361)	(0.536)	(0.494)	(1.148)
Wage per hour	Olwageph	0.248	0.262	0.236	0.162	0.145	0.424
		(0.313)	(0.338)	(0.355)	(0.299)	(0.365)	(0.417)
Taxes on income (total)	ltxinctot	-0.701**	-0.439	-1.575**	-0.815	-1.369*	-1.314
		(0.299)	(0.688)	(0.707)	(0.791)	(0.712)	(0.995)
Air freight	Olairfreight	-0.625***	0.311	-0.556**	0.487	-0.582***	0.546
		(0.106)	(0.453)	(0.227)	(0.634)	(0.162)	(0.631)
Expenditure on research & Development	lrndexp	1.679***	1.108	1.498***	1.069	1.607***	1.249
		(0.258)	(0.864)	(0.337)	(0.822)	(0.434)	(1.239)
Trade percentage of GDP	ltradepgdp	0.657*	1.415*	1.084***	1.322*	0.677	1.674***
		(0.352)	(0.807)	(0.350)	(0.720)	(0.702)	(0.591)
Stock traded (total)	Olstktrdtot	0.249	0.072	0.372	0.235	0.346	-0.030
		(0.291)	(0.696)	(0.301)	(0.641)	(0.419)	(0.555)
Political Rights	FHPR			-0.252	0.685	-0.112	0.734
				(0.285)	(0.432)	(0.335)	(0.657)
Civil Liberties	FHCL			-0.098	-1.255**	-0.219	-0.875
				(0.307)	(0.496)	(0.361)	(0.542)
Government Stability	gov_stab					0.084	-0.302
						(0.110)	(0.261)
Law & Order	law_order					-0.238	-0.348
						(0.316)	(0.740)
Bureaucratic	bureauc_qual					0.157	0.789

Quality						(0.289)	(1.047)
Constant	_cons	-5.250	-14.065	-10.810**	-16.182	-8.301	-17.492
		(4.653)	(12.718)	(5.107)	(12.492)	(9.540)	(15.439)
N		207	96	202	95	200	95
Pseudo R2		0.2706	0.2191	0.2796	0.2901	0.2884	0.3121

Note: t-statistics are provided in parentheses.
Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10
Source: Author's estimations in STATA

Appendix 7.6: Discussion and results of the regression analyses of disaggregated FDI using models 2.1-2.3

The regressions provided in table 7.14, empirically explore the manufacturing and services net FDI flows from our set of home countries into 140 host countries for the period of 1990-2009, using regression model 1.3, discussed in section 7.2.3. Of firms' motives, the Market seeking motives reflected by market size (*GDP*) show a positive and significant effect on manufacturing FDI from most countries with the exception of an insignificant positive effect reported in case of German and French FDI. Considering the effect of market size on services FDI flows, we find a positive and insignificant effect reported for all countries with the exception of a negative insignificant effect reported for Finish services FDI.

The effect of RS variable, *production of electricity* is negative on US, German, French, Dutch and Finish manufacturing FDI with significant results reported for French manufacturing FDI. In contrast, we observe a positive insignificant effect of *production of electricity* on UK manufacturing FDI. The review of the effect of *production of electricity* on services FDI is negative and significant on services FDI from all countries with the exception of UK and Finish services FDI.

Of ES variables, *wage per hour* has a negative insignificant effect on LMEs (UK and US) and Northern (Finland) countries' manufacturing FDI. In contrast we observe a positive effect of *wage per hour* on CMEs (Germany, France, Netherlands) with significant effects reported for Dutch and French manufacturing FDI. Considering the effect of *wage per hour* on services FDI is negative in case of US, German, Dutch and Finish services

FDI with significant effect reported for Finish FDI. In contrast we observe a positive insignificant effect of *wage per hour* on UK and French services FDI. The overall evidence suggests that Finish sectoral FDI is negatively affected by *wage per hour* while French FDI is positively affected by it. Furthermore, considering the effect of *wage per hour* on sectoral FDI from other countries we find contrasting results indicating the sector specific effect of wages on FDI flows.

The second ES variable, *employee compensation as a percentage of expenses*, has a positive insignificant effect on LMEs (US and UK) and Dutch manufacturing FDI, while a negative effect is reported for German, French and Finish FDI. Furthermore, the effect of employee compensation is negative and significant in case of Finish FDI. Considering the effect of employee compensation on services FDI, we find a positive insignificant effect on LMEs FDI, while a negative effect is observed in case of CMEs and Northern countries, with significant negative effects reported only in case of German and French services FDI. The overall results of ES variables demonstrate that the coordination of activities in services sector vary considerably across firms from similar market economies. Furthermore, we find that services industry is more sensitive to ES variables, in comparison to manufacturing sector. This is perhaps due to a more labour and knowledge intensive nature of the production process in services sector in comparison to manufacturing.

Of SAS variables, quality of transportation reflected by *air freight*, has a positive insignificant effect on manufacturing FDI from US, UK, Dutch and French manufacturing FDI, while a negative insignificant effect is observed in case of German and Finish manufacturing FDI. Considering the effect of *air freight*, on services FDI, we find a positive effect on LMEs' services FDI, with significant effect reported only for US services FDI. In contrast we observe a negative effect of *air freight*, on CMEs' and Northern FDI, with significant effects reported in case of German services FDI. Therefore, we find that LMEs' firms show a more centralised structure in coordination of their activities in services sector, in contrast to their counterparts from CMEs and Northern countries. This centralised structure mainly allocates production activities to the affiliates abroad taking advantage of cost differentials while the R&D activity tends to be chiefly undertaken at the home country. The evidence is not conclusive when CMEs' manufacturing FDI is considered as we observe both positive and negative insignificant

effects reported. However, LMEs FDI in manufacturing sector still shows insignificant signs of a centralised structure in contrast to their Northern counter parts for which the effect is reported to be negative and insignificant.

The second SAS variable, *Investment in research and development*, shows a positive insignificant effect on LMEs (US and UK), German and Northern (Finish) manufacturing FDI, while a negative insignificant effect is reported in case of Dutch and French manufacturing FDI. Considering services FDI, we find a positive insignificant effect in case of US, Dutch, French and Finish services FDI, while a negative insignificant effect is reported in case of UK and German services FDI. Therefore the overall evidence suggests that *Investment in research and development* has a positive insignificant effect on Northern countries' FDI across sectors. The effect remains consistent, insignificant a positive in case of US FDI across sectors. However, the results suggest that *Investment in research and development* has different effects on FDI from CMEs and UK firms into host counties, across sectors. Interestingly we find that the effect of *Investment in research and development* on CMEs' and Northern manufacturing FDI is a contrasting mirror of the effect of *air freight*, on their FDI activity, demonstrating the influence of the degree of centralisation/decentralisation of these firms' structure, and its effect on their coordination activity and consequently FDI activity. In contrast the evidence is not clear in case of LMEs' manufacturing FDI, with positive insignificant results reported for both variables. Perhaps this is due to level of aggregation (sectoral level) used for the analysis, that could results in provision of overall sectoral effect by aggregation of industry effects. Otherwise, it is possible to view the effect to indicate a more complex structure of LME firms that could not be categorised distinctly at least at a sectoral level into centralised or decentralised distinct structures. This is prevalent to the effects of the two variables on US and German services FDI. However, as before we observe opposite signs for the effect of the two variables reported for all other countries in case of services FDI.

Of macroeconomic variable, *interest rate lending*, has a positive effect on US, UK, Dutch and Finish manufacturing FDI, while the effect is reported to be significant only in case of US FDI. In contrast we find a negative insignificant effect of taxes on manufacturing FDI from German and French firms. Considering services FDI, we find a negative insignificant effect of *interest rate lending* on US, Dutch and Finish services FDI, while a positive insignificant effect is observed in case of UK, German and French services

FDI. The overall view of the results indicate that *interest rate lending* have contrary effects on manufacturing FDI and services FDI in case of all countries with the exception of UK sectoral FDI.

The second macroeconomic variable, *taxes on income and profit*, has a positive effect on LMEs' and German manufacturing FDI, with significant effect reported only in case of US firms. In contrast a negative insignificant effect of taxes is reported in case of CMEs' (with the exception of Germany) and Northern countries. Considering services FDI, we find that taxes have a positive effect on LMEs' services FDI with significant results reported only in case of US firms. In contrast taxes show a negative effect on CMEs' and Northern services' FDI, with significant results reported for Finish services FDI. The overview of the results indicate that *taxes on income and profit* have a similar effect of manufacturing and services FDI, for all home countries considered with the exception of Germany.

The last group of macroeconomic variables are trade related variables. The effect of *trade as a percentage of GDP*, on manufacturing FDI is positive for all countries with significant results reported for US and Dutch manufacturing FDI. Considering services FDI, we find a positive effect of trade on all countries' services FDI (with a significant effect reported for UK services FDI) with the exception of Finish FDI for which the effect is insignificant and negative. he second trade related variable, *Stock traded as a percentage of GDP*, has a positive effect on manufacturing FDI from all countries with significant results reported only in case of Finish manufacturing FDI. Considering services FDI, the effect of stock traded is negative and insignificant on US services FDI. However, the effect of stock traded is positive in case of all other countries with significant effects reported for Germany, France and Finland. The overall effect of trade related variables seems to be generally positive across sectors.

The effect of civil liberties on manufacturing FDI is negative in case of LMEs' (UK and US) and French manufacturing FDI, with significant results reported for UK and French manufacturing FDI, supporting the findings of Coates et al. . In contrast we observe a positive insignificant effect of civil liberties on manufacturing FDI from Germany, Netherlands, and Finland, supporting the view of Blanton and Blanton . Considering services FDI, we find a negative effect of civil liberties on FDI from all countries with significant effects reported in case of LMEs (UK and US), Dutch and French services FDI.

The non-linearity of the effect on German and Dutch manufacturing FDI across sectors indicate that the effect of civil liberties on sectoral FDI varies across sectors. Furthermore, we find that in contrast to our earlier claim that civil liberties have a negative effect on FDI flows a non-linear effect is observed in case of manufacturing FDI across countries supporting the findings of Asiedu and Lien (2011), Adam and Filippaios (2007), Li and Resnick (2003). Consequently the analysis of the effect of civil liberties in this section indicates that the effect of civil liberties is not linear across sectors. Furthermore, we find that the effect of civil liberties on manufacturing FDI is non-linear across countries. Therefore our results demonstrate that the effect of civil liberties on FDI is intermediated by sector specific characteristics, such as ratio of labour to capital share of production. This is in line with our theoretical findings of chapter 4.

The effect of political rights on manufacturing FDI is negative and insignificant in case of US, German, Dutch and Finish manufacturing FDI, supporting the findings of Coates, D., J. C. Heckelman, et al. (2010). In contrast a political rights show a positive effect on UK manufacturing FDI, providing support for the findings of Blanton and Blanton (2007). Finally a positive significant effect is reported for French manufacturing FDI, rendering support for the view of Coughlin, et al. (1991) and Pournarakis and Varsakelis (2004).

Considering the effect of political rights on services FDI we find a positive effect on all countries' services FDI, with significant effects reported for US, Netherlands and Finish services FDI, supporting the view of Blanton and Blanton (2007), Coughlin, et al. (1991) and Pournarakis and Varsakelis (2004). Therefore, the overview of the effect of political rights on FDI in contrast to our theoretical findings and hypothesis 2, demonstrates the existence of a non-linear effect on FDI, and in particular manufacturing FDI providing support for the findings of Li and Resnick (2003). Furthermore, we find that the effect of political rights on sectoral FDI is non-linear across sectors, providing more empirical support for our earlier argument that the characteristics of the sectors in which firms conduct their FDI activity affect their FDI behaviour and consequently their flows.

Of institutional variables, the effect of *government stability* is positive on LMEs (UK and US) and French manufacturing FDI, with significant effect reported only for US manufacturing FDI. In contrast we find a negative insignificant effect on German, Dutch and Northern manufacturing FDI. Considering services FDI we find a negative insignificant effect of *government stability* on German and French services FDI, while the

effect is positive and insignificant in case of other countries. The overview of the effect of *government stability* on LMEs FDI indicates a positive effect which is significant in case of manufacturing FDI demonstrating a greater effect of *government stability* on manufacturing FDI from LMEs. Furthermore the effect of *government stability* on Northern FDI is negative and insignificant across models. The effect of *government stability* on CMEs' FDI demonstrates that *government stability* affects sectoral FDI in different ways, with the exception of a negative insignificant effect reported for Germany across sectors.

The effect of *Bureaucratic quality*, on manufacturing FDI is insignificant and positive in case of LMEs and Northern countries' manufacturing FDI, while the effect reported for CMEs is negative and insignificant. Considering services FDI, we find *Bureaucratic quality* to have a negative insignificant effect on British services FDI, while the effect is positive for all other countries with a significant positive effect reported for US services FDI. The effect of the last institutional variable, *law and order*, is negative and insignificant on British manufacturing FDI, while a positive effect is reported for all other countries with a significant positive effect reported for Dutch manufacturing FDI. Considering services FDI, we find a negative insignificant effect of *law and order*, on US, Dutch and Finish services FDI, while a positive effect is reported for UK, German and French services FDI with significant results reported only for German services FDI. Therefore the overall results of the institutional variables indicate that the effect of various aspects of institutional environment of host countries affect FDI from various market economies in different ways. Furthermore, we find that the effects are non-linear across sectors. The latter explains the provision of mixed results on the effect of institutional variables on FDI flows. Therefore we consider that further research on disaggregated FDI flows, while considering the types of economies from which MNEs originate, as well as consideration of the aspects of institutional environment that are considered in both empirical and theoretical setting would benefit the overall understanding of the underlying processes that inform firms' FDI decision making processes and consequently their FDI behaviour.

Table 7.13		Estimation of Determinants of Sectoral FDI (All countries)											
		Manufacturing (Model 2.3)						Services (Model 2.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	1.057***	0.961***	0.523**	0.713**	0.442*	1.179***	1.005***	1.088***	1.011***	0.842***	1.025***	0.035
		(0.172)	(0.251)	(0.234)	(0.303)	(0.239)	(0.299)	(0.189)	(0.168)	(0.176)	(0.177)	(0.142)	(0.258)
Production of Electricity	Olprod_elec	-0.076	0.119	-0.209	-0.588	-0.646	-0.132	-0.623***	-0.239	-0.672***	-1.039***	-0.850***	-0.015
		(0.148)	(0.225)	(0.445)	(0.660)	(0.422)	(0.291)	(0.137)	(0.262)	(0.156)	(0.240)	(0.286)	(0.407)
Interest rate lending	lintrstRL	0.663***	0.305	-0.601	-0.016	-0.562	0.376	0.077	0.064	0.312	-0.280	0.509*	0.642**
		(0.157)	(0.342)	(0.468)	(0.558)	(0.366)	(0.368)	(0.218)	(0.147)	(0.243)	(0.188)	(0.307)	(0.304)
Wage per hour	Olwageph	-0.125	-0.065	0.234	0.878**	0.636***	0.266	-0.096	0.189*	-0.007	-0.160	0.326**	-0.492**
		(0.099)	(0.271)	(0.328)	(0.352)	(0.190)	(0.365)	(0.099)	(0.099)	(0.209)	(0.200)	(0.165)	(0.248)
Taxes on income (total)	ltxinctot	0.536	0.196	0.387	0.165	-0.287	-2.363***	0.366	0.259	-0.212	-0.882*	-0.322	-0.921***
		(0.343)	(0.788)	(0.570)	(0.747)	(0.401)	(0.797)	(0.313)	(0.492)	(0.566)	(0.488)	(0.381)	(0.223)
Air freight	Olairfreight	0.238**	0.193	0.082	-0.151	-0.228	-0.413	0.253*	0.441**	-0.537***	-0.123	-0.183	-0.239
		(0.104)	(0.294)	(0.333)	(0.382)	(0.208)	(0.311)	(0.140)	(0.197)	(0.152)	(0.220)	(0.176)	(0.394)
Expenditure on research & Development	lrndexp	-0.086	-0.074	0.665	-0.426	0.256	0.899	0.020	-0.260	-0.073	0.442	0.191	-0.179
		(0.237)	(0.343)	(0.497)	(0.490)	(0.362)	(0.609)	(0.193)	(0.206)	(0.229)	(0.354)	(0.252)	(0.530)
Trade percentage of GDP	ltradepgdp	0.476**	0.160	0.568	1.194**	0.320	1.194*	0.243	0.742**	0.639*	0.518	1.027***	-0.392
		(0.228)	(0.456)	(0.662)	(0.579)	(0.418)	(0.719)	(0.245)	(0.304)	(0.332)	(0.360)	(0.382)	(0.620)
Stock traded	Olstktrdtot	0.148	0.248	0.109	0.453	0.031	0.799**	0.036	0.271	0.500**	0.474**	0.278	1.051***

(total)		(0.176)	(0.428)	(0.330)	(0.376)	(0.236)	(0.370)	(0.205)	(0.218)	(0.197)	(0.188)	(0.208)	(0.270)
Political Rights	FHPR	0.087	0.285	0.163	-0.393	0.589**	-0.247	0.368***	0.249*	0.148	0.356*	0.233	0.636**
		(0.122)	(0.273)	(0.436)	(0.479)	(0.280)	(0.384)	(0.089)	(0.141)	(0.197)	(0.200)	(0.231)	(0.270)
Civil Liberties	FHCL	-0.184	-0.763*	-0.035	0.394	-0.882**	0.060	-0.580***	-0.888***	-0.357*	-0.938***	-0.643**	-0.570*
		(0.134)	(0.393)	(0.399)	(0.485)	(0.383)	(0.376)	(0.108)	(0.182)	(0.206)	(0.233)	(0.284)	(0.290)
Government Stability	gov_stab	0.308***	0.108	-0.242	-0.147	0.116	-0.102	0.063	0.180***	-0.066	0.041	0.041	0.054
		(0.071)	(0.115)	(0.167)	(0.191)	(0.104)	(0.133)	(0.135)	(0.069)	(0.092)	(0.088)	(0.079)	(0.112)
Law & Order	law_order	0.030	-0.038	0.242	0.561	0.082	0.117	-0.048	0.207**	0.429***	-0.058	0.261	-0.101
		(0.060)	(0.276)	(0.356)	(0.428)	(0.205)	(0.204)	(0.058)	(0.094)	(0.125)	(0.131)	(0.185)	(0.301)
Bureaucratic Quality	bureauc_qual	0.118	-0.039	-1.040*	-0.838	-0.277	0.657**	0.717***	-0.180	0.026	-0.042	-0.047	0.783
		(0.236)	(0.495)	(0.596)	(0.667)	(0.494)	(0.259)	(0.196)	(0.127)	(0.220)	(0.367)	(0.311)	(0.669)
Constant	_cons	-31.167***	-22.741***	-9.431	-19.377*	-7.574	-26.564***	-25.744***	-31.046***	-26.948***	-16.371***	-28.646***	1.979
		(4.989)	(6.927)	(9.280)	(10.144)	(8.371)	(8.592)	(5.668)	(4.870)	(4.388)	(4.900)	(5.371)	(9.148)
N		901.000	315.000	310.000	186.000	298.000	156.000	697.000	710.000	748.000	497.000	709.000	270.000
Pseudo R2		0.1495	0.1822	0.0786	0.1177	0.1519	0.3795	0.2392	0.2225	0.1649	0.1579	0.1995	0.1083

Note: t-statistics are provided in parentheses.
Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10
Source: Author's estimations in STATA

Appendix 7.7: the results of the sensitivity analysis of aggregated FDI flows (table 7-12)

Of firms' motives, the effect of Market seeking motives reflected by *market size* (GDP) shows a positive significant effect on all countries' FDI flows for the period, irrespective of their level of civil liberties. This suggests a dominating Market Seeking (MS) behaviour of firms from all home countries. Considering the effect of Resource seeking motives reflected by *production of electricity* we find a significant negative effect reported in case of free and moderately free countries, with the exception of UK for which the effect is negative and insignificant. In contrast we observe a positive and insignificant effect of RS variable on Finish FDI into countries with high and moderately high level of civil liberties. Considering the effect of RS variable on FDI into countries with moderately low and low level of civil liberties, we find a negative and insignificant effect reported in case of LMEs and most CMEs, with the exception of a France for which a positive insignificant effect is observed. The effect of *production of electricity* on Finish (Northern) FDI into countries with moderately low and low level of civil liberties is reported to be positive and insignificant. This demonstrates a greater RS behaviour of firms from LMEs and most CMEs, investing into countries with high and moderately high level of civil liberties. The exception is the case of UK FDI that shows a negative insignificant effect of RS variable across sectors, indicating an insignificant resource seeking behaviour of UK firms across groups of countries with various levels of civil liberties. Observing the behaviour of French FDI across sectors groups of countries with various levels of civil liberties, we find that they show a significant RS behaviour when investing into countries with high and moderately high level of civil liberties, while the effect reported in case of countries with moderately low and low level of civil liberties suggests that existence of natural resource production entities in host countries positively affects French FDI, indicating a low resource seeking behaviour. The effect of RS variable is insignificant and positive on Finish FDI across groups of countries with various levels of civil liberties, indicating that existence of natural resource production entities in host countries affects Finish FDI in an insignificant and positive manner irrespective of the host countries level of civil liberties. Therefore the overall effect of RS motives on home countries' aggregate FDI flows suggests that FDI into host countries with high and moderately high level of civil liberties is more sensitive to RS motives in comparison to FDI

into host countries with low and moderately low level of civil liberties, in case of LMEs and CMEs.

The effect of SAS variable *air freight*, reflecting *quality of transportation* is positive on LMEs' FDI into host countries with higher level of civil liberties with significant results reported only in case of UK firms at 5%. However, in contrast we observe a negative and insignificant effect of *air freight* on CMEs' and Northern FDI into host countries with higher level of civil liberties. The effect of *air freight* into host countries with higher level of civil liberties is negative and significant in case of US FDI at 10%, while the effect is reported to be positive and insignificant in case of UK FDI. Considering the effect of *air freight*, on CMEs' and Northern FDI into host countries with higher level of civil liberties we find a negative and insignificant effect on aggregate FDI flows. Furthermore the effect of *air freight,* on aggregate FDI flows from CMEs and Northern firms into host countries with lower level of civil liberties indicate a positive and insignificant effect in most cases with the exception of German FDI. Therefore the overall view of the effect of *quality of transportation* on services FDI shows a negative effect on US and German aggregate FDI flows into host countries with lower level of civil liberties, while the effect is positive and insignificant in case of other countries.

Of macroeconomic variables, we find *interest rate lending* to have a negative insignificant effect on US aggregate FDI flows into host countries with higher level of civil liberties. In contrast a positive and insignificant effect is reported in case of UK aggregate FDI flows into host countries with higher level of civil liberties.

The evidence from CMEs' manufacturing FDI shows a positive effect of *interest rate lending* on the aggregate FDI flows from all countries into host countries with higher level of civil liberties, with significant effect reported only in case of Dutch aggregate FDI flows. The effect of *interest rate lending* on Finish FDI into host countries with higher level of civil liberties is insignificant and negative, and similar to that observed in case of US FDI into host countries with higher level of civil liberties. The overall evidence suggest a positive insignificant effect of *interest rate lending* on CMEs' and UK FDI into host countries with higher level of civil liberties, while a negative insignificant effect is reported in case of US and Finish FDI into host countries with higher level of civil liberties, suggesting that firms from US and Finland tend to obtain some of their funding for their FDI into host countries

with higher level of civil liberties, through host countries' financial system and therefore are more sensitive to the host countries' level of interest rate lending. In contrast we find that firms from CMEs and UK tend to fund their FDI into host countries with higher level of civil liberties, mainly through internal channels. Considering the effect of *interest rate lending* on aggregate FDI flows into host countries with lower level of civil liberties, we find a positive effect reported for all countries, with significant effects reported for LMEs, Dutch and French FDI. This indicates that firms tend to be more reliant on funding their FDI into host countries with lower level of civil liberties, through host countries' financial channels, in comparison to their FDI into host countries with higher level of civil liberties. The overall effect of *interest rate lending* on aggregate FDI flows from our set of host countries demonstrates the differences that exists between the way various factors (in this case interest rate lending) affect FDI into countries with higher level of civil liberties in comparison to those with lower level of civil liberties.

The effect of the second macroeconomic variable, *taxes on income and profit* on FDI into host countries with higher level of civil liberties, shows a positive insignificant effect on LMEs FDI, while the effects reported in case of CMEs are generally negative and insignificant with the exception of a negative significant effect reported for German FDI into host countries with higher level of civil liberties. The evidence on Northern FDI indicates presence of a negative and significant effect of *taxes on income and profit* on Finish FDI into host countries with higher level of civil liberties. The results suggest that CMEs' and Northern FDI into host countries with higher level of civil liberties, are negatively affected by increases in the level of taxes on income and profit, in contrast to LMEs. Considering the FDI into host countries with lower level of civil liberties, we find a negative and insignificant effect of *taxes on income and profit* on LMEs and Northern aggregate FDI flows. Furthermore considering the effect of *taxes on income and profit* on FDI into host countries with lower level of civil liberties from CMEs we find a negative effect reported for German and Dutch FDI, with a significant effect reported only in case of Dutch FDI. In contrast a positive insignificant effect of *taxes on income and profit* is reported in case of French FDI into host countries with lower level of civil liberties. The overall evidence suggests a negative effect of *taxes on income and profit* on FDI from our set of home countries into host countries with lower level of civil liberties with the exception of French FDI. Therefore *taxes on income and profit* have a negative effect on Northern and CMEs' FDI into all countries, and

LMEs' FDI into host countries with lower level of civil liberties with the exception of French services FDI, while a contrasting effect is reported in case of LMEs' FDI into host countries with higher level of civil liberties.

The effect of the first trade related variable *trade as a percentage of GDP*, on FDI into host countries with higher level of civil liberties is positive and significant for all countries, with the exception of a positive insignificant effect reported for Dutch FDI into host countries with lower level of civil liberties FDI. The effect of second trade related variable *stock traded as a percentage of GDP*, on FDI into host countries with higher level of civil liberties is positive and significant for all countries with the exception of positive insignificant effect reported for US FDI. Considering the effect of *stock traded as a percentage of GDP*, on FDI into host countries with lower level of civil liberties we find a negative insignificant effect on US and German FDI, while a positive insignificant effect is reported on Dutch, French, and Finish FDI. The effect of *stock traded as a percentage of GDP*, on UK FDI into host countries with lower level of civil liberties is positive and significant. Therefore the overall view of the results suggests that the effect of *trade as a percentage of GDP* is positive on all countries FDI across groups of countries with various levels of civil liberties, while the effect of *stock traded as a percentage of GDP*, on FDI into groups of countries with various levels of civil liberties tends to vary. Furthermore, we find that FDI into host countries with higher level of civil liberties is more sensitive to *stock traded as a percentage of GDP*, in comparison to FDI into host countries with lower level of civil liberties.

Of institutional variables, the effect of *government stability* on the sectoral FDI from LMEs and Northern countries into host countries with higher level of civil liberties is positive and insignificant in support of hypothesis 2 and the findings of Lipsey (1999), Pournarakis and Varsakelis (2004), Ali et al. (2008), Méon and Sekkat (2004), Mottaleb and Kalirajan (2010). The effect of *government stability* on CMEs' manufacturing FDI is negative and insignificant in case of Germany and France, while the effect reported for Dutch manufacturing FDI is positive and insignificant. The effect of *government stability* on CMEs' services FDI is negative and insignificant in case of Germany, negative and significant in case of Netherlands, and positive and insignificant on French services FDI. Thus we observe that the effect of *government stability* on Germany is negative and linear across sectors, in contrast to our theoretical findings. Furthermore, the effects reported for Dutch and French sectoral FDI demonstrate the presence of a non-linear effect.

Of institutional factors, the first institutional variable, *government stability* has a positive significant effect on LMEs FDI irrespective of the host countries' level of civil liberties. The effect of *government stability* on German, Dutch and Finish FDI into host countries with higher level of civil liberties is positive, and significant only in case of Dutch FDI. However, in contrast the effect of *government stability* on French FDI into host countries with higher level of civil liberties appears to be negative and significant. Considering the effect of *government stability* on LMEs' and CMEs' FDI into host countries with lower level of civil liberties, we find a positive and significant effect reported for most countries with exception of French FDI for which the effect reported is positive and insignificant. In contrast the effect of *government stability* on Northern (Finish) FDI into host countries with lower level of civil liberties is negative and insignificant. The overall view of the effect of *government stability* on FDI from our set of host countries suggests that firms are more sensitive to the *government stability* in host countries with lower level of civil liberties.

The effect of the second institutional variable, *bureaucratic quality* on FDI from all countries into host countries with higher level of civil liberties is positive with significant effects reported in case of LMEs and France. The effect of *bureaucratic quality* on FDI from US, Dutch, French and Finish FDI `into host countries with lower level of civil liberties is negative and insignificant, with significant results reported only in case of Northern FDI. Furthermore, the effect of *bureaucratic quality* on FDI from UK and Germany into host countries with lower level of civil liberties is positive and insignificant.

The effect of the third institutional variable, *law and order*, is positive on US, German, Dutch and Finish FDI into host countries with higher level of civil liberties, while a negative effect is reported in case of UK and French FDI into host countries with higher level of civil liberties, where the effect is only significant in case of British FDI. Considering the effect of *law and order* on FDI into host countries with low level of civil liberties, we find a positive and significant effect reported in case of US and French FDI. In other cases the effect is significant and positive for German, Dutch and Finish FDI, while a negative insignificant effect reported for UK FDI into host countries with lower level of civil liberties.

The overall view of the effect of institutional variables on FDI into the two groups of countries with various levels of civil liberties show that the effect of institutional variables are

not symmetric across groups, demonstrating a non-linear effect of institutional variable when host countries with different levels of civil liberties are considered.

Appendix 7.8: the results of the sensitivity analysis of disaggregated FDI flows into host countries with higher level of civil liberties (table 7-13)

Of firms' motives, the effect of Market seeking motives reflected by *market size* (GDP) shows a positive significant effect on LMEs' FDI flows for the period, irrespective of sectors. This suggests a dominating Market Seeking (MS) behaviour of firms from LMEs across sectors. The evidence on the effect of market size on CMEs' manufacturing FDI into host countries with higher level of civil liberties indicates presence of a positive effect on German ad French manufacturing FDI where the significant effect is observed only in case of French FDI. In contrast, we observe a negative insignificant effect of market size on Dutch FDI. Considering the effect of market size on services FDI into host countries with lower level of civil liberties, we find a positive significant effect reported for all CMEs, indicating presence of a non-linear effect of market size across sector on Dutch FDI. The effect of market size on Northern FDI into host countries with lower level of civil liberties is positive and significant across sectors. Therefore, we find that services FDI into host countries with higher level of liberties, is more sensitive to market size, in contrast to manufacturing FDI.

Considering the effect of Resource seeking motives reflected by *production of electricity* on LMEs' FDI into host countries with higher level of civil liberties we find a positive insignificant effect reported in case of manufacturing FDI, while a negative significant effect is reported in case of services FDI, indicating a non-linear effect of RS variable on LMEs across sectors. The effect of *production of electricity* on CMEs' manufacturing FDI into host countries with higher level of civil liberties is negative and significant in case of France, negative and insignificant in case of Dutch FDI and positive and insignificant in case of German FDI, indicating RS behaviour of Dutch and French manufacturing FDI. Furthermore a review of the effect of *production of electricity* on CMEs' services FDI into host countries with higher level of civil liberties indicates the presence of a significant and negative effect. Therefore we find that German sectoral FDI is affected in a different manner by existence of natural resources' production entities in the host countries. The effect of RS variable on

Northern sectoral FDI is positive and insignificant across sectors indicating a low level of RS motives in Finish sectoral FDI in host countries with higher level of civil liberties.

The effect of SAS variable, *air freight* that reflects the effect of quality of transportation on LMEs' sectoral FDI into host countries with higher level of civil liberties is negative and insignificant on US manufacturing FDI, while a positive insignificant effect is reported for UK manufacturing FDI. Furthermore, a review of the effect of quality of transportation of LMEs' services FDI into host countries with higher level of civil liberties show a positive and significant effect. The effect of quality of transportation on CMEs' manufacturing FDI into host countries with higher level of civil liberties is positive and insignificant in case of Germany and negative and insignificant in case of French and Dutch manufacturing FDI. In contrast we observe a negative and significant effect of quality of transportation on German services FDI, a negative and insignificant effect on Dutch services FDI, and a positive and insignificant effect on French FDI. The effect of quality of transportation on Northern manufacturing FDI into host countries with higher level of civil liberties is negative and insignificant, while a negative and significant effect is reported in case of Finish services FDI.

Of macroeconomics variable, the effect of *taxes on income and profit*, on LMEs' manufacturing FDI into countries with higher level of civil liberties is positive and insignificant. In contrast, we observed a negative insignificant effect of *taxes on income and profit* on US services FDI, while a positive and significant effect is observed in case of UK services FDI. Reviewing the effect of *taxes on income and profit* on CMEs' manufacturing FDI shows a positive insignificant effect reported for Dutch and French manufacturing FDI, while the effect of *taxes on income and profit* on German manufacturing FDI is negative and insignificant. In contrast we find that *taxes on income and profit*, has a negative effect on CMEs' services FDI, with significant result reported in case of German services FDI. The effect of *taxes on income and profit* on Northern manufacturing and services FDI is negative and significant, indicating a symmetric effect of taxes on Finish sectoral FDI. Therefore, the overall effect indicates that the effect of *taxes on income and profit* is positive on UK sectoral FDI, and negative on German and Finish sectoral FDI into host countries with higher level of liberties. Furthermore, the effect of *taxes on income and profit* on sectoral FDI from US, Netherlands and France is asymmetric, indicating the effect of sectoral characteristics on the effect of taxes on sectoral FDI into countries with higher level of civil liberties.

The second macroeconomic variable, *interest rate lending* has a positive and significant effect on LMEs' manufacturing FDI into host countries with higher level of liberties. In contrast we observe a negative and significant effect on US services FDI, while a positive significant effect reported for UK services FDI. Considering the effect of *interest rate lending* on CMEs' manufacturing FDI we find a negative significant effect on French manufacturing FDI, a negative insignificant effect on German manufacturing FDI, and a positive insignificant effect on Dutch manufacturing FDI. The effect of *interest rate lending* on CMEs' services FDI is in contrast positive and insignificant on German and French manufacturing FDI, while a negative insignificant effect is observed in case od Dutch manufacturing FDI. The effect of *interest rate lending* on Northern manufacturing FDI is positive and significant while a positive insignificant effect is observed in case of Finish services FDI. The overall review of the effects reported indicates that manufacturing FDI tends to be more sensitive to host countries'' level of *interest rate lending*. Furthermore, consistent with our observations in previous sections we find that LMEs tend to be more reliant on funding their investment abroad through host countries' financial channels while CMEs tend to be more reliant on funding their FDI internally. However, the evidence suggests that the effect of *interest rate lending* on FDI is not symmetric across sectors in most cases (the exceptions are UK and Finish sectoral FDI), emphasising the differences that exist in terms of coordination activities of firms investing in manufacturing sector in comparison to services.

The effect of the first of the trade related variables, *trade as a percentage of GDP*, on all countries sectoral FDI is positive with the exception of UK manufacturing FDI. Furthermore, we find that trade has a positive and significant effect on Dutch services FDI, and US, French and Finish sectoral FDI. The effect of the second trade related variable, *stock traded as a percentage of GDP*, on all countries sectoral FDI is positive with the exception of US services FDI for which a negative insignificant effect is reported. Furthermore, we find a significant effect of *stock traded as a percentage of GDP* on UK, German and Finish manufacturing FDI, similar to the effect observed in case of all countries' services FDI with the exception of US services FDI. The overall review of the results of trade related variables indicate the presence of a positive effect on sectoral FDI into host countries with higher level of civil liberties, with minor exceptions. Furthermore, we find that CMEs' and Northern services FDI into host

countries with higher level of civil liberties is more sensitive to the host countries trade than manufacturing FDI.

The effect of the second institutional variable on *bureaucratic quality* on LMEs' manufacturing FDI into host countries with higher level of civil liberties, is positive and significant with the exception of UK manufacturing FDI for which the effect is reported to be positive and insignificant. The effect of *bureaucratic quality* on German and Dutch manufacturing FDI is negative and insignificant while a positive insignificant effect is reported in case of French manufacturing FDI. In contrast the effect of *bureaucratic quality* on CMEs' services FDI is positive and significant in all cases with the exception of a positive insignificant effect reported for German services FDI. Thus we observe a non-linear effect of *bureaucratic quality* on German and Dutch sectoral FDI. Similarly we find a non-linear effect of *bureaucratic quality* on Northern FDI, with a significant positive effect of *bureaucratic quality* reported on Finish manufacturing FDI, and a negative and insignificant effect reported for services FDI.

The effect of the third institutional variable, *law and order* on US manufacturing FDI into host countries with higher level of civil liberties, is positive and insignificant, while a negative and significant effect is observed in case of US services FDI, indicating the presence of a asymmetric effect that is the result of sector specific characteristics. Furthermore the effect of *law and order* on UK sectoral FDI is negative with significant result reported only for UK manufacturing FDI. The effect of *law and order* on German sectoral FDI is positive and insignificant across sectors, while a negative effect is reported for French sectoral FDI that is only significant for French services FDI. The effect of *law and order* on Dutch sectoral FDI into host countries' with higher level of civil liberties is non-linear as we observe a positive insignificant effect in case of Dutch manufacturing FDI, and a negative and insignificant effect for Dutch services FDI. Finally, the effect of *law and order* on Finish FDI is positive and insignificant across sectors.

Therefore, the overall effect of *government stability* and *law and order* on manufacturing FDI suggests that better quality of institutions promotes FDI activity in the manufacturing sector in line with the findings of Lipsey, R. E. (1999); Pournarakis and Varsakelis (2004), Ali et al. (2008), Méon and Sekkat (2004), Mottaleb and Kalirajan (2010). Similarly we find that lower *government stability* is a deterrent to services FDI flows, while an apposite effect is

observed in case of *law and order*, where lower institutional quality in terms of law and order leads to higher level of FDI in services sector, providing support for the findings of Egger and Winner (2005). However, observing multiple contrasting effects in case of each of the institutional variables, we consider the effect of institutional variables on sectoral FDI to vary, in line with the view of Alvaro Cuervo-Cazurra (2006).

Appendix 7.9: the results of the sensitivity analysis of disaggregated FDI flows into host countries with lower level of civil liberties (table 7-14)

Of firms' motives, the effect of Market Seeking (MS) motives reflected by *market size* (GDP) shows a positive significant effect on LMEs' FDI flows for the period, irrespective of sectors. This suggests a dominating MS behaviour of firms from LMEs across sectors.

The evidence on the effect of market size on CMEs' manufacturing FDI into host countries with lower level of civil liberties indicates presence of a positive significant effect on German ad French manufacturing FDI. Furthermore we observe a negative insignificant effect of market size on Dutch manufacturing FDI. Considering the effect of market size on services FDI into host countries with lower level of civil liberties, we find a positive significant effect reported for all CMEs, indicating presence of a non-linear effect of market size across sector on Dutch FDI. The effect of market size on Northern sectoral FDI into host countries with lower level of civil liberties is positive with significant results reported only in case of manufacturing FDI.

Considering the effect of Resource Seeking (RS) motives reflected by *production of electricity* on US sectoral FDI is negative and insignificant, while a positive insignificant effect is reported for UK sectoral FDI. The latter indicates that the effects observed are linear across sectors, and that US firms, show a dominating RS behaviour in their investment into host countries with lower level of civil liberties. The effect of *production of electricity* on CMEs' sectoral FDI is positive and insignificant in case of German sectoral FDI, negative in case of French sectoral FDI and non-linear in case of Dutch sectoral FDI. In particular we observe a negative insignificant effect of RS variable on Dutch manufacturing whilst a positive insignificant effect is observed in case of Dutch services FDI, emphasis the differences in the way Dutch firms behave in various sectors. The effect of *production of*

electricity on Finish sectoral FDI into host countries with lower level of civil liberties is negative and insignificant, indicating insignificant RS behaviour of Northern firms.

The effect of the SAS variable, *air freight*, reflecting host countries' quality of transpiration is positive and significant on US manufacturing FDI into host countries with lower level of civil liberties, while a positive and insignificant effect is observed in case of US services FDI. In contrast we find a negative and insignificant effect of quality of transpiration on UK sectoral FDI across sectors. The effect of quality of transpiration on German manufacturing FDI into host countries with lower level of civil liberties is negative and insignificant, while a significant negative effect is observed for German services FDI. Furthermore, the effect of quality of transportation of Dutch manufacturing FDI is negative and insignificant while a positive insignificant effect is reported in case of Dutch services FDI. Considering the effect of quality of transportation of French sectoral FDI we find a positive insignificant effect is reported for French manufacturing FDI, while a negative insignificant effect is reported for French services FDI. Therefore the results indicate a non-linear effect of quality of transportation on French and Dutch FDI across sectors. A similar effect is observed in case of Northern sectoral FDI, with a positive insignificant effect of quality of transportation observed in case of Finish manufacturing FDI, while a negative insignificant effect reported for Finish services FDI.

Of macroeconomic variables, *taxes on income and profit* have a positive insignificant effect on US sectoral FDI into host countries with lower level of civil liberties, while a negative insignificant effect is reported for UK manufacturing FDI, and a positive insignificant effect is observed in case of UK services FDI. The effect of *taxes on income and profit* is negative and insignificant on CMEs' sectoral FDI with the exception of a positive insignificant effect reported for German manufacturing FDI. Similarly we find that *taxes on income and profit* have a negative insignificant effect on Northern sectoral FDI. Thus the evidence suggests that *taxes on income and profit* have contrasting effect on CMEs' and Northern sectoral FDI in comparison to LMEs' sectoral FDI. Furthermore in most cases (the exceptions are UK and German sectoral FDI) the effect of *taxes on income and profit* is symmetric (linear) across sectors. The effect of the second macroeconomic variable, *interest rate lending* on LMEs' sectoral FDI is positive and significant with the exception of a positive insignificant effect reported for UK services FDI. Considering the effect of *interest rate lending* on CMEs' manufacturing FDI is positive and insignificant in case of German and

French FDI, while a negative insignificant effect is reported for Dutch manufacturing FDI. Furthermore, the effect of *interest rate lending* on CMEs' manufacturing FDI is positive and significant with the exception of French FDI, for which the effect reported is positive and insignificant. Considering the effect of *interest rate lending* on Northern manufacturing FDI is positive and insignificant while a negative and insignificant effect is reported for Finish services FDI. Thus in most cases *interest rate lending* has a positive effect on sectoral FDI with the exception of Dutch manufacturing FDI and Finish services FDI. Similarly the effect of *interest rate lending* on sectoral FDI of the most countries is symmetric across sectors with the exception of Netherlands and Finland. Finally, the CMEs' services FDI seems to be more reliant on the host country financing in comparison to their manufacturing FDI.

The effect of the first of the trade related variables, *taxes as a percentage of GDP* on sectoral FDI is positive across countries and sectors. However, the significant results are reported for LMEs across sectors and CMEs in services sector, indicating that the CMEs' services FDI is more sensitive to *taxes as a percentage of GDP* in comparison to their manufacturing FDI. The effect of the second of the trade related variables, *stock traded as a percentage of GDP* is negative and insignificant on US manufacturing FDI, whilst a positive insignificant effect is reported for US services FDI. Furthermore, the effect of *stock traded as a percentage of GDP* on UK FDI is positive across sectors with significant results reported for UK manufacturing FDI. Considering the effect of *stock traded as a percentage of GDP* on CMEs' manufacturing FDI is negative and insignificant in case of German and Dutch FDI, while a positive insignificant is reported for French manufacturing FDI. Furthermore, the effect of *stock traded as a percentage of GDP* on CMEs' services FDI is negative and insignificant in case of Dutch and French FDI, while a positive and significant effect is reported for German services FDI. Thus considering the effect of *stock traded as a percentage of GDP* on CMEs' sectoral FDI the effects are asymmetric for Germany and France, while a consistent negative effect is reported for Dutch sectoral FDI. The effect of *stock traded as a percentage of GDP* on Northern sectoral FDI is positive and insignificant across sectors.

Of institutional variables, the effect of *government stability* on US sectoral FDI into host countries with lower level of civil liberties is positive, with significant effect reported only in case of US manufacturing FDI. The effect of *government stability* on UK manufacturing FDI is insignificant and positive, while the effect on UK services FDI is reported to be negative

and significant. The effect of *government stability* on CMEs' manufacturing FDI into host countries with lower level of civil liberties is negative and significant in case of German and Dutch FDI, and positive and insignificant in case of French manufacturing FDI. Furthermore, the effect of *government stability* on CMEs' services FDI is negative and insignificant with the exception of a negative significant effect reported for German services FDI. Similarly, the effect of *government stability* on Northern FDI is consistently negative and insignificant across sectors.

The effect of the second institutional variable, *bureaucratic quality* on manufacturing FDI is negative and insignificant with exceptions of UK and France for which the effect is reported to be positive and insignificant. Furthermore, the effect of *bureaucratic quality* on US, Germany, and Netherlands is positive and insignificant, while a negative effect is reported for UK, France and Finish services FDI, with significant results reported for UK and France.

The effect of the third institutional variable, *law and order* is positive on all countries' manufacturing FDI, and in particular positive and significant on US FDI. The exception is the UK manufacturing FDI, for which the effect reported is negative and insignificant. The effect of *law and order* is positive on all countries' services FDI, and in particular positive and significant on French services FDI. The exception is the US and Finish services FDI, for which the effect reported, is negative and insignificant.

Therefore, the overall effect of *government stability* and *law and order* on manufacturing FDI suggests that better quality of institutions promotes FDI activity in the manufacturing sector in line with the findings of Lipsey, R. E. (1999); Pournarakis and Varsakelis (2004), Fathi, et al. (2008), Méon and Sekkat (2004), Mottaleb and Kalirajan (2010). Similarly we find that lower *government stability* is a deterrent to services FDI flows, while an apposite effect is observed in case of *law and order*, where lower institutional quality in terms of law and order leads to higher level of FDI in services sector, providing support for the findings of Egger and H. Winner (2005). However, observing multiple contrasting effects in case of each of the institutional variables, we consider the effect of institutional variables on sectoral FDI to vary, in line with the view of Alvaro Cuervo-Cazurra (2006).

Appendix 7.10: Sensitivity analysis of aggregate FDI flows using model 1.3 and 2.3 without "Olwages"

The variation of the model 1.3 omitting wages variable in order to provide a sensitivity analysis where we control only for civil liberties and not the channel through which it affects FDI flows. The table below is includes the model 1.3 covered in the tables 7.7-7.9 in the text.

Table 7.14: Sensitivity analysis of the results provided in tables 7.7-7.9 without wages		Estimation of Determinants of Total FDI (Model 1.3)							
Variable name	STATA label	US	UK	Germany	Netherlands	France	Japan	Finland	Norway
GDP	lgdp	0.825***	0.872***	1.262***	1.061***	1.116***	1.220***	1.406***	0.896***
		(0.105)	(0.054)	(0.058)	(0.165)	(0.082)	(0.147)	(0.111)	(0.236)
Production of Electricity	Olprod_elec	-0.730***	-0.164	-0.406***	-0.859***	-0.756***	-0.592***	-0.278	-0.414
		(0.173)	(0.146)	(0.093)	(0.119)	(0.232)	(0.160)	(0.219)	(0.336)
Interest rate lending	lintrstRL	0.086	0.322**	0.083	0.415*	0.214	0.409	0.133	1.383**
		(0.261)	(0.138)	(0.159)	(0.240)	(0.198)	(0.249)	(0.356)	(0.687)
Taxes on income (total)	ltxinctot	0.275	0.292	-0.199	-0.582***	-0.280	0.432**	-1.489***	-1.592***
		(0.207)	(0.199)	(0.156)	(0.201)	(0.258)	(0.201)	(0.318)	(0.426)
Air freight	Olairfreight	0.103	0.350***	-0.359***	0.112	-0.070	0.536***	-0.674***	-0.465
		(0.203)	(0.128)	(0.073)	(0.100)	(0.107)	(0.163)	(0.247)	(0.439)
Trade percentage of GDP	ltradepgdp	0.929***	0.538***	1.226***	1.066***	0.814***	0.899***	1.719***	1.568***
		(0.229)	(0.161)	(0.087)	(0.214)	(0.191)	(0.337)	(0.189)	(0.443)
Stock traded	Olstktrdtot	-0.047	0.414***	-0.041	0.252*	0.210*	0.132	0.909***	0.660*

(total)		(0.215)	(0.142)	(0.078)	(0.150)	(0.111)	(0.163)	(0.276)	(0.345)
Political Rights	FHPR	0.331**	0.192*	-0.005	0.121	0.324**	0.313**	0.128	0.776**
		(0.167)	(0.116)	(0.059)	(0.123)	(0.148)	(0.152)	(0.160)	(0.352)
Civil Liberties	FHCL	-0.701***	-0.535***	-0.446***	-0.663***	-0.884***	-0.206	-0.818***	-0.946**
		(0.179)	(0.136)	(0.077)	(0.130)	(0.137)	(0.157)	(0.205)	(0.379)
Government Stability	gov_stab	0.495***	0.152**	0.115***	0.117**	-0.007	-0.089	0.172*	-0.062
		(0.090)	(0.072)	(0.039)	(0.046)	(0.088)	(0.062)	(0.090)	(0.085)
Law & Order	law_order	0.146**	-0.128	0.315***	0.187*	0.365***	0.019	0.128	-0.251
		(0.059)	(0.103)	(0.075)	(0.101)	(0.132)	(0.113)	(0.113)	(0.348)
Bureaucratic Quality	bureauc_qual	-0.370*	0.447**	0.165	0.017	-0.244	0.229	0.365*	1.561***
		(0.198)	(0.218)	(0.117)	(0.162)	(0.181)	(0.317)	(0.203)	(0.570)
Constant	_cons	-20.999***	-22.604***	-33.907***	-26.549***	-26.383***	-33.795***	-37.824***	-25.661***
		(3.507)	(2.088)	(1.893)	(5.334)	(2.954)	(5.820)	(4.434)	(9.069)
N		391.000	466.000	623.000	412.000	505.000	283.000	285.000	133.000
Pseudo R2		0.3047	0.4081	0.5106	0.3347	0.4229	0.3623	0.309	0.2684

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

The variation of the model 2.3, omitting wages variable in order to provide a sensitivity analysis where we control only for civil liberties and not the channel through which it affects FDI flows. The table below is includes the model 1.3 covered in the tables 7.10-7.12 in the appendices 7.5.

Table 7.15: Sensitivity analysis of the results provided in tables 7.10-7.12 (in appendices 7.5 and 7.6) without wages		Estimation of Determinants of Total FDI (Model 2.3)							
Variable name	STATA label	US	UK	Germany	Netherlands	France	Japan	Finland	Norway
GDP	lgdp	1.018***	0.952***	1.237***	1.149***	1.157***	1.219***	0.760***	0.632*
		(0.236)	(0.156)	(0.131)	(0.176)	(0.116)	(0.319)	(0.196)	(0.325)
Production of Electricity	Olprod_elec	-0.448	-0.237	-0.408**	-0.765***	-0.924***	-0.214	-0.539*	-0.406
		(0.366)	(0.297)	(0.207)	(0.237)	(0.123)	(0.390)	(0.315)	(0.285)
Interest rate lending	lintrstRL	0.218	0.245*	0.068	0.515*	0.383	0.083	-0.077	1.027
		(0.369)	(0.141)	(0.135)	(0.267)	(0.247)	(0.549)	(0.490)	(0.714)
Taxes on income (total)	ltxinctot	0.402	0.247	-0.124	-0.697***	-0.070	0.213	-1.503***	-0.877
		(0.467)	(0.283)	(0.201)	(0.231)	(0.172)	(0.530)	(0.307)	(1.129)
Air freight	Olairfreight	0.388*	0.428***	-0.129	0.136	-0.054	0.642***	-0.531**	-0.083
		(0.211)	(0.128)	(0.103)	(0.182)	(0.140)	(0.192)	(0.252)	(0.463)
Expenditure on research & Development	lrndexp	-0.214	-0.130	-0.140	0.308*	0.394***	-0.277	1.582***	0.909
		(0.324)	(0.277)	(0.210)	(0.168)	(0.134)	(0.289)	(0.257)	(0.836)
Trade percentage of GDP	ltradepgdp	0.864*	0.548*	1.322***	1.231***	1.114***	0.808*	1.296***	1.039
		(0.450)	(0.299)	(0.116)	(0.269)	(0.237)	(0.488)	(0.429)	(0.641)
Stock traded	Olstktrdtot	0.004	0.327*	0.022	0.223	0.212	0.272	0.431*	0.267

(total)		(0.351)	(0.185)	(0.106)	(0.167)	(0.201)	(0.215)	(0.243)	(0.598)
Political Rights	FHPR	0.496**	0.469***	0.063	0.081	0.251	0.365**	-0.091	1.226*
		(0.211)	(0.167)	(0.126)	(0.144)	(0.203)	(0.165)	(0.271)	(0.714)
Civil Liberties	FHCL	-0.749***	-0.833***	-0.595***	-0.631***	-0.780***	-0.281	-0.268	-1.185*
		(0.201)	(0.188)	(0.143)	(0.153)	(0.207)	(0.234)	(0.315)	(0.660)
Government Stability	gov_stab	0.398*	0.120**	0.063	0.066	-0.102*	-0.118	0.123	-0.258
		(0.219)	(0.058)	(0.066)	(0.090)	(0.055)	(0.087)	(0.137)	(0.184)
Law & Order	law_order	0.067	-0.046	0.269**	0.144	0.282***	-0.062	-0.037	-0.236
		(0.127)	(0.149)	(0.133)	(0.136)	(0.104)	(0.218)	(0.161)	(0.468)
Bureaucratic Quality	bureauc_qual	0.135	0.434**	-0.039	-0.012	-0.347*	0.489	0.189	1.274
		(0.400)	(0.200)	(0.217)	(0.254)	(0.190)	(0.354)	(0.293)	(0.791)
Constant	_cons	-27.609***	-24.392***	-32.331***	-28.760***	-28.496***	-32.105***	-17.068**	-16.043
		(7.910)	(5.125)	(3.699)	(6.594)	(3.693)	(10.138)	(7.171)	(11.177)
N		248.000	312.000	386.000	295.000	392.000	213.000	223.000	100.000
Pseudo R2		0.3072	0.4193	0.4533	0.4235	0.4669	0.3775	0.3091	0.3008

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

As it is observable from tables 7.14 and 7.15, the results are in line with those reported in the text where we included wages as one of the covariates to explain the FDI activity.

Appendix 7.11: Sensitivity analysis using model 1.3 and Adam and Filippaios (2007) categorization

Table 7.12.a; tabulates the results of the regression analysis of the aggregated FDI (using model 1.3) into host countries with various levels of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.12.a		Estimation of Determinants of Total FDI (Model 1.3)											
		Countries with high and moderately high level of civil liberties $FHCL \leq 3$						Countries with moderately low and low level of civil liberties $FHCL \geq 4$					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	0.723***	0.923***	1.461***	1.317***	1.598***	1.323***	0.985***	0.628*	1.149***	1.074***	1.091***	1.519
		(0.178)	(0.129)	(0.136)	(0.130)	(0.132)	(0.197)	(0.363)	(0.352)	(0.169)	(0.288)	(0.210)	(4.077)
Production of Electricity	Olprod_elec	-0.995***	0.106	-0.495***	-0.814***	-0.457*	-0.043	-1.165	-1.320	-0.616	-0.635	-0.711	2.391
		(0.252)	(0.319)	(0.186)	(0.176)	(0.254)	(0.290)	(0.746)	(0.909)	(0.502)	(0.897)	(1.579)	(12.146)
Interest rate lending	lintrstRL	-0.146	0.367**	0.369**	0.617***	0.549*	0.187	0.656	0.048	0.748	1.537*	0.575	2.580
		(0.351)	(0.172)	(0.146)	(0.200)	(0.310)	(0.292)	(0.567)	(1.038)	(0.657)	(0.783)	(0.582)	(13.087)
Wage per hour	Olwageph	-0.268	0.167	0.185	0.340***	0.343***	0.596**	-0.236	-0.112	0.213	-1.393**	0.417**	-0.826
		(0.223)	(0.118)	(0.188)	(0.107)	(0.130)	(0.253)	(0.486)	(0.633)	(0.263)	(0.525)	(0.176)	(2.596)
Taxes on income (total)	ltxinctot	1.763**	0.157	-0.995***	-0.475*	-0.563	-2.344***	0.751	0.537	-0.175	0.502	0.999***	2.907
		(0.714)	(0.377)	(0.359)	(0.275)	(0.398)	(0.628)	(0.568)	(0.639)	(0.343)	(0.566)	(0.285)	(5.547)
Air freight	Olairfreight	0.430*	0.438**	-0.234*	-0.100	-0.202	-0.843***	0.205	-0.057	-0.085	1.765***	0.333	9.360
		(0.246)	(0.177)	(0.127)	(0.140)	(0.137)	(0.250)	(0.809)	(0.888)	(0.405)	(0.644)	(0.364)	(14.048)
Trade	ltradepgdp	0.350	0.525*	1.643***	1.554***	1.723***	1.766***	0.742	0.134	1.810***	-1.220	-0.150	-7.884

percentage of GDP		(0.319)	(0.292)	(0.233)	(0.346)	(0.343)	(0.583)	(0.812)	(1.349)	(0.558)	(1.056)	(0.714)	(10.432)
Stock traded (total)	Olstktrdtot	-0.140	0.307	0.143	0.344***	0.316*	0.578*	0.294	0.790	-0.438	-0.846	0.746*	0.001
		(0.205)	(0.200)	(0.109)	(0.100)	(0.170)	(0.296)	(0.473)	(0.500)	(0.312)	(0.565)	(0.408)	(3.504)
Political Rights	FHPR	0.493*	0.116	-0.451***	0.107	-0.053	-0.017	0.101	0.175	0.049	0.352*	-0.113	0.008
		(0.268)	(0.270)	(0.166)	(0.291)	(0.284)	(0.324)	(0.248)	(0.395)	(0.195)	(0.184)	(0.438)	(5.807)
Civil Liberties	FHCL	-1.275***	-0.734***	-0.381***	-0.568***	-0.818***	-0.573*	-0.003	-0.329	-0.023	-1.238**	-0.671	-0.207
		(0.293)	(0.219)	(0.137)	(0.126)	(0.136)	(0.311)	(0.527)	(0.641)	(0.390)	(0.490)	(0.622)	(2.777)
Government Stability	gov_stab	0.059	0.194***	0.068	0.088*	-0.056	0.271***	0.376	0.420*	0.151	0.283	-0.145	0.381
		(0.112)	(0.072)	(0.057)	(0.051)	(0.084)	(0.101)	(0.453)	(0.245)	(0.098)	(0.221)	(0.218)	(1.508)
Law & Order	law_order	0.112	-0.204*	0.383***	0.139	0.160	0.068	0.273*	0.029	0.090	1.255***	1.020**	-0.820
		(0.087)	(0.119)	(0.095)	(0.116)	(0.150)	(0.180)	(0.155)	(0.498)	(0.319)	(0.389)	(0.436)	(2.518)
Bureaucratic Quality	bureauc_qual	0.103	0.567**	-0.092	0.209	0.082	0.747**	-0.495	0.066	0.219	-0.281	-1.847*	-0.677
		(0.245)	(0.269)	(0.169)	(0.211)	(0.201)	(0.354)	(0.465)	(0.748)	(0.454)	(0.492)	(1.026)	(6.490)
Constant	_cons	-19.609***	-23.421***	-37.243***	-36.609***	-42.125***	-34.740***	-30.310***	-16.930	-36.922***	-27.455**	-22.979***	-20.208
		(4.460)	(4.256)	(3.896)	(4.643)	(5.206)	(5.414)	(10.323)	(14.235)	(6.590)	(10.921)	(8.322)	(87.752)
N		241.000	279.000	344.000	293.000	332.000	214.000	73.000	72.000	113.000	48.000	75.000	29.000
Pseudo R2		0.4057	0.4399	0.4521	0.4215	0.5111	0.3028	0.3824	0.4253	0.6222	0.6239	0.5463	0.7194

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

Table 7.13.a. tabulates the results of the regression analysis of the sectoral FDI (using model 1.3) into host countries with higher level of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.13.a		Estimation of Determinants of Manufacturing FDI (All countries); countries with high and moderately high level of civil liberties $FHCL \leq 3$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	1.170***	0.879***	0.618**	0.379	0.540**	1.510***	0.800***	-0.024	4.416	2.956	2.283	-2.746
		(0.168)	(0.240)	(0.271)	(0.359)	(0.231)	(0.225)	(0.255)	(1.852)	(4.521)	(2.765)	(3.424)	(9.731)
Production of Electricity	Olprod_elec	-0.006	-0.024	-0.020	-1.077*	-0.808**	0.156	-0.289	-5.051	-21.705**	31.596***	-15.376	-9.945
		(0.143)	(0.286)	(0.391)	(0.625)	(0.386)	(0.288)	(0.791)	(15.793)	(9.810)	(7.452)	(14.679)	(8.694)
Interest rate lending	lintrstRL	0.553***	0.450	-0.057	-0.109	-0.225	0.903**	0.221	-0.530	3.065	-19.219**	3.152	0.197
		(0.190)	(0.291)	(0.717)	(0.525)	(0.281)	(0.456)	(0.351)	(4.696)	(7.689)	(7.863)	(8.687)	(3.689)
Wage per hour	Olwageph	-0.251*	0.063	0.231	0.943***	0.540**	-0.011	0.352	1.760	-0.490	-11.715	-1.152	-12.119
		(0.141)	(0.274)	(0.416)	(0.311)	(0.230)	(0.331)	(0.364)	(8.230)	(8.285)	(8.587)	(12.828)	(14.120)
Taxes on income (total)	ltxinctot	0.664***	0.446	-0.381	0.821	0.501	-2.161***	0.161	1.887	0.018	5.435	0.973	-7.858
		(0.214)	(0.842)	(1.019)	(1.204)	(0.801)	(0.458)	(0.475)	(6.391)	(2.573)	(6.462)	(5.787)	(11.605)
Air freight	Olairfreight	0.285	0.158	0.399	-0.408	-0.354**	-0.270	-0.251	-0.728	-3.701	8.373	1.167	8.058
		(0.190)	(0.343)	(0.337)	(0.319)	(0.172)	(0.285)	(0.409)	(4.142)	(4.559)	(6.988)	(4.078)	(8.301)
Trade percentage of GDP	ltradepgdp	0.569**	0.109	0.587	1.082	0.802**	1.723**	0.411	3.745	1.006	-35.863***	1.592	-1.597
		(0.257)	(0.668)	(0.598)	(0.716)	(0.390)	(0.679)	(0.634)	(11.370)	(11.354)	(10.121)	(9.311)	(3.622)

Stock traded (total)	Olstktrdtot	0.082	0.498	0.572	0.398	0.109	0.968**	0.648*	0.634	-1.763	0.073	-0.084	0.577
		(0.191)	(0.327)	(0.485)	(0.451)	(0.228)	(0.441)	(0.381)	(2.605)	(3.583)	(2.419)	(3.642)	(4.441)
Political Rights	FHPR	0.058	-0.368	-0.170	0.084	-0.133	-0.615	0.006	-0.455	-2.047	-0.891	-0.424	19.128
		(0.214)	(0.428)	(0.533)	(0.425)	(0.457)	(0.402)	(0.266)	(4.826)	(3.527)	(6.512)	(6.429)	(12.408)
Civil Liberties	FHCL	-0.613***	-0.838***	-0.215	-0.084	-0.790*	-0.250	-0.241	0.988	-2.662	-3.537	0.277	
		(0.202)	(0.256)	(0.396)	(0.333)	(0.446)	(0.275)	(0.563)	(2.714)	(3.930)	(4.512)	(9.788)	
Government Stability	gov_stab	0.052	0.094	-0.245	-0.026	0.056	0.015	0.083	1.316	0.700	14.281***	0.934	0.233
		(0.163)	(0.073)	(0.223)	(0.129)	(0.140)	(0.095)	(0.400)	(2.364)	(4.251)	(2.916)	(3.141)	(7.984)
Law & Order	law_order	0.035	-0.343*	0.415	0.264	-0.130	0.163	0.160	-1.906	1.493	-33.779***	0.746	
		(0.043)	(0.195)	(0.414)	(0.422)	(0.167)	(0.214)	(0.109)	(9.096)	(9.278)	(6.192)	(6.634)	
Bureaucratic Quality	bureauc_qual	0.110	0.195	-0.736	-0.767	-0.122	0.946***	0.503	-6.586	-3.003	39.543***	-4.527	8.008
		(0.212)	(0.380)	(0.582)	(0.584)	(0.322)	(0.358)	(0.444)	(7.790)	(17.350)	(8.207)	(10.484)	(19.026)
Constant	_cons	-32.957***	-19.994**	-11.270	-12.142	-14.322**	-40.821***	-21.608***	-8.865	-102.198	22.559	-74.892	-24.344
		(5.457)	(8.389)	(9.352)	(10.399)	(6.540)	(8.155)	(7.350)	(50.355)	(131.380)	(103.020)	(142.291)	(182.128)
N		1011.000	333.000	319.000	201.000	307.000	159.000	257.000	27.000	44.000	21.000	43.000	16.000
Pseudo R2		0.175	0.2083	0.064	0.1046	0.1436	0.4179	0.1815	0.389	0.3635	0.5629	0.3673	0.5958

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

Table 7.14.a. tabulates the results of the regression analysis of the sectoral FDI (using model 1.3) into host countries with lower level of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.14.a		Estimation of Determinants of Services FDI (All countries); countries with high and moderately high level of civil liberties $FHCL \geq 4$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	0.827***	1.029***	1.087***	0.756***	1.245***	0.262	1.019***	-1.001	1.601	3.870	2.282	7.455
		(0.118)	(0.151)	(0.131)	(0.145)	(0.108)	(0.276)	(0.138)	(1.867)	(2.338)	(2.794)	(2.070)	(4.571)
Production of Electricity	Olprod_elec	-0.798***	-0.479**	-0.674***	-1.302***	-0.736***	0.064	-1.041***	-11.691	-7.391	7.630	-4.064	-1.992
		(0.152)	(0.187)	(0.205)	(0.227)	(0.260)	(0.245)	(0.347)	(8.739)	(7.190)	(8.339)	(11.160)	(17.059)
Interest rate lending	lintrstRL	-0.237	0.289	0.404**	0.064	0.580**	0.472	0.318	-2.437	-0.195	11.993***	-0.452	-4.562
		(0.249)	(0.186)	(0.179)	(0.232)	(0.244)	(0.289)	(0.264)	(2.282)	(4.747)	(3.671)	(3.131)	(9.235)
Wage per hour	Olwageph	-0.151	0.194**	0.225*	-0.205	0.515***	-0.633**	0.439*	9.257**	-0.883	4.075	-7.395	5.423
		(0.154)	(0.098)	(0.130)	(0.188)	(0.172)	(0.278)	(0.239)	(3.672)	(4.900)	(9.579)	(6.970)	(14.513)
Taxes on income (total)	ltxinctot	0.789*	0.144	-0.686	-0.425	-1.012	-1.646***	-0.218	7.825	-1.167	3.143	-0.875	-9.670
		(0.444)	(0.456)	(0.499)	(0.577)	(0.668)	(0.566)	(0.410)	(6.081)	(1.596)	(1.929)	(2.377)	(6.736)
Air freight	Olairfreight	0.228	0.314**	-0.468***	-0.057	-0.288**	-0.175	0.560	6.596***	-0.715	-3.637	-0.972	2.732
		(0.143)	(0.148)	(0.121)	(0.174)	(0.121)	(0.528)	(0.396)	(2.364)	(3.273)	(3.441)	(4.324)	(7.969)
Trade percentage of GDP	ltradepgdp	0.137	0.670**	1.107***	0.639	1.311***	0.174	1.008**	-5.444	0.425	10.906	1.537	14.836
		(0.213)	(0.308)	(0.291)	(0.389)	(0.213)	(0.561)	(0.480)	(9.664)	(5.023)	(8.514)	(5.773)	(18.849)

Stock traded (total)	Olstktrdtot	0.213	0.460**	0.441***	0.605***	0.514**	0.777***	0.013	0.263	1.489	-2.410	-0.945	0.988
		(0.171)	(0.210)	(0.109)	(0.132)	(0.236)	(0.247)	(0.433)	(1.282)	(3.432)	(1.966)	(2.001)	(3.601)
Political Rights	FHPR	0.264	0.029	-0.123	-0.240	0.142	0.177	-0.167	-2.527*	-0.617	2.565	0.300	-1.756
		(0.244)	(0.186)	(0.195)	(0.328)	(0.287)	(0.987)	(0.184)	(1.422)	(1.314)	(3.576)	(2.181)	(2.896)
Civil Liberties	FHCL	-0.860***	-0.757***	-0.442*	-0.729***	-0.936***	-0.609*	-0.098	-0.530	0.865	-7.734	3.066	35.625
		(0.173)	(0.137)	(0.247)	(0.188)	(0.251)	(0.315)	(0.537)	(7.676)	(3.118)	(8.296)	(5.935)	(48.526)
Government Stability	gov_stab	-0.096	0.090*	-0.077	-0.055	0.003	0.016	-0.246	2.500***	0.119	-3.966	0.098	-1.446
		(0.085)	(0.051)	(0.061)	(0.077)	(0.089)	(0.117)	(0.462)	(0.789)	(1.636)	(3.451)	(1.777)	(4.508)
Law & Order	law_order	0.022	0.071	0.284	-0.296**	-0.004	0.135	0.117	-5.112	0.059	8.673	1.852	-5.835
		(0.063)	(0.125)	(0.187)	(0.142)	(0.202)	(0.316)	(0.088)	(7.006)	(3.962)	(6.750)	(4.586)	(14.126)
Bureaucratic Quality	bureauc_qual	0.591***	0.145	0.177	0.684***	0.384	0.423	0.371	-19.810***	-1.090	-6.325	4.847	-47.590
		(0.205)	(0.207)	(0.339)	(0.219)	(0.237)	(0.882)	(0.254)	(6.775)	(7.640)	(17.146)	(7.316)	(40.915)
Constant	_cons	-20.394***	-28.723***	-28.596***	-16.913***	-32.689***	-2.614	-26.905***	89.231*	-35.843	-147.778**	-99.261	-306.443
		(3.716)	(4.436)	(3.870)	(5.114)	(2.903)	(10.066)	(3.752)	(45.640)	(74.352)	(71.904)	(69.181)	(231.867)
N		788.000	794.000	788.000	539.000	696.000	256.000	199.000	53.000	99.000	68.000	110.000	40.000
Pseudo R2		0.2383	0.2285	0.1807	0.1621	0.2318	0.11	0.2855	0.4536	0.1766	0.2828	0.152	0.3529

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

.

Appendix 7.12: Sensitivity Analysis using model 1.3 and Author's categorization

Table 7.12.b. tabulates the results of the regression analysis of the aggregated FDI (using model 1.3) into host countries with various levels of civil liberties. Categorization of the group of countries is based on Author's categorization of countries based on their level of civil liberties.

Table 7.12.b		Estimation of Determinants of Total FDI (Model 1.3)											
		Countries with high and moderately high level of civil liberties $FHCL < 3$						Countries with moderately low and low level of civil liberties $FHCL \geq 3$					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	1.085***	1.016***	1.354***	1.348***	1.514***	1.433***	1.111***	0.425**	1.253***	0.938***	0.981***	1.568**
		(0.167)	(0.175)	(0.093)	(0.132)	(0.161)	(0.172)	(0.160)	(0.193)	(0.134)	(0.218)	(0.139)	(0.682)
Production of Electricity	Olprod_elec	-0.367	0.099	-0.700***	-0.871***	-0.623***	0.014	-1.160*	-0.876*	-0.517**	-0.331	0.700	0.116
		(0.276)	(0.304)	(0.142)	(0.145)	(0.213)	(0.271)	(0.608)	(0.494)	(0.216)	(0.377)	(0.752)	(1.871)
Interest rate lending	lintrstRL	-0.190	0.283*	0.210	0.454*	0.282	-0.242	0.671**	0.715*	0.578***	0.958***	1.877***	1.795
		(0.405)	(0.154)	(0.201)	(0.252)	(0.321)	(0.538)	(0.282)	(0.388)	(0.213)	(0.301)	(0.499)	(1.373)
Wage per hour	Olwageph	-0.075	0.041	0.094	0.335**	0.276*	0.380	-0.275	0.369	0.045	-0.793**	0.133	-0.081
		(0.236)	(0.155)	(0.130)	(0.168)	(0.143)	(0.274)	(0.340)	(0.259)	(0.103)	(0.323)	(0.268)	(1.414)
Taxes on income (total)	ltxinctot	0.855	0.292	-1.127***	-0.350	0.009	-2.319***	0.693**	0.848**	-0.184	-0.405	0.387	-0.087
		(0.588)	(0.480)	(0.433)	(0.305)	(0.410)	(0.678)	(0.336)	(0.403)	(0.200)	(0.419)	(0.439)	(1.735)
Air freight	Olairfreight	0.262	0.584**	0.036	-0.167	-0.314*	-0.555**	0.355	0.053	-0.238	0.735***	0.304	0.741
		(0.238)	(0.269)	(0.206)	(0.132)	(0.183)	(0.241)	(0.349)	(0.385)	(0.199)	(0.262)	(0.395)	(1.539)
Trade	ltradepgdp	0.697**	1.092***	1.734***	1.734***	1.894***	2.283***	0.966**	0.645	1.405***	-0.360	0.749	0.656

percentage of GDP		(0.280)	(0.331)	(0.278)	(0.439)	(0.460)	(0.547)	(0.420)	(0.623)	(0.230)	(0.674)	(0.581)	(2.910)
Stock traded (total)	Olstktrdtot	0.623*	0.291**	0.204	0.421***	0.293	0.789**	0.126	0.631**	-0.032	0.441	0.055	0.995
		(0.369)	(0.129)	(0.142)	(0.129)	(0.191)	(0.334)	(0.270)	(0.251)	(0.127)	(0.325)	(0.197)	(1.320)
Political Rights	FHPR	-0.179	0.125	-0.424	0.555	0.808	-0.384	0.252*	0.487**	-0.083	-0.000	0.610	0.281
		(0.547)	(0.399)	(0.364)	(0.408)	(0.510)	(0.600)	(0.142)	(0.244)	(0.116)	(0.196)	(0.408)	(0.396)
Civil Liberties	FHCL	-0.881**	-0.558*	-0.175	-0.651**	-0.748***	-0.310	-0.196	-0.510	0.081	-0.407	-0.834	-0.629
		(0.354)	(0.289)	(0.202)	(0.281)	(0.172)	(0.327)	(0.252)	(0.419)	(0.178)	(0.467)	(0.564)	(0.601)
Government Stability	gov_stab	-0.009	0.191**	0.030	0.127**	-0.060	0.171*	0.234	0.504***	0.158***	0.206*	0.182	0.303
		(0.254)	(0.076)	(0.062)	(0.061)	(0.089)	(0.102)	(0.254)	(0.097)	(0.055)	(0.117)	(0.150)	(0.359)
Law & Order	law_order	0.163**	-0.293***	0.235**	0.166	0.202	0.129	0.205*	0.013	0.152	0.315	0.324	0.454
		(0.079)	(0.110)	(0.111)	(0.113)	(0.134)	(0.238)	(0.105)	(0.240)	(0.160)	(0.317)	(0.415)	(0.679)
Bureaucratic Quality	bureauc_qual	0.852*	0.624**	-0.113	0.221	0.271	0.406	-0.327	-0.158	0.152	-0.063	0.325	-0.433
		(0.434)	(0.297)	(0.244)	(0.331)	(0.249)	(0.361)	(0.237)	(0.323)	(0.209)	(0.206)	(0.786)	(1.272)
Constant	_cons	-30.561***	-28.676***	-33.105***	-39.228***	-44.080***	-37.468***	-33.484***	-17.351**	-37.432***	-20.993***	-33.418***	-48.804**
		(5.439)	(5.600)	(3.158)	(5.616)	(6.387)	(5.896)	(5.506)	(6.869)	(3.509)	(6.728)	(5.318)	(22.131)
N		192.000	230.000	283.000	250.000	285.000	195.000	122.000	121.000	174.000	91.000	122.000	48.000
Pseudo R2		0.4085	0.4249	0.3815	0.4352	0.5445	0.3075	0.3424	0.4426	0.5812	0.4098	0.4192	0.5261

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. Source: Author's estimations in STATA. Observations marked red, indicate that the number of observations for the regressions are considerably low, affecting the statistical validity of the estimations provided.

Table 7.13.b. tabulates the results of the regression analysis of the sectoral FDI (using model 1.3) into host countries with higher level of civil liberties. Categorization of the group of countries is based on author's categorization of countries based on their level of civil liberties.

Table 7.13.b		Estimation of Determinants of Manufacturing FDI (All countries); countries with high and moderately high level of civil liberties $FHCL < 3$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	1.422***	0.808***	0.570*	0.435	0.402*	1.543***	1.125***	0.648	1.347	-0.924	0.888	0.631
		(0.157)	(0.241)	(0.343)	(0.300)	(0.216)	(0.143)	(0.143)	(0.406)	(1.431)	(4.295)	(1.281)	(3.144)
Production of Electricity	Olprod_elec	0.155	0.173	0.132	-1.308**	-1.007***	0.226	-1.213***	-0.729	-2.930	3.033	4.022	-3.370
		(0.119)	(0.289)	(0.534)	(0.592)	(0.252)	(0.341)	(0.379)	(1.894)	(3.630)	(8.217)	(4.970)	(8.879)
Interest rate lending	lintrstRL	0.781***	0.342	-0.542	0.057	-0.485*	0.809	0.585**	0.620	0.099	-3.754	4.370*	0.218
		(0.192)	(0.290)	(0.425)	(0.634)	(0.264)	(0.507)	(0.256)	(1.561)	(2.161)	(6.555)	(2.401)	(4.197)
Wage per hour	Olwageph	-0.105	0.104	0.112	0.882**	0.346	0.163	-0.248	-0.626	0.910	1.265	2.639	-0.311
		(0.161)	(0.220)	(0.346)	(0.372)	(0.244)	(0.359)	(0.244)	(1.286)	(3.237)	(3.599)	(2.266)	(7.318)
Taxes on income (total)	ltxinctot	0.541	0.427	-0.151	0.327	1.013*	-2.112***	0.370	-0.123	-0.995	0.456	0.628	-2.005
		(0.383)	(0.726)	(1.116)	(0.974)	(0.613)	(0.636)	(0.600)	(1.164)	(2.632)	(6.444)	(1.264)	(8.598)
Air freight	Olairfreight	0.052	0.295	0.473	-0.529	-0.269	-0.308	0.635**	0.530	-0.770	-2.555	-0.375	3.501
		(0.191)	(0.330)	(0.496)	(0.536)	(0.240)	(0.412)	(0.255)	(1.221)	(2.737)	(4.500)	(1.929)	(4.444)
Trade percentage	ltradepgdp	0.752**	0.056	0.717	0.823	0.751*	2.551***	0.413	-0.083	1.032	3.056	6.141**	-3.562
		(0.304)	(0.720)	(0.806)	(0.845)	(0.446)	(0.526)	(0.382)	(2.061)	(5.360)	(6.201)	(3.054)	(9.041)

of GDP													
Stock traded (total)	Olstktrdtot	0.247	0.299	0.493	0.557	0.110	0.796*	0.317	-0.117	0.813	-0.097	0.089	1.583
		(0.210)	(0.344)	(0.374)	(0.494)	(0.292)	(0.414)	(0.321)	(0.858)	(2.040)	(2.105)	(1.102)	(2.008)
Political Rights	FHPR	0.031	-0.802	0.100	0.079	0.241	-0.092	-0.040	0.535	-0.389	0.688	0.232	0.378
		(0.471)	(0.501)	(1.154)	(1.797)	(0.701)	(0.922)	(0.208)	(0.533)	(0.966)	(2.452)	(0.757)	(2.145)
Civil Liberties	FHCL	-0.639***	-1.028***	0.098	0.032	-0.420	0.172	0.281	-0.781	0.803	-1.874	-0.872	1.232
		(0.208)	(0.309)	(0.747)	(0.569)	(0.382)	(0.385)	(0.292)	(1.244)	(2.143)	(7.523)	(1.994)	(8.171)
Government Stability	gov_stab	0.139	0.094	-0.176	0.081	0.016	0.037	0.058	0.313	0.215	-0.172	-0.164	0.572
		(0.152)	(0.085)	(0.210)	(0.208)	(0.131)	(0.091)	(0.193)	(0.235)	(0.558)	(0.934)	(0.471)	(4.510)
Law & Order	law_order	0.026	-0.556**	0.519	0.225	-0.258	0.130	0.131**	0.331	0.009	1.488	0.717	-1.204
		(0.050)	(0.230)	(0.318)	(0.441)	(0.253)	(0.241)	(0.059)	(0.373)	(1.605)	(2.069)	(0.960)	(5.937)
Bureaucratic Quality	bureauc_qual	0.318	0.176	-0.948	-0.574	0.104	1.067***	-0.230	0.043	0.921	-2.125	-2.094	0.808
		(0.230)	(0.270)	(0.619)	(0.697)	(0.322)	(0.339)	(0.233)	(1.101)	(2.876)	(3.573)	(1.894)	(8.606)
Constant	_cons	-41.661***	-15.640*	-11.586	-12.336	-12.547*	-46.866***	-32.948***	-17.412	-39.290	29.033	-53.754	-2.676
		(5.575)	(8.732)	(10.841)	(11.875)	(7.241)	(5.323)	(4.642)	(15.464)	(48.917)	(145.786)	(47.595)	(93.871)
N		836.000	293.000	300.000	182.000	283.000	148.000	432.000	67.000	63.000	40.000	67.000	27.000
Pseudo R2		0.1654	0.2049	0.0745	0.1078	0.1393	0.423	0.1804	0.3131	0.2502	0.2706	0.2789	0.6477

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

Table 7.14.b. tabulates the results of the regression analysis of the sectoral FDI (using model 1.3) into host countries with lower level of civil liberties. Categorization of the group of countries is based on author's categorization of countries based on their level of civil liberties.

Table 7.14.b		Estimation of Determinants of Services FDI (All countries); countries with high and moderately high level of civil liberties $FHCL \geq 3$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	0.843***	1.045***	1.117***	0.783***	1.146***	0.583*	0.990***	0.354	1.437***	2.479***	2.834***	4.028
		(0.113)	(0.083)	(0.113)	(0.163)	(0.138)	(0.298)	(0.167)	(0.557)	(0.499)	(0.739)	(0.892)	(10.683)
Production of Electricity	Olprod_elec	-0.740***	-0.504	-0.544***	-1.375***	-0.759**	0.329	-1.365***	-2.948	-4.035**	2.789	1.684	1.143
		(0.172)	(0.317)	(0.175)	(0.302)	(0.351)	(0.385)	(0.472)	(2.266)	(1.888)	(3.240)	(2.235)	(14.652)
Interest rate lending	lintrstRL	-0.612*	0.534**	0.130	-0.150	0.290	0.233	0.547***	-0.631	0.337	1.411	0.333	-7.136
		(0.323)	(0.253)	(0.199)	(0.349)	(0.341)	(0.315)	(0.147)	(0.598)	(0.967)	(1.988)	(1.425)	(29.234)
Wage per hour	Olwageph	-0.152	0.241**	0.171	-0.209	0.374**	-0.526*	0.291	0.244	-0.607	0.528	-1.963	3.846
		(0.165)	(0.120)	(0.222)	(0.132)	(0.175)	(0.278)	(0.235)	(0.793)	(0.996)	(1.158)	(1.504)	(13.563)
Taxes on income (total)	ltxinctot	0.768**	-0.093	-0.651**	-0.442	-0.604	-1.440***	0.204	-0.169	-0.952	-0.586	0.510	-3.276
		(0.371)	(0.456)	(0.290)	(0.582)	(0.623)	(0.497)	(0.400)	(1.503)	(1.270)	(0.743)	(0.776)	(12.935)
Air freight	Olairfreight	0.269**	0.318	-0.420***	-0.044	-0.208*	-0.548	0.499**	1.424*	-0.684	-3.195***	-2.799**	8.014
		(0.129)	(0.252)	(0.163)	(0.206)	(0.123)	(0.408)	(0.234)	(0.797)	(0.911)	(1.206)	(1.258)	(8.385)
Trade percentage	ltradepgdp	0.283	0.536*	1.116***	0.671	1.432***	0.767	1.188***	-0.093	0.236	4.539**	1.027	7.970
		(0.226)	(0.278)	(0.294)	(0.425)	(0.335)	(0.708)	(0.375)	(1.050)	(1.389)	(2.111)	(2.504)	(35.291)

of GDP													
Stock traded (total)	Olstktrdtot	0.103	0.395*	0.474***	0.538***	0.448**	0.955***	-0.125	0.736*	1.442**	1.637	0.461	1.803
		(0.263)	(0.209)	(0.160)	(0.170)	(0.196)	(0.218)	(0.276)	(0.384)	(0.727)	(1.104)	(0.955)	(3.986)
Political Rights	FHPR	0.141	-0.293	0.500	1.073	0.747**	1.554**	-0.151	-0.393*	-0.618	-0.181	-0.084	-1.804
		(0.263)	(0.575)	(0.476)	(0.707)	(0.350)	(0.685)	(0.124)	(0.230)	(0.461)	(0.802)	(0.423)	(3.564)
Civil Liberties	FHCL	-0.823***	-0.973***	-0.582	-1.034***	-0.775**	-0.459	0.173	0.974	1.059	-1.892	-1.522	-1.856
		(0.203)	(0.279)	(0.388)	(0.304)	(0.378)	(0.430)	(0.261)	(0.863)	(0.983)	(1.599)	(1.480)	(14.758)
Government Stability	gov_stab	-0.225	0.110	-0.074	-0.062	0.020	0.102	-0.121	-0.177	-0.202	-0.111	-0.204	0.154
		(0.181)	(0.068)	(0.061)	(0.068)	(0.066)	(0.139)	(0.185)	(0.122)	(0.270)	(0.250)	(0.359)	(4.337)
Law & Order	law_order	0.016	-0.099	0.085	-0.056	-0.215	0.246	0.192**	0.295	0.834	0.214	1.031*	-4.012
		(0.040)	(0.163)	(0.174)	(0.239)	(0.202)	(0.331)	(0.076)	(0.241)	(0.824)	(0.419)	(0.524)	(18.727)
Bureaucratic Quality	bureauc_qual	0.883***	0.356	0.345	0.535*	0.614**	0.300	-0.041	-1.329*	-0.379	0.215	1.596	-10.580
		(0.266)	(0.296)	(0.360)	(0.287)	(0.257)	(0.691)	(0.132)	(0.725)	(0.926)	(1.492)	(1.230)	(25.149)
Constant	_cons	-20.832***	-27.563***	-29.261***	-18.963***	-32.285***	-16.756	-30.679***	-3.084	-35.896*	-76.861***	-80.440***	-68.744
		(3.596)	(3.140)	(4.109)	(5.652)	(4.010)	(11.016)	(4.028)	(21.850)	(18.329)	(29.041)	(28.285)	(226.415)
N		662.000	723.000	731.000	504.000	646.000	254.000	325.000	124.000	156.000	103.000	160.000	42.000
Pseudo R2		0.2231	0.2196	0.1699	0.1635	0.2371	0.1141	0.2302	0.2547	0.2279	0.2016	0.184	0.3747

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

Appendix 7.13: Sensitivity Analysis using model 1.3 variation and Adam and Filippaios (2007) categorization

Table 7.12.c. tabulates the results of the regression analysis of the aggregated FDI (using variation of model 1.3 excluding wage per hour) into host countries with various levels of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.12.c		Estimation of Determinants of Total FDI (Model 1.3)											
		Countries with high and moderately high level of civil liberties $FHCL \leq 3$						Countries with moderately low and low level of civil liberties $FHCL \geq 4$					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	0.635***	0.804***	1.279***	1.177***	1.331***	1.391***	0.507***	1.067***	1.355***	0.563**	0.839***	2.142*
		(0.181)	(0.118)	(0.056)	(0.110)	(0.125)	(0.187)	(0.181)	(0.190)	(0.117)	(0.245)	(0.192)	(1.091)
Production of Electricity	Olprod_elec	-0.859***	-0.128	-0.451***	-0.830***	-0.642***	-0.111	-0.266	-0.498	0.145	-0.521	-0.313	-0.254
		(0.176)	(0.164)	(0.116)	(0.200)	(0.186)	(0.303)	(0.337)	(0.367)	(0.256)	(0.491)	(0.904)	(0.842)
Interest rate lending	lintrstRL	-0.291	0.295	0.245	0.508*	0.289	0.189	0.132	0.457	0.448	0.990	0.978	-0.063
		(0.282)	(0.182)	(0.150)	(0.270)	(0.222)	(0.333)	(0.364)	(0.592)	(0.469)	(0.671)	(0.771)	(1.834)
Taxes on income (total)	ltxinctot	1.774**	0.617**	-0.903***	-0.377	-0.356	-2.320***	0.058	0.030	-0.088	-0.482**	0.473	-0.434
		(0.698)	(0.251)	(0.305)	(0.252)	(0.391)	(0.553)	(0.217)	(0.315)	(0.216)	(0.223)	(0.344)	(1.170)
Air freight	Olairfreight	0.260	0.554***	-0.100	0.180	0.137	-0.554**	-0.588*	0.149	-0.232	-0.124	-0.105	2.191
		(0.186)	(0.191)	(0.142)	(0.140)	(0.149)	(0.263)	(0.349)	(0.448)	(0.243)	(0.382)	(0.403)	(3.511)
Trade percentage of GDP	ltradepgdp	0.557*	0.617**	1.294***	1.502***	1.568***	1.667***	1.299***	1.129**	1.489***	1.471***	0.396	0.651
		(0.294)	(0.307)	(0.174)	(0.218)	(0.286)	(0.335)	(0.394)	(0.545)	(0.250)	(0.498)	(0.723)	(1.681)

Stock traded (total)	Olstktrdtot	-0.424**	0.296*	0.154	0.299**	0.140	0.910***	0.180	0.152	-0.213	-0.322	0.522*	0.567
		(0.182)	(0.152)	(0.114)	(0.145)	(0.167)	(0.174)	(0.274)	(0.306)	(0.208)	(0.399)	(0.301)	(0.997)
Political Rights	FHPR	0.620***	0.088	-0.292*	-0.354	-0.380	-0.257	-0.051	-0.162	-0.012	0.162	0.155	0.097
		(0.178)	(0.204)	(0.162)	(0.247)	(0.241)	(0.299)	(0.204)	(0.225)	(0.160)	(0.210)	(0.383)	(0.418)
Civil Liberties	FHCL	-1.089***	-0.695***	-0.699***	-0.664***	-1.005***	-0.839**	0.031	0.043	-0.317	-0.660	-0.046	-0.821
		(0.240)	(0.205)	(0.136)	(0.137)	(0.169)	(0.350)	(0.357)	(0.390)	(0.224)	(0.521)	(0.623)	(0.620)
Government Stability	gov_stab	0.217*	0.140***	0.074	0.107*	-0.033	0.163	0.198	0.135	0.045	0.308**	-0.141	-0.080
		(0.112)	(0.049)	(0.045)	(0.058)	(0.057)	(0.111)	(0.315)	(0.141)	(0.078)	(0.118)	(0.180)	(0.297)
Law & Order	law_order	0.122**	-0.273***	0.290**	0.122	-0.007	0.124	0.176*	-0.121	0.121	0.420	0.487*	0.253
		(0.061)	(0.080)	(0.126)	(0.126)	(0.167)	(0.161)	(0.100)	(0.254)	(0.165)	(0.421)	(0.267)	(0.576)
Bureaucratic Quality	bureauc_qual	-0.134	0.508**	-0.083	0.024	0.035	0.406	-0.139	0.383	0.259	-0.380	-1.023	-1.318
		(0.233)	(0.226)	(0.193)	(0.240)	(0.185)	(0.327)	(0.188)	(0.309)	(0.295)	(0.391)	(0.671)	(0.824)
Constant	_cons	-18.214***	-21.237***	-30.351***	-31.525***	-33.108***	-33.655***	-14.577**	-30.449***	-38.217***	-18.168**	-22.139***	-51.205*
		(5.298)	(3.779)	(2.324)	(4.169)	(3.775)	(6.998)	(5.581)	(7.207)	(4.066)	(8.688)	(8.095)	(29.910)
N		285.000	327.000	423.000	329.000	378.000	239.000	106.000	139.000	200.000	83.000	127.000	46.000
Pseudo R2		0.3559	0.4561	0.4863	0.3945	0.4936	0.2864	0.3299	0.3409	0.5374	0.3014	0.3727	0.598

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA

Table 7.13.c. tabulates the results of the regression analysis of the sectoral FDI (using variation of model 1.3 excluding wage per hour) into host countries with higher level of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.13.c		Estimation of Determinants of Manufacturing FDI (All countries); countries with high and moderately high level of civil liberties $FHCL \leq 3$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	1.056***	0.840***	0.636***	0.021	0.643***	1.460***	0.933***	1.013	1.419	-1.277	1.389	0.809
		(0.109)	(0.136)	(0.240)	(0.361)	(0.169)	(0.208)	(0.230)	(0.646)	(0.883)	(4.362)	(1.756)	(26.066)
Production of Electricity	Olprod_elec	0.044	0.062	0.038	-0.990**	-0.726*	0.042	-0.761*	0.401	0.069	-0.371	-2.836*	14.784
		(0.164)	(0.296)	(0.482)	(0.482)	(0.406)	(0.269)	(0.455)	(1.251)	(1.169)	(8.562)	(1.615)	(39.859)
Interest rate lending	lintrstRL	0.497***	0.500***	-0.083	0.015	-0.200	0.882**	0.574	0.137	1.787	-3.045	3.813	3.694
		(0.153)	(0.162)	(0.647)	(0.498)	(0.335)	(0.355)	(0.439)	(1.951)	(3.253)	(10.708)	(3.422)	(22.145)
Taxes on income (total)	ltxinctot	0.302	0.431	-0.447	1.109	0.114	-1.916***	0.071	-0.018	0.028	-0.303	0.849	7.108
		(0.360)	(0.497)	(0.704)	(0.847)	(0.470)	(0.395)	(0.468)	(0.426)	(0.517)	(1.516)	(0.814)	(43.165)
Air freight	Olairfreight	0.330***	0.326	0.308	0.124	-0.292	-0.166	-0.067	-0.669	-1.050	0.001	0.532	11.844
		(0.105)	(0.274)	(0.331)	(0.533)	(0.199)	(0.280)	(0.325)	(1.117)	(1.069)	(12.784)	(1.907)	(11.251)
Trade percentage of GDP	ltradepgdp	0.730***	0.239	0.457	0.188	0.585	1.861***	1.341**	1.182	3.392	2.153	4.755	-25.097
		(0.211)	(0.381)	(0.659)	(0.632)	(0.426)	(0.521)	(0.593)	(2.083)	(2.850)	(20.013)	(3.888)	(19.013)
Stock traded (total)	Olstktrdtot	-0.260**	0.269	0.758***	0.737**	0.530**	1.003***	-0.015	0.589	-1.124	-0.409	0.109	-0.198
		(0.109)	(0.331)	(0.282)	(0.365)	(0.230)	(0.314)	(0.325)	(0.791)	(1.056)	(1.995)	(1.010)	(16.343)

Political Rights	FHPR	0.170	-0.337	-0.119	0.222	-0.072	-0.753	-0.057	0.175	0.813	-0.180	0.568	-5.777
		(0.181)	(0.328)	(0.702)	(0.433)	(0.314)	(0.481)	(0.193)	(0.659)	(0.822)	(4.976)	(1.115)	(81.175)
Civil Liberties	FHCL	-0.764***	-0.889***	0.147	-0.387	-0.818***	-0.078	0.040	-0.594	-0.241	2.149	0.362	3.256
		(0.184)	(0.249)	(0.528)	(0.357)	(0.276)	(0.263)	(0.345)	(1.524)	(1.356)	(6.976)	(3.586)	(90.749)
Government Stability	gov_stab	0.066	0.089	-0.254	0.008	0.021	0.009	0.210	0.240	-0.646	-0.765	0.000	1.993
		(0.093)	(0.071)	(0.217)	(0.182)	(0.090)	(0.098)	(0.211)	(0.375)	(0.707)	(1.038)	(0.539)	(13.139)
Law & Order	law_order	0.082**	-0.331*	0.408	0.362	-0.268*	0.205	0.160*	-0.352	1.406*	1.210	1.533	1.280
		(0.042)	(0.170)	(0.380)	(0.346)	(0.147)	(0.147)	(0.093)	(0.693)	(0.787)	(3.143)	(1.081)	(21.497)
Bureaucratic Quality	bureauc_qual	0.033	0.265	-0.523	-0.808	0.109	0.618***	-0.203	-0.054	1.085	-3.662	-3.004	5.256
		(0.154)	(0.253)	(0.558)	(0.582)	(0.221)	(0.207)	(0.188)	(0.863)	(2.647)	(6.363)	(2.867)	(46.162)
Constant	_cons	-29.063***	-19.674***	-12.109	-0.144	-14.827**	-40.061***	-30.064***	-27.517	-58.177	38.736	-71.699*	32.398
		(3.935)	(4.278)	(10.290)	(11.715)	(6.752)	(5.768)	(7.607)	(22.991)	(39.973)	(137.786)	(42.412)	(722.771)
N		1153.000	369.000	334.000	221.000	333.000	182.000	396.000	59.000	66.000	35.000	62.000	21.000
Pseudo R2		0.163	0.2078	0.0601	0.0462	0.1335	0.3900	0.1531	0.2088	0.2395	0.2441	0.2917	0.6188

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. Source: Author's estimations in STATA

Table 7.14.c. tabulates the results of the regression analysis of the sectoral FDI (using variation of model 1.3 excluding wage per hour) into host countries with lower level of civil liberties. Categorization of the group of countries is based on Adam and Filippaios (2007) categorization of countries based on their level of civil liberties.

Table 7.14.c		Estimation of Determinants of Services FDI (All countries); countries with moderately low and low level of civil liberties $FHCL \geq 4$											
		Manufacturing (Model 1.3)						Services (Model 1.3)					
Variable name	STATA label	US	UK	Germany	Netherlands	France	Finland	US	UK	Germany	Netherlands	France	Finland
GDP	lgdp	0.788***	1.123***	1.121***	0.778***	1.013***	0.640***	0.878***	0.902	1.324***	2.421**	1.147	2.868
		(0.083)	(0.097)	(0.098)	(0.198)	(0.100)	(0.226)	(0.131)	(0.546)	(0.353)	(0.924)	(1.088)	(27.488)
Production of Electricity	Olprod_elec	-0.746***	-0.437*	-0.518***	-1.210***	-0.897***	0.451	-0.409	-0.469	0.539	0.260	-0.330	-1.670
		(0.143)	(0.230)	(0.185)	(0.211)	(0.249)	(0.281)	(0.341)	(1.193)	(1.057)	(3.919)	(1.326)	(26.906)
Interest rate lending	lintrstRL	-0.339*	0.375	0.397***	0.100	0.095	0.209	0.523**	-0.704	1.334	5.008***	-1.715	-6.478
		(0.203)	(0.273)	(0.152)	(0.148)	(0.299)	(0.216)	(0.220)	(1.735)	(1.678)	(1.384)	(1.989)	(25.189)
Taxes on income (total)	ltxinctot	0.703***	-0.435	-0.891***	-0.850	-1.218**	-1.392**	0.444	0.204	-0.202	0.447	-0.183	-3.441
		(0.196)	(0.354)	(0.290)	(0.564)	(0.516)	(0.562)	(0.439)	(1.319)	(1.270)	(0.979)	(0.648)	(20.803)
Air freight	Olairfreight	0.210***	0.487***	-0.255*	0.027	0.071	-0.676*	-0.055	0.044	-0.821	-0.564	-1.232	7.702
		(0.059)	(0.184)	(0.133)	(0.179)	(0.167)	(0.370)	(0.305)	(1.515)	(0.526)	(1.364)	(1.271)	(9.273)
Trade percentage of GDP	ltradepgdp	0.457***	0.575**	1.042***	0.605	0.784**	0.856*	0.946***	0.513	0.072	4.610	-1.118	6.769
		(0.168)	(0.227)	(0.223)	(0.372)	(0.359)	(0.459)	(0.266)	(1.519)	(1.887)	(2.907)	(2.413)	(22.856)
Stock traded (total)	Olstktrdtot	-0.025	0.441***	0.449***	0.557***	0.428***	0.885***	0.475*	-0.474	1.303***	0.328	0.976	1.337
		(0.136)	(0.159)	(0.155)	(0.160)	(0.163)	(0.236)	(0.275)	(1.321)	(0.451)	(1.068)	(0.954)	(2.711)

Political Rights	FHPR	0.355**	-0.081	0.040	0.037	0.078	1.569***	-0.296*	0.440	0.445	0.839	-0.622	-1.730
		(0.151)	(0.192)	(0.220)	(0.308)	(0.227)	(0.565)	(0.174)	(0.542)	(0.697)	(1.134)	(0.833)	(8.716)
Civil Liberties	FHCL	-0.862***	-0.683***	-0.875***	-1.148***	-1.418***	-0.561**	0.643	-1.476	-0.714	-2.087	-0.747	2.424
		(0.161)	(0.166)	(0.255)	(0.178)	(0.276)	(0.221)	(0.397)	(0.963)	(1.491)	(3.382)	(1.961)	(47.563)
Government Stability	gov_stab	-0.053	0.045	-0.080	-0.103*	-0.003	0.040	-0.382*	-0.269	-0.316	-0.980**	0.064	0.288
		(0.130)	(0.052)	(0.054)	(0.062)	(0.089)	(0.106)	(0.220)	(0.324)	(0.339)	(0.490)	(0.299)	(5.424)
Law & Order	law_order	0.027	-0.015	0.210	-0.297	-0.326**	0.439*	0.194**	0.649	0.569	2.890**	0.412	-3.508
		(0.042)	(0.105)	(0.205)	(0.201)	(0.131)	(0.225)	(0.084)	(0.593)	(0.402)	(1.365)	(0.992)	(45.160)
Bureaucratic Quality	bureauc_qual	0.366*	0.306	0.124	0.788**	0.349	-0.206	0.232	-0.239	0.923	-1.895	-0.459	-7.807
		(0.203)	(0.222)	(0.318)	(0.327)	(0.238)	(0.419)	(0.223)	(1.144)	(1.694)	(2.316)	(1.762)	(45.646)
Constant	_cons	-19.677***	-28.491***	-27.583***	-15.501**	-20.019***	-17.430**	-28.651***	-17.961	-35.299**	-89.381***	-13.070	-62.698
		(2.962)	(3.353)	(2.976)	(6.258)	(5.001)	(7.906)	(3.888)	(18.951)	(13.619)	(20.124)	(31.148)	(685.964)
N		912.000	882.000	857.000	614.000	754.000	275.000	296.000	93.000	148.000	85.000	144.000	41.000
Pseudo R2		0.2215	0.2244	0.1718	0.1595	0.2089	0.1145	0.1739	0.1957	0.1896	0.2367	0.1488	0.3607

Note: t-statistics are provided in parentheses. Asterisks denote the statistical level of significance; those with *** reflecting significance at %1; ** %5; and * %10. The values marked in red indicate low number of observations, which in turn indicate that the results are not statistically reliable. Source: Author's estimations in STATA