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# The Making (and Un-Making) of Markets from Public Services: The Case of Telecommunications Multinationals

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**ABSTRACT**: *As a consequence of major regulatory reform of the telecommunications sector from the 1980s - particularly privatisation, deregulation and liberalisation – dozens of former telecom incumbents transformed themselves into some of the world's most important multinational corporations. But this process was quite uneven, with some incumbents internationalising earlier and deeper, others went abroad then partially de-internationalised later, whilst others proved reluctant to go abroad. This paper seeks to understand the logic underpinning this uneven internationalisation by testing hypotheses on firm internationalisation in the political economy literature. We first quantify the uneven approaches to internationalisation by OECD telecoms incumbents. Then, centring on European incumbents, that dominated the process in the OECD, we show how regulatory change in the short-term did not determine their internationalisation; rather, this can best be explained using an institutional approach.*

**Keywords**: Internationalisation, Multinational Corporation, public services, telecommunications, political economy.

## Introduction

Telecommunications is a case "par excellence" where a public service, formerly provided by a state-regulated and often state-owned entity enjoying monopoly status, has been transformed into a key part of the market over the past three decades.[5] Whilst scholars have paid attention to regulatory reform of telecommunications, particularly, privatisation, deregulation and liberalisation, relatively little work has been done on the internationalisation of telecommunications. One of the consequences of major regulatory reform of sectors providing public network services, such as telecommunications (but also energy, water and transportation) from the 1980s, was that a new business environment was established which permitted incumbents to expand abroad. Managers previously charged with guaranteeing public service provision to domestic users, usually on the basis of universal service provision, and largely protected

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[5] See Robert Millward (2005) for an economic history approach to the changing role of telecommunications.

from competition by their monopoly status, transformed themselves into market-makers. Incumbents needed to be reinvented as aggressive international players, well positioned to compete against their foreign peers, as well as against new domestic and foreign entrants, to seek out and capture new business opportunities to supply to customers and organisations internationally (Clifton, Comín and Díaz-Fuentes, 2007). Theoretically, this new environment was to be highly competitive, and was justified on the grounds that permitting firms to reorganise in physical, technological and financial terms beyond their original, national borders would result in lower prices and greater choice and quality for end consumers.

Historically, the utilities were anchored in domestic contexts, being funded, as they were, by national budgets, and run by the public administration in the national interest. The management of the telecoms sector was generally oriented to promote network development, though cross-subsidisation (local calls were partly paid for by international ones). Increasingly, however, this configuration no longer stands.

From the 1970s, technological change, deregulation and processes of market-building (integration, privatisation and service liberalisation) eroded the traditional framework organising telecoms. As a consequence, incumbent internationalisation was rapid. By the beginning of the 2000s, dozens of incumbents had transformed themselves into some of the world's most international of Multinational Corporations. These "new" Multinationals which provided basic public network services overtook many of the classic ones in manufacturing (such as General Motors, Ford Motor Co, Toyota, Volkswagen, Daimler Benz, Fiat, Nissan and Mitsubishi), electronics (General Electric, IBM, Siemens, Sony) and oil (Royal Dutch Shell, Exxon/Mobil, BP, Elf, Total and Eni) in the United Nations' ranking of world Multinational Corporations (UNCTAD 1991-2010).

Incumbent internationalisation was also uneven, however. Though domestic incumbents in these sectors from continents around the world went international, incumbent internationalisation was irregular. Whilst some incumbents became very international quickly (Telefónica, AT&T, BCE and Singtel), others proceeded hesitantly, or avoided going abroad, whilst others were acquired by another incumbent (as in the cases of Belgacom, Eircom and most Eastern European such as TPSA from Poland, Czech Telecom and Magyar from Hungary). And, if, at first, incumbent expansion appeared to be ambitious, pursuing international markets, there followed waves of retrenchment from international markets, in a sense, an "un-making" of markets, which rendered some Multinationals more regional in scope (Rugman, 2005).

Table 1

Main Multinational Enterprises in Telecommunications as ranked in UNCTAD World Investment Report TOP 100 TNC in terms of foreign assets 1991-2008

| *Enteprise* | Home country | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | TNI** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Vodafone Group Plc* | UK | | | | | | | | | | 1 | 1 | 2 | 2 | 2 | 2 | 7 | 1 | 3 | 87.1 |
| *Telefónica** | Spain | | | | | | | | 52 | 30 | 9 | 14 | 28 | 36 | 33 | 53 | 11 | 12 | 18 | 45.0 |
| *Deutsche Telekom** | Germany | | | | | | | | | | | 5 | 56 | 14 | 13 | 17 | 13 | 19 | 19 | 50.0 |
| *France Telecom** | France | | | | | | | | | | | | 9 | 10 | 10 | 11 | 15 | 18 | 22 | 48.7 |
| *Liberty Global* | US | | | | | | | | | | | | | | | 61 | 67 | 66 | 61 | 96.5 |
| *TeliaSonera** | Sweden/Finland | | | | | | | | | | | | | | | | 78 | 81 | 75 | 69.0 |
| *Telenor Asa** | Norway | | | | | | | | | | | | | | | | | 99 | | 70.4 |
| *Singtel Ltd** | Singapore | | | | | | | | | | | 68 | 70 | 66 | 73 | 82 | 99 | | | 67.1 |
| *Telecom Italia** | Italy | | | | | | | | | | | | 67 | 24 | 35 | 31 | | | | 25.5 |
| *Verizon Communications* | US | | | | | | | | | | 58 | 95 | 74 | 82 | 89 | | | | | 6.1 |
| *Nortel Northern Telecom* | Canada | | | | | 78 | 85 | 48 | | | | 57 | 78 | | 99 | | | | | 83.4 |
| *NTL Inc* | US | | | | | | | | | | | 62 | 82 | | | | | | | 99.1 |
| *Cable & Wireless* | UK | 93 | | 84 | 80 | 55 | 49 | 34 | 35 | 50 | 78 | 64 | | | | | | | | 60.3 |
| *BCE Bell Canada Enterprises** | Canada | | | | | 61 | 57 | 49 | | | | 97 | | | | | | | | 19.6 |
| *SBC* | US | | | | | | | | 76 | 74 | 60 | | | | | | | | | 9.3 |
| *GTE* | US | 86 | 84 | 75 | 83 | 95 | 97 | 84 | 94 | | | | | | | | | | | 15.6 |
| *AT&T** | US | | | 65 | 56 | 48 | 63 | 81 | | | | | | | | | | | | 19.4 |
| *ITT* | US | 53 | 64 | 62 | 53 | | | | | | | | | | | | | | | 22.4 |

Sources: Elaborated by the authors based on UNCTAD (1990-2010),
* ex incumbents.
** Transnationality Index.

The aim of this paper is to explain the logic of this process of market-making, as regards the outward internationalisation patterns, in terms of timing, extent and direction, of these former incumbents. The cases under study will be telecommunications incumbents in the OECD area. Our main point of departure is that regulatory reforms, particularly liberalisation and privatisation, were prerequisites of incumbent internationalisation. Internationalisation would not have been prioritised or even permitted when nationalised incumbents were domestic monopoly public service suppliers. But, beyond this initial link, the precise relationship between regulatory reform and incumbent internationalisation has been contested. Different theories from the international business and political economy literatures establish various relationships between regulation and internationalisation. Three main approaches can be identified for testing.

A first argument is that earlier and deeper liberalisation and privatisation in the home country would give rise to earlier and greater firm internationalisation. Liberalisation exposes the incumbent to market forces, rendering the market contestable, and ebbs away at the incumbents' market share: fearful of being left behind in the race to internationalisation - as investment opportunities in these sectors are scarce - managers are pressurised to exploit firm economies of scale and know-how in new or more lucrative businesses abroad. Privatisation also renders the incumbent more visible and accountable to its shareholders, forcing it to maximise profits. According to this argument, then, earlier and deeper liberalisation and privatisation would lead to greater internationalisation.

A second major argument predicts a different outcome. As in the first argument, liberalisation and privatisation are against understood as being important vis-à-vis incumbent internationalisation; firms and countries are considered to be rational agents; and institutional aspects are downplayed. The main difference then is in the direction of the linkage between internationalisation, liberalisation and privatisation. As liberalisation deepens, firms, sometimes supported by their governments and, in particular, with close links to other firms ("crony-capitalism") linked by cross-shareholding arrangements and interested to promote national champions, seek to avoid or restrict its effects at home. This may come in the form of Foreign Direct Investment restrictions, introducing liberalisation slowly, or giving "breathing time" to domestic firms to readjust to liberalisation requirements. Protection from liberalisation provides incumbents with monopoly rents and certainty, both useful when undertaking international operations. As regards privatisation, since Mergers and Acquisitions are high risk, once-off events requiring much political steering, incumbents with significant political involvement may be at an advantage as they can access insider information whilst politicians may have incentives to “lubricate” operations. Hence, slower and less liberalisation and privatisation may be associated with greater internationalisation. Both these two arguments establish mechanical links between policy and internationalisation.

The third argument is more nuanced, and puts institutional differences and multiple levels of analysis into the foreground. It emphasises how different national contexts and various configurations of firms operating in different sectors will influence the path to internationalisation. Governments and firms respond in different ways to the pressures of liberalisation, and that this can be best explained by institutional accounts, incorporating the country, sectoral and firm level of analysis. Following this perspective, incumbents may be organised into groups showing similar behaviour, and internationalisation can be explained using these common patterns.

Whilst econometric techniques are used to test the first two arguments, cluster analysis is applied to analyse the third. We find no evidence that internationalisation was determined by regulatory choices taken by governments in home countries, so reject the first and second sets of arguments. Instead, we show how incumbent internationalisation is best explained by examining the firm in its institutional setting, as suggested by the third argument. To illustrate, we apply “maximum variation” case study methodology developed by Flyvberg (2006) to analyse the paths to internationalisation followed by two important incumbents which represent two different clusters of incumbent Multinationals: Telefónica of Spain, and BT of the United Kingdom.

The organisation of the paper proceeds as follows. In the second section we present some of the main political economy literature which deals with incumbent internationalisation and from it derive three sets of hypotheses to explain patterns of incumbent internationalisation for testing. In the third section, we briefly chart the transformation of former domestic telecommunications monopolies from the OECD into world-class Multinationals. We use econometrics and cluster analysis to test the hypotheses in section four. In section five, we use “most different” case study methodology to synthesise internationalisation strategy of two major telecoms Multinationals. Conclusions follow.

## II. Hypotheses on regulation and internationalisation

A vast literature exists on why firms internationalise. Here, three main points will be made about the state-of-the-art literature in order to contextualise the political economy and international business literature which we deem of high relevance for the understanding of internationalisation of former telecommunications incumbents. Firstly, historically speaking, most research firm internationalisation focused on the manufacturing, oil and financial sectors, reflecting the dominance of this profile of Multinational in the twentieth century. Less attention has been paid to why firms in network industries internationalise. Secondly, causes of firm internationalisation are complex and multiple. Theories or paradigms developed to explain firm internationalisation include multiple variables. One particularly influential perspective is the “OLI paradigm” which stresses the importance of Ownership, Localization and Internalisation (Dunning 1989). Thirdly, scholars are increasingly recognising the role of policy as a variable in the internationalisation decision (Dunning 2009). Policy considerations are important because differences in timing, extent and quality of policies, such as the implementation of liberalisation policies at home and abroad, constitute part of the business environment in which firms operate. Policy forms part of the "O" of the home country, and the "L" of the potential host country. Policy is an even more important factor influencing internationalisation in the 'heavily regulated' network industries such as the telecommunications sector. In this sector, regulatory change was a prerequisite for incumbent internationalisation: telecom incumbents had little international presence at the beginning of the 1990s and regulatory change, particularly liberalisation and privatisation, "enabled" their going abroad.

Attention is now turned to the conceptualisation of the relationship between polices of liberalisation, privatisation and internationalisation in the political economy literature. The first broad body of literature argues that sectoral liberalisation forces incumbents to readjust to a new environment. Incumbent managers recognise the erosion of their former monopolistic markets by new challengers. They accept domestic liberalisation, fearing its delay could compromise their potential outward expansion due to reciprocity demands. By embracing liberalisation they will be free to exploit scale economies and new markets. This logic is explicit in most policy documents by the European Commission, for instance (Kroes, 2005). *Hypothesis one claims that the greater a firm is exposed to earlier and deeper liberalisation, the more it will respond to increased pressure on its domestic market by increasingly internationalising.* As regards privatisation, this is thought to make a company more visible to its stock-holders, forcing it to maximise profits (Megginson & Netter, 2001). *Hypothesis two states that more privatisation means a firm is more likely to go abroad, seeking out profitable markets.* In both cases, it is assumed that macro-policy reform has a direct impact on firm behaviour, which is thought to be rational and profit-seeking. This perspective is 'generalistic' because it assumes firms will respond uniformly to policy change. Little attention is paid to country, sectoral or firm-based institutional differences. It is also 'optimistic', since it anticipates liberalisation and privatisation will proceed along a lineal path, from design to outcome. This narrative represents the 'hope' of mainstream policy-making: liberalisation will bring about more competition; privatisation will improve efficiency; consumers will benefit by enjoying reduced prices and increased choice.

The second argument predicts a different outcome (Bonardi 2004; Chari and Gupta 2008, Haar and Jones 2008, Sarkar *et al*. 1999). Again, liberalisation and privatisation are understood as being important vis-à-vis incumbent internationalisation; firms and States are understood to behave rationally; institutional aspects are downplayed. The difference is in the *direction* of the linkage between liberalisation, privatisation and internationalisation. In a battle for survival, as liberalisation quickens and deepens, firms, sometimes supported by their States, will seek to avoid or restrict liberalisation at home. Highly publicised examples of 'national champion' policies include Italian Prime Minister Berlusconi's preference to keep Telecom Italia in 'Italian hands' and France's former Prime Minister Dominque de Villepin's '*patriotisme economique*' pledge to protect eleven 'strategic' industries from foreign takeover. States can deliberately implement liberalisation incorrectly, partially or slowly, giving 'breathing time' to domestic players to readjust and exploit other markets which liberalise earlier. State protection of industry may be even more likely to emerge in industries such as networks, due to historical links and strategic interests. Protection provides firms with monopoly rents useful when undertaking risky international operations. *Hypothesis three argues that greater firm internationalisation is associated with relatively slower and limited implementation of liberalisation*. As regards privatisation, the opposite of this argument is the corollary to hypothesis two. Mergers and Acquisitions are often once-off, risky and politically complex operations: board-room politics often becomes transformed into 'high politics' when potential gains are significant. Incumbents with significant political involvement may be at an advantage in that they can access information and politicians to 'lubricate' the operation. Hence, *hypothesis four is that less privatisation should be correlated to more internationalisation.*

The fifth hypothesis is derived from comparative political economy (Hall and Soskice 2001) and its application to sectoral reform (Börsch 2004, Levi-Faur 2006, Murillo 2009, Thatcher and Héritier 2002). The most nuanced account uses a 'policy analysis' approach to argue that different paths to reform - explained by institutional differences -may lead to relatively similar outcomes (Thatcher 2007). Internationalisation is analysed as technological, economic and policy/ideational developments which unsettle national spaces, but which are mediated by socio-economic distributional issues, efficiency of institutions' reform capability and state actors. Different national contexts and sectors will be affected differently by internationalisation: liberal market economies may be more predisposed to embracing liberalisation quickly and deeply than coordinated market ones, whilst technological change will tend to be stronger in some sectors than others (for instance, in telecommunications than other network services, such as electricity or water). Firm characteristics, such as size, existence of scale economies, and prior internationalisation experience, may intervene in responses to liberalisation and internationalisation. *Hypothesis five claims that governments and firms responded in various ways to liberalisation and privatisation, incumbent internationalisation being one, and that various paths to internationalisation can be explained by country, sectoral and firm differences.*

Finally, firm size could facilitate internationalisation. There may be a minimum size that firms need to reach before internationalisation becomes possible. Firm size is a control variable throughout the analysis. Summing up, the first four hypotheses predict a lineal, continuous relationship between internationalisation and liberalisation (one and three), and internationalisation and privatisation (two and four), albeit in different directions. Correlational analysis measures the strength of the associations between the independent and dependent variables, thus is appropriate to test these hypotheses. Hypothesis five predicts there is no fixed relationship between the variables; rather, there will be multiple paths in terms of the timing and extent towards incumbent internationalisation and liberalisation, best explained by institutional differences. Cluster analysis is ideal for testing this, since patterns of incumbent behaviour are explored. Before testing these hypotheses we map out the rise of telecommunications Multinationals.

## III. The rise of new telecommunications multinationals: A snapshot

As a result of complex technological change and regulatory reform, telecommunications incumbents have emerged as some of the world's most important enterprises. A ranking of the top OECD former telecoms incumbents by revenue and region in 2007 is shown in Table 2.

Table 2

**Major Telecommunication ex-incumbents from in the OECD area (fiscal year 2007 unless noted)**

| | | | USD millions | | | | | | | Units | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name of PTO | Country | | Revenue | Net income | Debt | | Capital expenditures | Mobile revenue | R&D spending | Fixed access lines | DSL/cable/ FTTH lines | Mobile subscribers |
| AT&T | United States | | 118 928 | 11 951 | 57 255 | (3) | 17 717 | 38 568 | | 61 582 000 | 14 156 000 | 70 052 000 |
| NTT | Japan | (1) | 90 708 | 532 | 3 637 | (8) | 18 079 | 23 268 | 2 619 | | | 53 390 000 |
| Deutsche Telekom | Germany | | 85 638 | 7 241 | 50 959 | (5) | 10 979 | 47 534 | 274 | 50 500 000 | | 119 600 000 |
| Telefonica | Spain | | 77 316 | 12 200 | 62 033 | (5) | 10 996 | 30 322 | 814 | 41 974 200 | 10 277 800 | 169 219 700 |
| France Telecom | France | | 72 548 | 8 630 | 52 847 | (4) | 9 589 | 10 342 | 1 233 | | | 109 700 000 |
| Telecom Italia | Italy | | 42 863 | 7 896 | 48 905 | (5) | 7 562 | 20 427 | 167 | 22 124 000 | 11 060 000 | 67 611 000 |
| BT | United Kingdom | (1) | 41 408 | 5 790 | 18 920 | (5) | 6 600 | 696 | 2 504 | 27 209 000 | 12 700 000 | 360 000 |
| Telmex | Mexico | | 11 964 | 4 011 | 8 368 | (11) | 1 267 | | | 17 800 000 | 2 925 000 | 69 500 000 |
| America Movil | Mexico | | 28 507 | 5 046 | 12 520 | (9) | 3 168 | | | 3 866 000 | 130 000 | 153 422 000 |
| Telstra | Australia | (2) | 20 690 | 5 188 | 12 702 | (5) | 4 502 | 5 313 | 8 | 10 668 000 | 4 977 000 | 9 335 000 |
| Korea Telecom | Korea | | 20 080 | 1 260 | 9 905 | (e) | 3 913 | 6 322 | 313 | 11 200 000 | 11 200 000 | 13 721 000 |
| KPN Telecom | Netherlands | | 17 070 | 3 425 | 16 133 | (10) | 1 879 | 9 110 | 22 | 5 400 000 | 2 400 000 | 27 000 000 |
| BCE Inc. | Canada | | 16 697 | 4 650 | 8 112 | (5) | 2 945 | 3 861 | | 8 176 000 | 2 004 000 | 6 216 000 |
| Telenor | Norway | | 15 780 | 3 277 | 7 769 | (4) | 3 328 | 9 945 | 100 | 2 058 000 | 1 074 000 | 143 000 000 |
| TeliaSonera | Sweden/Finland | | 14 252 | 3 003 | 5 533 | (5) | 51 | 6 586 | 256 | 6 218 000 | 2 326 000 | 14 501 000 |
| OTE | Greece | | 8 657 | 908 | 10 493 | (7) | 1 509 | 3 082 | | 8 889 000 | 825 000 | 15 546 000 |
| Portugal Telecom | Portugal | | 8 422 | 1 143 | 15 124 | (7) | 1 232 | 5 488 | 7 | 2 312 000 | 714 000 | 39 745 000 |
| Belgacom | Belgium | | 8 308 | 1 312 | 2 112 | (3) | 856 | 2 814 | | 3 899 000 | 1 237 000 | 4 620 000 |
| Swisscom | Switzerland | | 9 241 | 1 726 | 8 614 | | 1 688 | 3 346 | | 3 686 000 | 1 602 000 | 5 007 000 |
| TDC | Denmark | | 7 228 | 1 485 | 7 610 | (8) | 956 | 2 134 | 5 | 3 670 000 | 1 290 000 | 4 475 000 |
| Türk Telekom | Turkey | | 7 102 | 1 925 | 3 062 | (3) | | | | 18 200 000 | 4 500 000 | 9 900 000 |
| Telekom Austria | Austria | | 6 738 | 675 | 6 037 | (6) | 1 166 | 4 158 | 65 | 1 683 700 | 750 700 | 15 449 000 |
| Telecom NZ | New Zealand | (2) | 4 166 | 524 | 3 433 | (7) | 726 | 613 | 7 | 1 434 000 | 543 000 | 2 200 000 |

(1) Fiscal year ending March 2008. (2) Fiscal year ending June 2008. (3) Long-term liabilities. (4) Current liabilities. (5) Total liabilities. (6) Net debt. (7) Interest-bearing liabilities. (8) Total contractual obligations. (9) Debt obligations excluding lease obligations. (10) Debt from continuing operations. (11) Total debt and capital lease obligations.

This table shows the ranking of the OECD's twenty three largest telecoms incumbents are located in the following domestic markets: the US, Japan, the four large continental EU countries (Germany, Spain, France and Italy), the UK, Mexico, Australia, Korea, the Netherlands, Canada, smaller European countries (Norway, Sweden/Finland, Greece, Portugal, Belgium, Switzerland, Denmark, Turkey, Austria and, finally, New Zealand. We now need to analyse their internationalisation.

A sketch of the dynamics of the internationalisation of these same firms is briefly provided in Table 3. Though this paper focuses on the activity of telecoms Multinationals in the OECD area, since the OECD itself has recently started to include regulatory data from key non-OECD countries, (as part of its reinvention into a more global organisation, see Clifton and Díaz-Fuentes, 2011), we are at a preliminary stage of extending our analysis to telecoms incumbents from non-OECD countries, including China, India, Russia, and South Africa. For these countries, regulatory information is only provided for 2007, which is shown in Table 5.

Table 3 includes data on the firm and the regulatory structure of the home market. On the firm, data includes revenues, employees and timing and extent of firm internationalisation. For the regulatory structure, data includes information on ownership (privatisation) and liberalisation. In all cases, data is on periods at a four-year interval (1999, 2003 and 2007). As in Table 1, firms are ranked by revenue in 2007.

Table 3

**OECD largest Telecoms ex-incumbents Multinationals: Size, Internationalisation and Regulatory Reform and Privatization Indicators 1999, 2003 and 2007**

| | | Revenues (000 euros) | | | Employees (000) | | | Internationalisation | | | Entry Regulation | | | Market structure | | | Privatization | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region/ Company | Country | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 |
| ***Europe*** | | | | | | | | | | | | | | | | | | | |
| Deutsche Telekom | Germany | 35325 | 62739 | 85638 | 203268 | 251263 | 241426 | 8.5 | 38 | 50.9 | 100 | 100 | 100 | 51 | 64 | 72 | 43 | 57 | 69 |
| Telefónica | Spain | 24458 | 31910 | 77316 | 146619 | 221657 | 245427 | 58.1 | 38 | 62.8 | 100 | 100 | 100 | 30 | 38 | 45 | 100 | 100 | 100 |
| France Telecom | France | 29014 | 51821 | 72548 | 174282 | 148288 | 187331 | 13.2 | 41 | 47.4 | 100 | 100 | 100 | 39 | 56 | 61 | 39 | 41 | 73 |
| Telecom Italia | Italy | 29425 | 35051 | 42863 | 122682 | 93187 | 93187 | 5.9 | 21 | 29.3 | 100 | 100 | 100 | 31 | 49 | 55 | 96 | 100 | 100 |
| BT | United Kingdom | 35438 | 30359 | 41408 | 136800 | 99900 | 99900 | 7.1 | 7 | 14.7 | 100 | 100 | 100 | 63 | 77 | 70 | 100 | 100 | 100 |
| KPN Telecom | Netherlands | 9729 | 14502 | 17070 | 38550 | 31267 | 31267 | 9.5 | 20 | 31.4 | 100 | 100 | 100 | 35 | 64 | 47 | 56 | 81 | 100 |
| Telenor | Norway | 4291 | 7503 | 15780 | 23470 | 26694 | 35800 | 17.4 | 41 | 65.4 | 100 | 100 | 100 | 23 | 48 | 50 | 11 | 38 | 46 |
| TeliaSonera | Sweden/Finland | 8151 | 8151 | 14252 | 40155 | 19450 | 28376 | 10.0 | 49 | 62.7 | 100 | 100 | 100 | 36 | 55 | 64 | 15 | 54 | 71 |
| Swisscom | Switzerland | 7440 | 10990 | 9241 | 21777 | 19207 | 16099 | 9.1 | 30.9 | 15.1 | 96 | 100 | 100 | 27 | 37 | 45 | 20 | 57 | 53 |
| TDC | Denmark | 5765 | 7945 | 7228 | 17464 | 24872 | 24872 | 41.8 | 53.1 | 25.5 | 100 | 100 | 100 | 56 | 63 | 58 | 100 | 100 | 100 |
| Belgacom | Belgium | 5151 | 6128 | 8308 | 22071 | 17541 | 16335 | 0.0 | 0.0 | 0.0 | 100 | 100 | 100 | 47 | 47 | 47 | 16 | 40 | 52 |
| Portugal Telecom | Portugal | 3429 | 6490 | 8422 | 16188 | 19207 | 19207 | 8.8 | 23.6 | 44.7 | 34 | 100 | 100 | 21 | 32 | 52 | 88 | 94 | 92 |
| OTE | Greece | 3622 | 5522 | 8657 | 21588 | 17169 | 17169 | 0.5 | 19 | 37.0 | 17 | 79 | 79 | 20 | 49 | 53 | 42 | 66 | 72 |
| Telekom Austria | Austria | 3966 | 4460 | 6738 | 19347 | 13890 | 13890 | 0.0 | 11 | 35.9 | 100 | 100 | 100 | 28 | 66 | 67 | 13 | 53 | 73 |
| Turk Telekom | Turkey | 5479 | 5065 | 7102 | 72463 | 61129 | 35000 | 0.0 | 0.0 | 0.0 | 34 | 43 | 100 | 11 | 16 | 18 | 0 | 0 | 74 |
| ***Asia*** | | | | | | | | | | | | | | | | | | | |
| NTT | Japan | 91156 | 95709 | 90708 | 223900 | 205288 | 199000 | 0.0 | 0.0 | 0.0 | 100 | 100 | 100 | 66 | 62 | 58 | 35 | 54 | 81 |
| KT | Korea | 9914 | 9714 | 20080 | 52533 | 38167 | 37379 | 0.0 | 0.0 | 0.0 | 100 | 100 | 100 | 29 | 44 | 46 | 35 | 100 | 100 |
| ***Pacific*** | | | | | | | | | | | | | | | | | | | |
| Telestra | Australia | 12800 | 13818 | 20690 | 50761 | 41941 | 35706 | 2.9 | 6.1 | 6.8 | 100 | 100 | 100 | 39 | 56 | 53 | 41 | 49 | 83 |
| Telecom NZ | New Zealand | 2299 | 3128 | 4166 | 5717 | 6840 | 8362 | 20.5 | 28.0 | 25.1 | 100 | 100 | 100 | 35 | 45 | 33 | 100 | 100 | 100 |
| ***Norht America*** | | | | | | | | | | | | | | | | | | | |
| ATT | United States | 62319 | 42197 | 118929 | 147800 | 61600 | 309050 | n.a. | 4.0 | 3.4 | 100 | 100 | 100 | 87 | 89 | 93 | 100 | 100 | 100 |
| SBC | United States | 49531 | 40843 | n.a. | 204430 | 168950 | n.a. | 0.5 | 1.2 | n.a. | 100 | 100 | 100 | 87 | 89 | 93 | 100 | 100 | 100 |
| Telmex | Mexico | 10075 | 10829 | 11964 | 72321 | 62103 | 56624 | 0.0 | 0.0 | 26.9 | 50 | 50 | 50 | 34 | 38 | 36 | 100 | 100 | 100 |
| América Movil | Mexico | 1693 | 7965 | 28507 | 3346 | 8624 | 49091 | 9.9 | 39.0 | 49.5 | 50 | 50 | 50 | 34 | 38 | 36 | 100 | 100 | 100 |
| Bell Canada Enterprises | Canada | 9540 | 13611 | 16697 | 55000 | 64054 | 54034 | 7.6 | 0.0 | 0.9 | 83 | 79 | 79 | 55 | 60 | 49 | 100 | 100 | 100 |

Definitions and measurements of internationalisation, liberalisation and privatisation require explanation. International activity takes two main forms: global alliances or the physical extension of the firms' sales, assets and/or employees abroad. It is this second activity that has been most important in telecommunications, so it is this 'physical' internationalisation that is considered here. Following UNCTAD methodology, internationalisation is quantified as foreign revenues as a percentage of overall revenues. Data on foreign operating revenues is derived from annual company reports, and Bureau van Dijk-Amadeus-Orbis (2010). Liberalisation is quantified using OECD (2009), and follows the methodology developed by Conway and Nicoletti (2006). The OECD quantifies liberalisation differently according to the peculiarities of the sector. Telecommunications liberalisation is measured in two ways. In the case of telecommunications, the OECD has developed a composite indicator which includes the major telecommunications' markets (mobile, trunk and international). The first indicator is 'Entry Regulation', meaning to what extent legal systems allow for new entrants, zero being they do not, and one being completely. This indicator includes a weighting for the share of turnover for different telecoms markets (mobile, trunk, international calls) by country. This indicator could be referred to as "*de jure*" or "nominal" liberalisation. The second indicator, 'Market Structure', indicates what market share new entrants enjoy, as a means of gauging the extent to which liberalisation leads to actual competition, zero meaning none and one the total market. This could be understood as "de facto" or "real" liberalisation. Privatisation measures the percentage of domestic activity in private hands, using the same structure of weights as for the entry indicator.

Pressures to reform the telecoms sector have been documented elsewhere and are not rehearsed here (OECD, 2007). A first observation is that the telecoms Multinationals from the EU area have dominated - by far - the internationalisation activity of the world's telecommunications incumbents. In the EU, the most important internationalisers gain between a low of 15% to a high of 65% of their total revenue from abroad. It is interesting that the top two incumbents by revenue in 2007, AT&T and NTT, hardly ventured abroad, as measured by the percentage of revenue obtained. Other incumbents which obtained very low or no revenues abroad include Bell Canada, Telstra and KT. Of the non-EU OECD incumbents which internationalised, the most important were Telmex (27%) and Telecom NZ (25%). It is interesting that both these incumbents retained higher shares of their domestic market than their North American and EU counterparts, on average.

It is of considerable interest to enquire why certain incumbents, particularly but not solely, those based in the EU were such enthusiastic internationalisers, whilst those based in the US, Canada, Australia, Japan and Korea were not. Of course, one clear difference is that the EU incumbents were subjected to pressures in the Single Market programme and found themselves under the threat of corporate control in the form of Mergers and Acquisitions. However, all of the OECD members were moving towards privatisation and liberalisation, as shown in Table 3, indeed, the US anticipated these developments, whilst Japan and Australia reflected the EU average. A future line of research will deploy a similar methodology to that used below, in the case of the EU incumbents, to find the answer to this question.

Beyond the OECD, and particularly in the context of the paper delivered in Singapore, it is of interest to examine the behaviour of incumbents from outside the OECD. The case of Singtel is of interest as an aggressive internationalisation strategy was pursued, with international revenues making up nearly 70% of total revenues in 2007. The authors would like to try to quantify the regulatory structure following OECD methodology in order to incorporate Singtel to the study.[6]

Table 4
Data on Singtel and its internationalisation

| | | Revenues (000 euros) | | | Employees (000) | | | Internationalisation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Company | Country | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 | 1999 | 2003 | 2007 |
| Singtel | Singapore | 2842 | 6885 | 10300 | 12637 | 19081 | 19500 | 15.8 | 67.9 | 69.0 |

Recent regulatory data is, however, available for China, India, Russia and South Africa. The authors are currently working on finding the necessary data on the firm ex incumbents in the annual reports and Bureau van Dijk-Amadeus-Orbis (2010).

Table 5
**Regulatory Reform in Telecommunications 2007**

| | Entry Regulation | Market structure | Privatization |
|---|---|---|---|
| China | 21 | 39 | 34 |
| India | 100 | na | 43 |
| Russia | 100 | 66 | 57 |
| South Africa | 100 | 14 | 61 |

Source: OECD (2011)

We now turn to the EU telecommunications incumbents, which dominated internationalisation. In 2007, there were five huge and seven medium-sized EU Multinationals. Interestingly, the ranking of the 'giants' changed between 1999 and 2007. In 1999, BT ranked top, followed closely by Deutsche Telekom. But, by 2003, BT's revenue had stagnated, its revenues had fallen whilst the other 'giants' saw significant growth, and the German incumbent's revenue had nearly doubled, leading the pack. BT started to grow again, slowly, toward the end of the period, though it remained in fifth position. In 1999, Telefónica ranked fifth among the 'giants' but leapt

[6] However, in the case of Singapore, being a country "not interested" in joining the OECD, the OECD does not have data on the regulatory structure (privatization, liberalization and so on).

to second place in 2007. Much of this incumbent growth in revenue was fuelled by internationalisation. The average extent of incumbent internationalisation in 1999 was nearly 15%, increasing to around 41% in 2007. Incumbent internationalisation was uneven as regards timing and extent. Both smaller and larger incumbents internationalised. In 1999, internationalisation 'stars' included Telefónica (58%) and TDC (42%); by 2007, sales abroad exceeded domestic levels for Telenor (65%), Telefónica (63%) and TeliaSonera (63%). BT was by far the least international of the multinationals by 2007 (15%). As regards liberalisation, 'Entry Regulation' shows that Denmark, Sweden and the UK were 'first movers' during the 1990s; their liberalisation preceded implementation of EC directives. The importance of EC directives as regards timing, however, can be seen as all other countries reached full 'Entry Regulation' by the 1999 deadline, except those with official extensions: Greece, Portugal and Ireland. The UK was consistently the most open market for new entrants ('Market Structure').

Between 1999 and 2003, average access to market share for new entrants increased from 35% to 56%; but this only grew slowly over the next four years. In 2007, incumbents still enjoyed around 43% of market share, though this was uneven. Telefónica enjoyed the highest market share (55%), whereas Deutsche Telekom and BT had the lowest (28% and 30% respectively). Of the 'big five', Spain's telecommunications market was the least open between 1999 and 2007. As 'first-mover', Telefónica - enjoying monopoly status and having enjoyed significant private ownership from the 1970s – was the internationalisation pioneer, taking advantage of the liberalisation of Latin American telecoms markets (Clifton, Comín and Díaz-Fuentes, 2008). Privatisation was completed earlier on in BT, TDC and Telefónica, followed by Telecom Italia and, though telecommunications privatisation was widespread across the EU, public ownership remained at 24% on average in 2006, being higher in Deutsche Telekom, France Télécom, Telenor, TeliaSonera, OTE and Telekom Austria.

## IV. Analysis

Because the major telecommunications Multinationals emerged from the EU, and their North American, Asian and Pacific OECD counterparts either did not internationalise very strongly or did not internationalisation at all, our preliminary analysis presented below has focused solely on explaining the extent of internationalisation of the largest twelve EU operators. Returning to the five hypotheses set out in section II, we sought to answer the question whether EU telecoms incumbent internationalisation was determined by regulatory change in that sector, as was claimed by two important sub-sets of political economy and international business literature, or whether the institutional literature provided a superior explanation. In the next stage of this research, currently underway, we are examining the top fifteen OECD telecoms incumbents ranked by revenue (and regardless of their internationalisation) including incumbents from North America, Asia, Pacific and Europe, and seek to explain the role of regulatory change as a determinant in explaining incumbents' decision to internationalise.

Focusing then here on the most internationalised of the EU operators, the first four hypotheses are now tested using correlation and cluster analysis techniques. Correlation between variables using Pearson bivariate correlation, Kendall rank and Spearman rank correlation were used to detect the strength of association between internationalisation and entry regulation, market structure, ownership, size (revenue and employees) for 1999, 2003 and 2006. Results are shown in Annex 1. Using Pearson's correlation, in 1999, there is a negative relationship between internationalisation and public ownership (privately-owned incumbents were more likely to go abroad), though this correlation is not apparent applying Kendall and Spearman correlations. However, this correlation did not reappear using Pearson in 2003 or 2006. No other significant variables were detected which correlated with internationalisation, including the two indicators for liberalisation. So, over this period, indicators on liberalisation, ownership or size do not explain the extent of incumbent internationalisation. No evidence in support of hypotheses 1, 2, 3 and 4 is obtained. This means that incumbent internationalisation cannot simply be explained by the timing and extent of privatisation and liberalisation alone. Neither early and deep liberalisation and privatisation, nor delayed and restricted liberalisation and privatisation are enough in themselves to explain the extent of internationalisation of incumbents.

To test our fifth hypothesis, we deploy cluster analysis. The idea here is to search for groups of incumbents that are found to be similar in one or more sets of variables. All twelve telecoms incumbent Multinationals were considered for extent of internationalisation, entry regulation, market structure and privatisation for 1999, 2003 and 2006. Results for internationalisation, entry regulation and market structure are shown in Figure 1. Since all countries had attained complete entry regulation from 1999, this variable is no longer of use and is excluded from the analysis henceforth.

**Cluster Membership* of EU Telecoms Multinationals: Internationalisation and liberalisation Market entry 1999, and Market Structure 1999, 2003 and 2006**

| | Internationalisation and Market entry | Internationalisation and Market Structure | | |
|---|---|---|---|---|
| | 1999 | 1999 | 2003 | 2006 |
| **Deutsche Telekom** | 3 | 3 | 4 | 4 |
| **Telefónica** | 4 | 2 | 2 | 2 |
| **France Telecom** | 3 | 1 | 4 | 4 |
| **Telecom Italia** | 3 | 1 | 1 | 1 |
| **BT** | 3 | 3 | 3 | 3 |
| **KPN Telecom** | 3 | 1 | 3 | 1 |
| **Telenor** | 3 | 1 | 2 | 2 |
| **TeliaSonera** | 3 | 1 | 4 | 4 |
| **TDC** | 4 | 4 | 4 | 4 |
| **Portugal Telecom** | 1 | 1 | 1 | 1 |
| **OTE** | 1 | 1 | 1 | 1 |
| **Telekom Austria** | 3 | 1 | 3 | 4 |
| Valid cases | 12 | 12 | 12 | 12 |

Based on Squared Euclidean Distance and Average Distance among groups

1. Low internationalisation and low liberalisation
2. High internationalisation and low liberalisation
3.Low internationalisation and high liberalisation
4. High internationalisation and high liberalisation

This cluster analysis reveals some interesting patterns. Starting with 1999, there are two sets of findings; internationalisation and entry regulation, and internationalisation and market structure. Regarding the former, two incumbents – TDC and Telefónica - set the pace to internationalise, and which constitute cluster 4. Both incumbents underwent significant internationalisation and were based in countries where entry regulation had been liberalised. The vast majority of incumbents, however, fell into cluster 3; here, internationalisation was rather slow, whilst entry regulation was liberalised. Portugal and Greece predictably fell into a fourth category, cluster 1, where incumbent internationalisation was slow and entry regulation was officially delayed.

Analysis of internationalisation and market structure throws a more nuanced light on these results, particularly as regards the strategies of TDC and Telefónica. TDC is left alone in Cluster 4, since market share was quite liberalised in Denmark. Telefónica uniquely comprises Cluster 2, having embarked on an ambitious internationalisation programme whilst enjoying a relatively high share of its domestic market. Hence, TDC and Telefónica emerged as opposites: the two most international of companies pursued this expansion based on different shares of the domestic market. Again, the vast majority of incumbents fell into the same category, cluster 1; here, internationalisation is low, as is market structure liberalisation. Exceptions are BT and Deutsche Telekom (cluster 3), where internationalisation was quite low but market structure had been highly liberalised. The clusters in 1999 show clearly that there were no automatic relationships between the variables under study; rather, in similar situations incumbents pursued different paths toward internationalisation.

A number of patterns emerged over the next seven years. Firstly, Telefónica was joined by Telenor in cluster 2. Telefónica and Telenor both constituted internationalisation 'stars' as regards their aggressive pursuit of internationalisation. Both did so in a context of slower liberalisation of market structure. Telenor emulated the strategy pioneered by Telefónica from 2003. Secondly, ambitious internationalisation was now pursued by other incumbents, this time, in the context of a liberalised market structure. TDC's strategy was adopted by TeliaSonera, France Télécom, Deutsche Telekom and, to a lesser extent, Telekom Austria, which comprised cluster 4. There was a third group of incumbents (cluster 1) which internationalised more slowly, based in countries where market structure was less liberalised: Telecom Italia, KPN, Portugal Telecom and OTE. Finally, BT alone formed cluster 3, as incumbent internationalisation was relatively low and market structure had been highly liberalised. BT's lower international level was due to the fact that much of its initial international activity was sold off after partially de-internationalised from its businesses abroad as a larger consequence of firm re-organisation, discussed below in greater detail.

The cluster analysis facilitates our understanding of the responses to the challenge of internationalisation by organising incumbents into groups which followed common patterns. However, the different paths to internationalisation taken by these incumbents still require explanation. We argue that behaviour of incumbents can be understood considering developments at the country, sectoral and firm levels. Although we found that regulatory change did not determine incumbent behaviour in the short-term, we think that the regulatory framework over the long-term was influential for firm behaviour.

There are various methodologies at hand for further exploring incumbent behaviour. One attractive option is described in Flyvberg (2006), whereby two cases are selected that are the most similar in many ways but most different in the variable being explained. Following this logic, we selected two important incumbents from large EU countries which internationalised. Both were exposed early on to privatisation and liberalisation. However, whilst one internationalised strongly, emerging as the most international of the large EU incumbents, whilst the other internationalized initially, then partially de-internationalised, becoming the least internationalised of the large EU country incumbents. The cases selected are Telefónica, whose bold, early, unrelenting and deep internationalisation abroad, particularly into Latin America and later, Europe, transformed it into one of the most international of former telecommunications monopolies today; and BT, whose overseas' strategy, mainly comprising global alliances with North American but also Asian firms met with significant failure, and its ultimate partial retreat, leading to a much more modest presence abroad. We show in particular how enterprise ownership, rules on access to capital, management style and exposure to liberalisation all played their part in shaping firm behaviour, and influenced its path to internationalisation.

## V. "Maximum variation" paths to internationalisation: Telefónica and BT

Finding that short-term regulatory change did not determine an incumbents' path to internationalisation, we argue here that a longer-term understanding of the regulatory environment influenced incumbents' later internationalisation. We illustrate this by examining the cases of Telefónica and BT, employing the technique of "maximum variation" as described in Flyvberg (2006).

### *Telefónica*

By the 1950s, Telefónica represented Spain's largest firm and, by the 1990s, it had converted itself into one of the world's leading Multinationals (UNCTAD, 2010). Business scholars have argued that Telefónica represents an exceptional case of business organisation in the European context (Calvo, 2010). Three, major and inter-related features help explain its singularity over the long-term, particularly vis-à-vis its European peers: firstly, its origins as a private, foreign-owned and controlled firm; secondly, its management style, which was more similar to that of a private firm than a public administration or public enterprise; and thirdly, its relatively fluid access to credit and the national and international stock markets. Before proceeding to analyse its internationalisation, a synthesis of its origins and its access to finance is mentioned.

### *Origins, evolution and finance*

Telefónica differs to most other European telecoms incumbents in that, firstly, it was born a foreign-owned Multinational when, in 1924, General Primo de Rivera granted a 20-year monopoly to the recently founded Telefónica to operate the national telecommunications network and supply equipment on a private monopoly basis.[7] Despite its Spanish name, it was controlled by an emerging Multinational based in the United States: ITT (Wilkins, 1974). After the Civil War ended, the Franco dictatorship introduced foreign investment restrictions to most Spanish firms. After the 20 year contract had expired, Telefónica was nationalised in 1945, retaining monopoly privileges. However, this nationalisation differed to most other telecoms nationalisations in Europe. Nationalisation was never total: rather, Telefónica remained a mixed public-private firm until full privatisation in the 1990s. The emphasis was on "naturalisation" rather than "nationalisation", so Spanish capital was preferred, whether this was public or private (Gálvez and Comín, 2006). This influenced management style, which reflected conflicts of interest between private shareholders and public service investment. Telefónica was managed more like a private firm than as a public service utility. Unlike most of its European counterparts, it was never run as part of a Ministry or Post Office. Instead, the regime colluded with private interests in the board (banks and ITT, which remained as its exclusive technology provider through its subsidiary in

[7] The discussion of Telefónica is adapted from Clifton, Comín and Díaz-Fuentes (2011).

Spain Standard Eléctrica), whilst the business was organised according to clear functional divisions. Managers were allowed to manage with considerable autonomy.

Thanks to this ownership, Telefónica became very successful at generating finance through public offerings. For instance, during the 1960s, an infamous media campaign on Spanish television promoted popular capitalism through the sale of "Matildes", named after the girlfriend of the advert's protagonist who used his ownership of Telefónica shares to demonstrate his prowess and credentials as a marriage partner (Rodríguez, 2005). By the 1970s, Telefónica shares were deemed so safe they were called "widow's shares" and the firm was categorised as "blue chip" on the stock markets.

*Internationalisation*

Spain's transition to democracy (176-1982) marked a new phase in Telefónica's evolution. The democratic government embarked on industrial restructuring in the quest for improved performance. One of the main objectives of the first socialist governments (1982-1996) was to improve the management of monopolies, such as Telefónica, through its policy of partial privatisation. Public enterprises would remain as such only when their ownership was deemed strategic. From the mid-1980s, minority share packages of Telefónica and other monopolies were placed on national and international markets (Comín, 2008). In 1982, MP Luis Solana was named Telefónica's president. Solana had long been critical of Telefónica's over-dependence on ITT's technology and had also accused it of over pricing (Solana, 1979). Solana took Telefónica forward in developing R&D and export-promotion projects, joint ventures and cooperative projects involving industrial production and technological transfer. Telefónica was the first Spanish enterprise to be listed on the London Stock Exchange in 1985. In 1986, agreements were signed with AT&T Technologies, SysScan, Olivetti, Brown Boveri, Phillips, Fujitsu, and so on. In June 1987, the government launched a public offering of 6% on the New York Stoke Exchange, reducing state ownership from 38% to 32%. So, during the 1980s, whilst most European telecommunications incumbents – except BT – were still state-owned, Telefónica was subject to certain international external discipline or threat through flotation in international stock markets. The aim was to finance its international expansion without affecting the public budget (Bel & Trillas, 2005).

Solana was replaced by Cándido Velázquez, former president of tobacco monopoly Tabacalera. Velázquez embarked on a new phase of corporate internationalisation from 1989. Telefónica targeted acquiring telecommunications enterprises put up for sale in the years following the debt crisis in Latin America. Many enterprises became privatised monopolies (Ramamurti, 1996). Telefónica's early acquisitions, therefore, were executed as a national monopoly. Telefónica acquired controlling shares in telecoms enterprises in Chile and Argentina (1990), Venezuela and Puerto Rico (1991), Colombia and Peru (1994) and Brazil (1996). When the conservative party, the PP, came to power from 1996, the drive to internationalisation only strengthened. Telefónica was fully privatised in 1997, when the government sold its last tranch of 20%. To 2000, Telefónica increased its stake in telecommunications enterprises in Latin America (Telefónica de Argentina 29% to nearly 100%; Telesp 17.5% to nearly 90%; Telefónica de Perú 40% to 93% and Tele Sudeste 17.6% to nearly 76%). From 2000, its director was César Alierta, who had previous experience in huge mergers as CEO of Tabacelera. Telefónica consolidated its international presence, staying in Latin America whilst also growing in Europe, whilst it also established joint ventures in China. It became the most global of all former telecommunications monopolies, and was ranked fourth position world-wide in the sector by market capitalisation, number one amongst European integrated operators, and number two in Eurostoxx in 2010. It is leader provider in Brazil, Argentina, Chile and Peru, and has substantial operations across most Latin American countries. Its expansion into Europe included acquiring the incumbent Cesky Telecom in 2005 and acquiring a licence for mobile telephony in Slovakia in 2006. It also bought 02, BT´s subsidiary operating in the UK, Ireland and Germany in 2006, and signed an alliance with Telecom Italia (10.5% of voting rights) in 2007. In 2009, Telefónica and China Unicom established an strategic alliance and, in 2011, both parties agreed to enhanced their respective stakes by US$500 million in the other party through Telefónica increased its stake to 9.7% while China Unicom has a 1.37% stake in Telefónica.

*BT*

Before proceeding to analyse BT's internationalisation strategy, we first briefly examine its origins and the regulatory framework, comparing this to those of Telefónica and the Spanish context.

*Origins and regulatory framework*

By 1912, the General Post Office (GPO) had taken over trunk service in Britain thus unifying the network for the first time and effectively installing a public telecommunications monopoly. Telecommunications henceforth in Britain emerged under state control and ownership, unravelling only from the end of the 1960s. Numerous debates were held as to whether the GPO should be nationalised, rather than being run as a government department, as critiques that the system was bureaucratic and "Edwardian" were rife (Florio, 2004). Lipartito (2004) argued that the main problem was that the GPO was used by the government of the day as a tool of demand management, setting budget priorities according to macroeconomic needs until 1961, leading to long-term under-investment. Run by civil servants, it was assumed telecommunications were something a person wanted, or not, feeble efforts were made to commercialise them or expand them, in comparison with other leader nations. Britain had historically prioritised other forms of communications, such as cable and telegraph services. The GPO behaved as a "discriminating monopoly", under-investing in low-profit services and taking profits were they were available. London was its priority; here the aim was to support the city's development as a financial, commercial and residential centre (Lipartito, 2004: 157).

The watershed in British telecommunications came during the 1980s when the Conservative Party calculated external finance would be vital in securing the modernisation of British telecommunications. The business and financial lobbies also pushed for its privatisation. Various schemes were considered until outright divestiture was decided upon (Parker, 2009). The Conservatives wanted to dilute British Telecom's monopoly power and its unions, especially the Post Office Engineering Union, hence initial efforts were made to split it up prior to its sale, following the example of AT&T in the US (Parker, 2009: 241-5). Unions and managers alike were opposed to this. Privatisation would be easier if the business was sold as a single unit. Meanwhile, the government had to suffice with helping forge competition to British Telecom, in the form of promoting the establishment of Mercury Communications, to attain a duopoly. British Telecom's initial public offering of 51% of its shares in 1984 was the first time a monopoly had been sold in Britain. Full privatisation was completed in stages, in 1991 the government sold off half of its 47.6% shares and, two years later, virtually all that remained. The enterprise was renamed BT. In 1997, the Labour government sold off the "golden-share" that had been retained to avoid take-overs.

*Internationalisation*

Two main routes to internationalisation were pursued by telecoms incumbents: FDI and global alliances. Whilst Telefónica successfully expanded via FDI, BT largely opted to pursue global alliances. In particular, its efforts prioritised seeking alliances with large players in the US. Though its internationalisation project started ambitiously, in retrospect, this has been interpreted as something of a failure (Turner & Gardiner, 2007). In 1994, BT (71.5%) and the US's second largest long-distance telecoms firm, MCI (24.9%) entered a joint venture to provide global communications services to Multinationals by establishing Concert. Two years later, other large players had joined, including Telefónica, and Concert was to emerge as the leading provider of its kind, until WorldCom bought MCI. Again, in 1998, BT and AT&T agreed to form a joint venture to serve Multinationals but the Concert project was abandoned in 2001, and the companies forced to embark on a costly de-merger. BT was also forced to de-merge from its mobile activities in the form of MMO2, to reduce its debt as a consequence of acquisitions and 3G licences (van Kranenburg & Hagedoorn, 2008).

## Conclusion

In this paper we sought to better understand the relationship between regulatory change, particularly privatisation and liberalisation, and incumbent internationalisation in the case of telecommunications in the OECD area. We first set out some of the main literature on this topic from the political economy and international business literature and from it derived five hypotheses for testing. We then turned to the ranking of the OECD's major telecommunications incumbents by revenue, and reorganised their ranking by sub-region, adding data on firm and country regulatory indicators. We first stressed how the process of incumbent internationalisation had been quite uneven, and dominated by far by EU-based incumbents, whereas the incumbent based in the US, Canada, Japan, Korea and Australia had hardly ventured abroad. A further line of research will enquire as to the determinants of this initial internationalisation decision. We next examined in detail those EU telecoms incumbents that dominated this market-making process, in order to explain the different extents of their internationalisation. Using regression techniques, we found no evidence that firm internationalisation was caused by differences in the timing or extent of regulatory change. Instead, firm internationalisation could best be explained from an institutional political economy perspective, combining considerations about the firm, the sector and the country. To illustrate why firms took different paths to internationalisation, we used "maximum variation" case study techniques applied to Telefónica and BT. Telefónica, with a long-term history of private ownership and easy access to capital, internationalised early on and aggressively, exploiting asymmetric patterns of regulatory reform to penetrate Latin American markets through physical forms of investment, later expanding its presence also in Europe. In contrast, BT, which emerged from a long-term tradition of public service provision and bureaucracy, was reformed after early regulatory change from the 1980s, but prioritised global alliances with operators in the US and beyond. Because most of these alliances ended up collapsing, and BT's home market was increasingly under threat, a partial de-internationalisation followed. Whilst Telefónica emerged as the most global of world telecommunications operators, BT was the least international of the EU “big five”.

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