THE TELECOMMUNICATIONS INDUSTRY IN THE INFORMATION AGE:
A CASE STUDY IN GLOBALIZATION, DEREGULATION, AND TAX COMPETITION

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I. Introduction

Telecommunications is a very dynamic industry experiencing significant changes in terms of technological capabilities, market access, and entity structure. It is an industry that is changing rapidly due to the process of globalization and international integration, as well as the computer and related technological revolutions. As such, the telecommunications industry is a fascinating case study of industry dynamics within the information age at the beginning of the new millennium. As the process of globalization advances, the nature of tax competition between jurisdictions is becoming a more important tax policy issue.

This paper analyzes the impact of tax incentives and competition on the dynamics in the telecommunications industry. There is significant literature that questions whether tax incentives and competition are beneficial to the economies providing the incentives and whether these incentives stimulate transnational corporations to carry out investment that would not exist otherwise.¹ For example, the International Monetary Fund

¹ See Reuven S. Avi-Yonah, Globalization, Tax Competition, and the Fiscal Crisis of the Welfare State, 113 Har. L. Rev. 1573,
(IMF) “maintains a widely held view that tax incentives of all sorts have proved to be largely ineffective, while causing serious distortions and inequities in corporate taxation.” On the other hand, others argue that tax incentives are important for investment stimulation and location. This paper does find that, within the telecommunications industry, tax incentives are playing an important role in shaping the dynamic development of the industry.

Important to understanding the effects and dynamics of tax competition is the broader context of globalization. Too often tax policy discussions are carried out on a theoretical basis.


that is devoid of historical and institutional context.⁴ Others have recognized the important link between globalization and tax competition.⁵

The paper initially sets up the context of globalization and how this context may be divided into identifiable phases. The second part of the paper describes the key developments in the recent history of the telecommunications industry and how these developments fit within the general pattern of globalization. The third part of the paper describes how international tax competition has fit into the globalization

⁴ The importance of explicitly addressing the historical and institutional context of an economics issue is forcefully advocated by only certain segments of the economics professional. See Alfred S. Eichner & J.A. Kregel, An Essay on Post-Keynesian Theory: A New Paradigm in Economics, 13 J. Econ. Literature 1293, 1294 (1975).

⁵ See Avi-Yonah, supra note 1, at 1577-79 (arguing that globalization creates tax competition that may create a serious social backlash); Michael A. Livingston, Blum and Kalven at 50: Progressive Taxation, “Globalization,” and the New Millennium, 4 Fla. Tax Rev. 731, 742-44 (2000) (postulating that globalization is an important force acting against progressive taxation).
process. Emphasis is given to the recent attempts at international tax coordination and the discussion on harmful tax competition. The fourth part of the article analyzes the impact of tax competition on the telecommunications industry.

In order to effectively analyze the central issues, specific reference is made to the tax policies of two interesting and geographically diverse jurisdictions—Ireland and Singapore. Emphasis is given to the so-called “Irish model” that has been very effective in attracting players in the telecommunications and related industries to Ireland. The final major substantive part of the paper evaluates what tax policies have been effective in positively influencing telecommunications investment and what general lessons may be drawn from this for developing efficient tax policy regimes.

II. The Context of Globalization

Globalization is a dynamic process. Its modern origins can be traced back to the dislocation, protectionism, and misery of the Great Depression. The process of globalization can be divided into three phases encompassing (1) a breaking down of traditional trade barriers, (2) deregulation and privatization, and (3) international coordination.
A. Globalization and International Economic Integration: A Brief History

The Great Depression created and was, in turn, exacerbated by a huge reduction in international economic relations. The resulting Second World War strongly reinforced this development. During the Second World War, the Allies and a number of other countries developed a plan to resuscitate and restructure the international economic relations between countries. Out of the Bretton Woods agreement came the IMF, World Bank, and a fixed-exchange rate system. This is the economic structure that finds its political parallel in the United Nations (U.N.), though the

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7 See id. at 278-84.
8 See id. at 284-87.
actual operation of the two sets of institutions has been very different.\textsuperscript{10}

The Bretton Woods era was a period of strong international growth, prosperity, and economic stability.\textsuperscript{11} For example, total


real GDP grew at an average of 5.9% for OECD countries and at 5.5% for developing countries between 1950 and 1973.\textsuperscript{12} After the breakdown of Bretton Woods, there has been a general slowing of economic growth as well as a divergence of growth rates. New industrialized countries’ real GDP grew at a 3.5% annual rate from 1973-1990, while growth in major industrialized countries dropped to 2.5% per year.\textsuperscript{13} These growth rates, while significantly lower than those during the Bretton Woods period, compare favorably to the average annual negative growth rate of 0.1% for developing countries.\textsuperscript{14}

The Bretton Woods system broke down at the end of the 1960s and early 1970s due to the accumulation of US$ reserves held outside the United States, built-up trade imbalances, speculative pressures, and the August 15, 1971 decision by the American government to stop the convertibility of US$ into

\textsuperscript{12} See id. at 22.

\textsuperscript{13} See id.

\textsuperscript{14} See id.
gold.\textsuperscript{15} A key outcome of this breakdown is that we now have a flexible-exchange rate system. This has added “exchange rate uncertainty” as an important consideration for transnational corporations and other international economic actors.\textsuperscript{16} In the modern flexible-exchange rate system, the sometimes extreme exchange-rate fluctuations are driven by the speculative activities of currency traders and not the trade requirements of corporations.\textsuperscript{17}


\textsuperscript{16} See Paul Davidson, International Money and the Real World 83 (2d ed. 1992) (defining exchange rate uncertainty as exchange rates having the ability to vary and expected to do so in an unpredictable fashion).

World trade grew very rapidly in the last half of the twentieth century.\textsuperscript{18} This internationalization of economic relations was not only achieved on a global basis, but also on a regional basis. Most important of this has been the half-century old and on-going dynamic of creating the European Union. The Treaty of Rome establishing the European Economic Community (EEC) in 1957 focused on trade and the free circulation of goods, services, capital, and labor.\textsuperscript{19} Driven by the breakdown of Bretton Woods, European integration expanded to include monetary unification and the establishment of the Euro.\textsuperscript{20} Regional economic integration also finds lesser-developed examples such as the North American Free Trade Agreement (NAFTA).\textsuperscript{21}

\textsuperscript{18} See The WTO in brief: Part 1, at http://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbro01_e.htm (indicating that over the last fifty years merchandise exports grew by a six percent average annual rate, as well as world trade being 14 times larger in 1997 than 1950).

\textsuperscript{19} See Deprez & Deprez, supra note 15, at 69-70.

\textsuperscript{20} See id. at 70-72.

\textsuperscript{21} See id. at 72-73.
Globalization has been driven by the different rounds of the General Agreement on Tariffs and Trade (GATT) and that has now morphed into the World Trade Organization (WTO). The first GATT was signed in Geneva in 1947 (GATT 1947) and focused on lowering custom duty rates and other barriers to the trade of goods.\textsuperscript{22} Further opening of trade occurred via the Tokyo Round (1973-79) and the Uruguay Round (1986-94).\textsuperscript{23} The WTO was established on January 1, 1995, via the Uruguay Round of negotiations and currently has 140 member countries.\textsuperscript{24} The WTO goes beyond the scope of GATT to include an agreement on services, rules for trade and investment in intellectual property (TRIPS), and dispute settlement.\textsuperscript{25}


\textsuperscript{24} See World Trade Organization, WTO / About the organization, at http://www.wto.org/english/thewto_e/thewto_e.htm.

\textsuperscript{25} See World Trade Organization, supra note 22 (indicating that services--such as banks, insurance firms, and telecommunications
B. The Phases of the Process of Globalization

The process of globalization is not as simple as lowering tariffs, eliminating non-tariff barriers, and let the “free market” take over. The process also includes the creation of laws and institutions that allow for international integration; standardization of products, services, and measures; and mechanisms of dispute resolution. From this it is possible to identify distinct phases in the globalization process. It is usually the case that the initial step is dominated by the breaking down of traditional trade barriers. This initial step develops into a second step where questions of deregulation and privatization dominate. The third phase is dominated by international coordination, harmonization, and standardization.

1. Phase I: Breaking down traditional trade barriers

The traditional barriers to trade that are identified in the economics literature are tariffs, quotas, and non-tariff barriers. Non-tariff barriers typically include bureaucratic barriers, such as import licenses, product standards, and agency red tape. The first phase of globalization aims at the reduction and elimination of these types of barriers.

For example, GATT originally only addressed the trade of goods. Similarly, the EU started with the European Coal and Steel Community Treaty signed in Paris in 1951.

2. Phase II: Deregulation and Privatization


27 See <need cite>.
28 See <need cite>.
29 See WTO, supra note 22.
The second phase of globalization involves the restructuring of domestic components of a country’s economy. Globalization is not just a process that reduces the barriers on the edge of the economy but it also alters the way in which an economy operates. Deregulation and privatization are key aspects of this restructuring.

With the creation of the WTO, services were added under the GATS and intellectual property under TRIPS. Deregulation of telecommunications in South America is a recent example. In Argentina, for example, the liberalization of the telecommunications sector started November 8, 2000. The Argentinean deregulation is aimed at creating a more competitive market and attracting foreign investment. Venezuelan reform is increasing transparency and modernizing the tax structure.

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31 See WTO, supra note 22.
32 See Erica Eppinger, Argentina Finally Overhauls Regulations? Espero que Si!, 1 Convergent Communications Latin America (June 2000).
33 See id. at 1.
Privatization of telecommunications is also spreading to more and more countries.\textsuperscript{35}

3. Phase III: International coordination, harmonization, and standardization

The third phase of globalization occurs when order and organization are imposed on what comes to be perceived as an unnecessarily chaotic international system. The desire to impose order may come from dissatisfaction with the market outcomes that are generated by a highly deregulated, privatized, and uncoordinated international market system. Illustrations range from financial crises in places such as Mexico to the loss

of jobs resulting from companies shifting operations to low wage countries.\textsuperscript{36}

The desire to impose order may also come from a desire or need to address issues of international economic interrelationship that cannot be addressed by private markets. Pollution and the generation of global warming is one such issue that is now resulting in coordinated, international attempts to understand and fix the problem.\textsuperscript{37} The depletion of world fish stocks is another, similar problem.\textsuperscript{38} International organizations, national governments, non-governmental

\textsuperscript{36} See Ilene Grabel, Emerging Stock Markets and Third World Development: The Post Keynesian Case for Pessimism, in Deprez & Harvey, supra note 11, at 228.


\textsuperscript{38} See Jeffrey A. Hutchings, Collapse and Recovery of Marine Fishes, 406 Nature 882 (2000) (indicating that over-exploitation and subsequent collapse of marine fish stocks may take far longer to recover).
organization, associations of business enterprises, and even transnational corporations themselves can organize these attempts at coordination.

III. The Development of the Telecommunications Industry Within the Context of Globalization

Telecommunications is an industry that has experienced rapid quantitative and qualitative growth over the last decade of the twentieth century. Telecom market revenue more than doubled over the decade by increasing from $500 billion in 1990 to $1.16 trillion in 2000. The largest part of this increase occurred because of the mushrooming of mobile telephone use, which went from 11 million subscribers in 1990 to 650 million subscribers in 2000, for a revenue jump from $11 billion in 1990 to $230 billion in 2000. Revenues from non-traditional

40 See id.
sources, such as leased circuits, data communications, telex, telegraph, and other telecom-related activities, increased from $29 billion in 1990 to $150 billion in 2000.\textsuperscript{41} The number of personal computers jumped more than fourfold from 120 million computers in 1990 to 500 million computers in 2000.\textsuperscript{42} Internet users ballooned from 2.6 million people in 1990 to 385 million people in 2000.\textsuperscript{43}

This rapid growth in the telecommunications sector is intertwined with the broader process of globalization. While the new technological capabilities have developed largely outside the globalization process, these new capabilities have stimulated the speed at which the internationalization of the telecommunications industry is occurring. The removal of international trade barriers has been an important component of the spread of technology and the internationalization of telecommunications. But probably more important to the globalization process within telecommunications is the deregulation and privatization that has and is occurring in this

\textsuperscript{41} See id.
\textsuperscript{42} See id.
\textsuperscript{43} See id.
sector. This has resulted in greater market access and competition. This market access and competition has in turn created an ongoing dynamic of change in the number of business entities and their internal structures. As part of the globalization process there are now increasing attempts at international coordination and standardization.

A. Technological Capabilities

During much of the post-World War II period, the technology involved in telecommunications evolved in a relatively stable manner.44 Because of the computer revolution and the rapid development of fiber optic technology, the technological dynamics changed rapidly in the 1990s.45 We are now in the


Information Age where “the investment capital is knowledge and the means of production the human intellect.”46 The development of digital technology has been instrumental in this new industrial revolution.47 This revolution is creating a “convergence of media (from print to television) with telecommunications (fixed or mobile) and computing (hardware and software).”48

The rapid technological progress is partially reflected in changes readily observable by the general public, while other changes tend to be hidden from the public view. For example, worldwide mobile phone sales increased to 412.7 million units in 2000, a 45.5% jump over 1999 sales.49 Similarly, online consumer

47 See id.
48 Id.
49 See Mobile Phone Sales Jump in 2000, But Handset Manufacturers Still on Shaky Ground, TelcoTimes, Feb. 15, 2001, at
spending hit $28 billion in 2000, compared to $17.3 billion in 1999 and $7.7 billion in 1998.\textsuperscript{50} Likewise, United States Internet access hit 162 million people, or 60\% of the U.S. population, in January 2001.\textsuperscript{51}

B. The Removal of Traditional Barriers to International Trade

Trade barriers are typically analyzed in terms of the trade of goods. Trade barriers are usually broken down into tariffs, quotas, and non-tariff barriers.\textsuperscript{52} The trade barriers that exist with respect to the provision of telecommunications services do not fit neatly in these categories. The barriers to

\begin{footnotesize}
http://www.telcotimes.com/archive.news/gartner_02152001.htm
(last visited Feb. 15, 2001).
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\textsuperscript{52} See, e.g., <need cite>.
international trade in the telecommunications industry generally take the form of regulatory and licensing requirements. This is because a significant part of the telecommunications industry involves the provision of services, as opposed to the sale of goods.

The sale of goods in telecommunications is focused on the sale of consumer durables, such as cell phones, and the component parts of telecommunications infrastructure. This is what encounters the traditional trade barriers of tariffs, quotas, and non-tariff barriers. Even here special problems are encountered. Among these is the reluctance of some countries—particularly the United States—to allow the export of high-tech goods or to allow such goods to compete with their domestic equivalents.53 In the end, many of the infrastructure goods are

entering new markets when the new foreign service providers set up operations in those markets.\textsuperscript{54}

C. Deregulation, Privatization, and Market Access

Within the telecommunications industry, deregulation has been a fundamental component to the internationalization of the industry. This, in part, explains why the globalization of telecommunications is occurring later in the overall globalization process.

Historically, telecommunications markets were typically based on a monopoly, government-owned system of service supply. The breaking of this monopoly and allowing for competition is a key, ongoing component of the developing telecommunications market.\textsuperscript{55} This market liberalization has two identifiable

\textsuperscript{54} See, e.g., <cite to an example of this happening>.

\textsuperscript{55} See, e.g. Taiwan Ends Fixed Line Monopoly, TelcoTimes, Jan. 20, 2001, at http://www.telcotimes.com/archive/news/taiwan_-1302001.htm. (pointing out that Chunghwa Telecom’s monopoly in Taiwan’s local call market is being broken by the entry of three newly licensed, privately-held consortiums: Eastern Broadband Telecom, Taiwan Fixed Network Telecom, and New Century
components. First, there is the creation of other firms to compete with the incumbent entity. Second, there is the opening up of the markets to foreign firms.

The degree of competition varies in different parts of the telecommunications industry. The basic services market remains highly noncompetitive, with seventy-three percent of the world’s markets maintaining a monopoly. At the other end of the spectrum are the Internet service providers, with seventy-two percent of the global market open to competition, and the global

Infocommon Co.); Soon-to-be Former India Long Distance Monopoly Privatize, TelcoTimes, Feb. 8, 2001, at http://www.telcotimes.com/archives/news/india_02082001.htm (indicating that the Indian government plans to reduce its 53% share in Videsh Sanchar Nigam Limited (VSNL) by selling 25% to a partner and 1.97% to employees); Korea Telecom Privatization Receives Little Interest, TelcoTimes, Feb. 6, 2001, at http://telcotimes.com/archive/news/kt_02062001.htm (indicating that the Korean government plans to reduce its 59% share in Korea Telecom (TK) in stages until all its shares are sold by June 2002).

56 See ITU, Trends, supra note 46, at 7-8.
cellular market, where sixty-seven percent of the market is open to competition.\textsuperscript{57}

Telecommunications competition is seen as important in making a variety of services cheaper and more accessible, as well as being a driving force for technological development and upgrades. For example, the European Commission (EC) is pushing European Union (EU) member countries toward fostering competition for local telephone lines as a way to reduce European Internet access costs to be more in line with those in the United States.\textsuperscript{58} Opening up access to phone lines is also seen as stimulating technical innovation.\textsuperscript{59}

This liberalization is being partially pushed by obligations under the World Trade Organization (WTO). The WTO, in contrast to its GATT predecessor, was extended to include services via the WTO General Agreement on Trade in Services

\textsuperscript{57} See id.


\textsuperscript{59} Id.
(GATS) and related agreements.\textsuperscript{60} This allows an additional avenue to pressure for telecommunications deregulation.\textsuperscript{61}

**D. Changes in Entities and Their Structure**

Large firms that tend to have a national basis dominate the world telecommunications market. For example, the top public telecommunications operators, ranked in terms of 1999 revenue are NTT of Japan at $98.0 billion, AT&T of the United States at $62.4 billion, SBC of the United States at $49.5 billion, MCI Worldcom of the United States at $37.1 billion, and Deutsche Telekom of Germany at $35.6 million.\textsuperscript{62} The top eight telecom

\textsuperscript{60} See World Trade Organization, supra note 22.

\textsuperscript{61} See, e.g. CompTel Warns U.S. Trade Officials of Anticompetitive Practices, *TelcoTimes*, Jan. 31, 2001, at http://www.telcotimes.com/archive/news/CompTel_01312001.htm (pointing out that CompTel is arguing that Germany, Mexico, South Africa, Japan, and Taiwan are violating their WTO obligations by engaging in anti-competitive practices such as “failed interconnection, exorbitant national license fees, and delayed delivery of vital services to competitors).

\textsuperscript{62} See International Telecommunications Union, Top 20 Public Telecommunications Operators, at
equipment manufactures were all estimated to have more than $20 billion in revenue in 2000, with Canada’s Nortel leading the way with $29.8 billion of revenue and followed by Sweden’s Ericsson and Finland’s Nokia.\textsuperscript{63} This compares to the ITU ranking for 1998 that had as the top three telecom equipment vendors Lucent of the USA with revenue of $26.8 billion, Ericsson with revenue of $21.5 billion, and France’s Alcatel with revenue of $20.9 billion.\textsuperscript{64} This data illustrates that while dominated by large firms, this industry nevertheless a volatile one.\textsuperscript{65}

\begin{quote}
http://www.itu.int/ti/industryoverview/at_glance/topptor_1999.htm (last updated Feb. 14, 2001). Note that these 1999 figures are the most resent comparable number provided by the ITU.
\end{quote}


\textsuperscript{64} See International Telecommunications Union, Top 20 Telecom Equipment Vendors, at http://www.itu.int/ti/industryoverview/at_glance/Top2098.htm (last updated Oct. 8, 1999).

\textsuperscript{65} See Gartner Dataquest, supra note 63.
The deregulation process—when it extends to foreign firms—predominantly means that these large transnational firms are allowed entry into the local economy. Privatization—when it, again, is open to foreign firms—tends to result in these large foreign corporations being the ones that purchase the former state companies. This entry by the large foreign firms allows for a variety of positive effects, including access to their advanced technology and expertise, as well as to the global network that these companies possess. Yet, despite these positive effects, there is often a fear of foreign dominance and control that comes with the entry of these companies into the local economy, and that they will, consequently, not act in the national interest of the country within which they are doing business.

A relatively recent and important example of this is negative reaction of some in the House and Senate to Deutsche

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66 In Asia fifty-five percent of operators have been privatized, while Europe crossed the fifty percent threshold in 1999. See ITU, Trends, supra note 46, at 8.
Telekom’s acquisition of VoiceStream Wireless. The attempt to draft legislation to block this merger drew a strong reaction from the EU. The EU pointed to the deregulation, openness, and foreign ownership of the telecommunications industry in Europe.

In reaction to these types of problems, incumbent companies are trying to position themselves so that they can effectively compete with the large transnational telecommunications companies. Many examples exist. Recently, Indonesia’s state-owned incumbent domestic carrier, Indonesian Telkom, is trying to position itself for the opening up of the Indonesian domestic telecommunications market in 2003 by trying to acquire PT


69 See id.
Indosat, the country’s international telecommunications operator that is 65% owned by the Indonesian government.70

E. Coordination and Standardization

Communication requires, by definition, some degree of standardization. Just as a person cannot communicate with another person unless they use a commonly understood language or other method of communication, an international telecommunications network must coordinate the diverse national systems into something that fits together on a technological basis.

Part of international coordination in the telecommunications industry comes through the International Telecommunications Union (ITU). The ITU started as the International Telegraph Convention in May 1865, morphed into the

ITU, and became a specialized agency of the U.N. on October 15, 1947. Part of the work of the ITU is the creation of standards in telecommunications. Fourteen Study Groups, that have created more than 2600 recommendations or standards, carry out this standardization work. For example, the ITU recently “approved

71 The fact that the ITU is a U.N. organization is, at times, important for understanding the implications coming from its conventions and how these interrelated with other controlling agreements. For example, the ITU’s Melbourne convention does not apply to Taiwan because it is not a member of the UN, but Taiwan is an “observer government” of the WTO. See World Trade Organization, The Organization, Members and Observers, at


new world standards for next generation optical networks that will provide ultra-high capacity using Dense Wavelength-Division Multiplexing (DWDM).”75

Coordination is also being stimulated by the convergence of the telecommunications, broadcasting, and IT industries. Countries are starting to move to regulatory and legislative regimes that blur the traditional jurisdictional boundaries that separated media, telecommunications, and computing by integrating the regulation of these into one unified regulatory scheme. Since the early 1990s, more than 150 countries have modified or changed their regulations.76 Malaysia, for example, grouped telecommunications, broadcasting, and the computing industries into one industry with one regulator by its 1998 Act.77 Other countries, like China and Namibia, have put

76 See ITU, Trends, supra note 46, at 5.
77 See id. at 5-6.
responsibility for these converging industries under one ministry, but without creating the single regulator.78

IV. Tax Competition and Globalization

Globalization is responsible for significantly extending the scale and scope of international tax competition. By greatly expanding the ease by which goods, services, and capital cross national borders, tax differences between jurisdictions are increasingly important in determining where business activities are carried out. A number of jurisdictions have been successful in using tax incentives to attract foreign investment. Yet many experts are now seeing tax competition as harmful to the fiscal and development goals of many countries. As a result, there is an increasing movement away from tax competition toward tax harmonization and coordination.

A. International Tax Competition and its Interrelationship with Globalization

78 See id. at 7.
Tax competition is the use of taxes by tax authorities to attract business activities to their jurisdictions.\textsuperscript{79} The specific instruments used can be any tax rates, exemptions, and rules that are on the books. Tax instruments can be used to affect finance and real capital, labor, or services--any component part that may be important to business.

Because globalization makes the movement between countries of capital and business operations easier, globalization has increased the use and effectiveness of tax competition. With the reduction of barriers to trade, firms are less locked into particular locations to carry out their activities.\textsuperscript{80} For example, having a factory in the market where sales occur is rarely needed anymore.\textsuperscript{81} Hence, location-specific factors, such


\textsuperscript{80} See Avi-Yonah, supra note 1, at 1588-89.

\textsuperscript{81} See \textit{id.} at 1589-90.
as tax rates and other tax consideration, can affect the expected profitability of an activity and the firm’s decision on where the activity should be located.\textsuperscript{82} With globalization, it is not only the greater likely effectiveness of tax incentives that drives tax policy, but also the large increase in international trade. This means that there are a lot more private business activities for tax authorities to compete over.

The increase in international tax competition has resulted in changing economic and tax policies for many countries, including the United States.\textsuperscript{83} There are theoretical arguments, as well as empirical and anecdotal evidence, pointing to the overall positive benefits to corporations, tax authorities, and economies of tax competition. On the other hand, there exists significant theoretical and empirical authority that indicates that tax competition has negative outcomes for economies and tax authorities. The increasing concern about the negative outcomes is resulting in stronger attempts at tax harmonization and coordination.

\textsuperscript{82} See id. at 1591.

\textsuperscript{83} See Hines, \textit{supra} note 3, at 305.
B. The Positive Goals and Results of Tax Competition

Tax competition has been a device successfully used by a number of countries to attract foreign investment.\textsuperscript{84} This investment has taken the form of both real and financial investment.\textsuperscript{85} The real investment is, of course, important in directly and indirectly generating employment, sales, and income.\textsuperscript{86} The financial investment may be important in developing the banking and financial sector of an economy and

\textsuperscript{84} Ireland is the most commonly cited success story. See infra section V.B.

\textsuperscript{85} <give some data, if possible. (OECD?) ; problem of separating what is driven by tax incentives and what is driven by other factors. (any article addressing this?>

\textsuperscript{86} In economics, it is a broadly accepted that increases in real investment created direct and indirect (multiplier) effects on employment, expenditures, sales, and income. See John Maynard Keynes, The General Theory of Employment, Interest, and Money 115-28 (First Harbinger ed. 1964) (1936). Such increases in real investment may also stimulate additional real investment (accelerator) that then, in turn, creates more employment, expenditures, sales, and income. See R.F. Harrod, The Trade Cycle: An Essay (Augustus M. Kelley 1961)(1936).
may have direct and indirect effects to generate additional real investment.

Theories abound on the nature and effects of tax competition. The use of tax incentives by governments is aimed at increasing economic activity—especially employment—and thereby increasing tax revenues. A lower tax rate can increase tax revenues if the tax base increases by a large enough amount. This would essentially be brought about by business investment expenditures responding elastically (as opposed to inelastically) to tax changes.

The empirical studies that have been done generally agree that foreign direct investment (FDI) reacts positively to lower

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87 See John Douglas Wilson, Theories of Tax Competition, 52 Nat’l Tax J. 269 (1999) (providing a broad survey of the theoretical models in the tax competition literature).

tax rates. A tax elasticity of investment of roughly -0.6 seems to be a common reference point when it comes to U.S. FDI. There seems to be a much more significant impact of lower tax rates on FDI financed by internal funds compared to FDI financed by parent company funds. When examining expenditures on U.S.-owned property, plant, and equipment (PPE), there seems to be even a more significant positive impact from tax competition. In fact, the data seems to indicate that, as globalization has progressed, PPE has become more sensitive to tax reductions.

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89 See Hines, supra note 3, at 308-13 (surveying and discussing the empirical studies on FDI).

90 See id. at 309. This tax elasticity of investment means that for every 1% decline in the tax rate there is an increase in FDI of 0.6%.

91 See id. at 309 n.14. (pointing out that a number of studies indicate significantly lower and inelastic tax elasticities of investment for investment financed by parent’s funds compared to higher and elastic tax elasticities of investment for investment financed by internal funds).

92 See id. at 310-11.

93 See id. at 311. (citing a study indicating that the tax elasticity of PPE investment increased (in absolute terms) from -1.5 in 1984 to -2.8 in 1992).
Other types of positive effects are also acknowledged. It is argued, for example, that tax competition introduces efficiency-enhancing incentives or that it reduces government waste.\textsuperscript{94} Efficiency-enhancing incentives may occur if there is imperfect competition or there are "commitment problems."\textsuperscript{95} The reduction in government waste is seen to come about by reducing the excessive size of government or by "expenditure competition" that leads to more efficient use of government expenditures.\textsuperscript{96}

Both large-scale empirical analyses and case studies indicate that tax competition tends to have a positive impact in generating foreign investment.\textsuperscript{97} The mechanism by which this occurs is somewhat open to debate.\textsuperscript{98} The magnitude of the effect is also an open question.\textsuperscript{99} Some experts are skeptical of these empirical results and point to other studies that raise logical and practical questions.\textsuperscript{100}

\textsuperscript{94} See Wilson, supra note 87, at 296-98.

\textsuperscript{95} See id. at 294-96.

\textsuperscript{96} See id. at 296-97.

\textsuperscript{97} See Hines, supra note 3, at 309-12.

\textsuperscript{98} See id.

\textsuperscript{99} See id.

\textsuperscript{100} See id. at 312-13.
C. Harmful Tax Competition

While tax competition is very beneficial for transnational corporations—and increasingly so with the spread of globalization—taxing authorities are increasing worried that “their tax bases are eroded through the actions of countries which offer taxpayers ways to exploit tax havens and preferential tax regimes to reduce the tax that would otherwise be payable to them.”\(^1\) In other words, tax competition is seen to be harmful when it draws business and capital away from a significant number of jurisdictions in large amounts to significantly reduce that potential tax revenue that would otherwise be generated.

A basic implication of the tax competition literature is that tax competition can lead to inefficiently low taxes and government spending on public goods.\(^2\) While this result has been confirmed under additional circumstances, the simple result


\(^2\) See, Wilson, supra note 87, at 298.
is now seen as a less obvious result.\textsuperscript{103} There are now credible arguments pointing to the benefits of tax competition.\textsuperscript{104}

The idea that tax competition is about a “race to the bottom” and that tax authorities, corporations, and experts see it as such can be repeatedly found in all kinds of tax literature.\textsuperscript{105} The tax authorities involved in this include, of course, both national authorities and those of political subdivisions.\textsuperscript{106} The idea of the “race to the bottom” is that by competing for mobile investment and capital by using taxes and

\begin{footnotes}
\item[103] See id.
\item[104] See id.
\end{footnotes}
subsidies, one may end up with an inefficiently lax tax regime and set of public policies.\textsuperscript{107}

One example of such a “race to the bottom” deals with the withholding tax on portfolio interest earned by foreign residents.\textsuperscript{108} In 1984, the United States unilaterally abolished its 30% withholding tax on U.S. source portfolio interest earned by nonresident aliens.\textsuperscript{109} Motivated by a fear that mobile finance capital would be lost to the United States, country after country has enacted this portfolio interest exemption.\textsuperscript{110} Some experts argue that whatever economic justifications may have existed at the time the exemption was created are now gone and it is time to reverse this trend.\textsuperscript{111}

Tax competition has been identified to have a number of potential negative effects. One major effect is its contribution to the fiscal crisis of the welfare state.\textsuperscript{112} The

\footnotesize
\textsuperscript{107} See Wilson, supra note 87, at 288-89.
\textsuperscript{108} See Avi-Yonah, supra note 1, at 1581.
\textsuperscript{109} See id. at 1579.
\textsuperscript{110} See id. at 1579-81.
\textsuperscript{111} See id. at 1667-68.
\textsuperscript{112} See id. at 1632-39.
lower tax rates and other tax incentives generated by tax competition results in lower tax revenues, and the state is therefore less capable in supporting social welfare programs.\textsuperscript{113}

In addition, by providing tax breaks to corporations and the wealthy, some see globalization and tax competition as a significant contributor to making tax structures more regressive and, therefore, widening the gaps in the distribution of income and wealth.\textsuperscript{114}

Tax competition is also seen to violate the “capital export neutrality principle.”\textsuperscript{115} The capital export neutrality principle is the situation where tax rates are immaterial in the profit maximizing decisions of firms so that these decisions maximize world welfare.\textsuperscript{116} Tax competition causes violation in this principle because it manipulates price signals that would otherwise exist and “promote worldwide efficiency and growth.”\textsuperscript{117}

\textsuperscript{113} See id. at 1632-35.

\textsuperscript{114} See Livingston, supra note 5, at 742-44.


\textsuperscript{116} See id. at 311.

\textsuperscript{117} Id.
The OECD has stepped into the discussion with its recent report “Harmful Tax Competition: An Emerging Global Issue.”\(^{118}\) The OECD sees a harmful tax practice as one “that meets one of the three operative criteria of no effective exchange of information, lack of transparency, and ‘no substantial activities’/ring fencing, and at the same time offers a low/no/nominal rate of tax.”\(^{119}\) Low or no taxes do not, therefore, create a presumption of a harmful tax practice.\(^{120}\)

Commentators have quickly responded to the report.\(^{121}\) It is argued that regulating tax competition impinges on the sovereign’s right of taxation.\(^{122}\) The large and powerful economies that dominate the OECD are seen as trying to impose

\(^{118}\) Harmful Tax Competition Report, supra note 101.


\(^{120}\) See id.


\(^{122}\) See, Melo, supra note 121, at 186-89.
their view of what a tax regime should be on the small and relatively powerless economies that are typically labeled as tax havens. By coercion, the OECD is robbing the small economies’ ability to set their own, independent tax regime.

It is also argued that low tax states “simply offer a superior services-to-cost ratio.”\textsuperscript{123} In other words, the tax havens are seen as financial centers that effectively manage the monetary assets and flows of transnational corporations and individuals. By limiting the nature of tax competition, these services could not be provided as efficiently and the overall cost of operation of the TNCs would increase.

\textbf{D. Tax Harmonization and Coordination}

In this era of globalization, it may be surprising to note that OECD tax levels have been increasing. Taxes were 29\% of aggregate OECD GDP in 1970, 33\% in 1980, 36\% in 1990, and 37.2\% in 1998.\textsuperscript{124} There is, however, a large variance of tax levels

\begin{itemize}
  \item \textsuperscript{123} \textit{Id.} at 209.
  \item \textsuperscript{124} See OECD, \textit{A World of Taxes}, at http://www.oecd.org/daf/fa/stats/stats.htm (last visited Jan. 9, 2001).
\end{itemize}

45
between member countries.\textsuperscript{125} Countries like Sweden, Denmark, Finland, Belgium, France, and Luxembourg are at the high end of the spectrum with taxes being over 45\% of GDP.\textsuperscript{126} At the lower end of the spectrum are Korea, Japan, Australia, the United States, and Turkey with their tax share of GDP being in the 20-30\% range, with Mexico being lowest with taxes being 16\% of GDP.\textsuperscript{127}

The tax mix has changed significantly. The largest--but declining--share of tax revenue comes from personal income taxes.\textsuperscript{128} While the share made up of the corporate income tax has remained relatively constant, the effective tax burden on business profits has declined.\textsuperscript{129} In contrast, value-added taxes

\textsuperscript{125} See id.
\textsuperscript{126} See id.
\textsuperscript{127} See id.
\textsuperscript{128} See id.
\textsuperscript{129} See id. (arguing that “[f]or over two decades the share of the corporate income tax has remained some 8 per cent of total taxes. AS the share of corporate profits in GDP of the OECD area strongly increased after the mid 1980s, effective tax burdens on profits fell. This trend reflects in part an increased erosion of the tax base as a consequence of widespread
(VAT) and other general consumption taxes have risen significantly to make up 18% of total tax revenue, compared to 12% in the 1960s.130

With this backdrop, it is easier to understand the OECD’s push for tax harmonization. Arguably, the OECD is trying to (1) harmonize the wide discrepancy of tax rates that exist within member countries, (2) protect its overall tax rates against those outsiders that are undermining it with tax competition, and (3) alter the trend toward regressive taxes that is pushed by tax competition.

The OECD is pushing for cooperation and harmonization131 as the means to address harmful tax competition.132 The OECD tax planning (including the use of ‘tax havens’) and intense tax competition among industrialized countries”).

130 See id. Additionally, social security taxes are the other area of significant increase. See id.

131 The OECD claims it is only looking toward tax cooperation and not tax harmonization. See Jeffrey Owens, Promoting Fair Tax Competition, at http://www.oecd.org/daf/fa/harm_tax/PromotingFairTaxComp.pdf (last visited Mar. 19, 2001). Owens also claims that the OECD is not challenging legal tax planning. See id.
identified 47 preferential tax regimes in the OECD area that are potentially harmful and that it aims at curing.\textsuperscript{133}

The OECD’s push against harmful tax practices is resulting in a dialogue with the alleged offending tax jurisdictions. In June 2000 the OECD identified thirty-five jurisdictions that met the technical criteria for being tax havens.\textsuperscript{134} This has developed into an initiative for a dialogue with the listed jurisdictions based upon an OECD framework.\textsuperscript{135} The framework


\textsuperscript{133} See id. at 12-14.

\textsuperscript{134} See id. at 17. The thirty-five jurisdiction include British dependencies and territories, such as Jersey and the British Virgin Islands, territories of other countries, such as the U.S. Virgin Islands, Aruba (Netherlands), and Niue (New Zealand), small Carribean countries, such as Barbados, Grenada and St. Lucia, as well as other geographically-diverse jurisdictions, such as Monaco, Liechtenstein, Bahrain, Liberia, and the Seychelles. See id.

\textsuperscript{135} See Organization for Economic Co-operation and Development, Framework for a Collective Memorandum of Understanding on
presents terms and a timetable by which to eliminate harmful tax practices by December 31, 2005.\textsuperscript{136} This is leading to regional conferences being held in early 2001 between the OECD, the listed tax jurisdictions, and other interested parties, such as the IMF, the World Bank, the U.N., and the WTO.\textsuperscript{137}

As with many aspects of internationalization and economic integration, Europe has led the way. There is currently a process gaining steam for tax harmonization within the European Union.\textsuperscript{138} If one has one integrated market with one currency, \begin{flushleft}
\end{flushleft}
\textsuperscript{136} See id. at 2-5.
then it is a logical extension to have a relatively harmonized
tax system.139

The link between trade globalization and international tax
issues is recognized as a dynamic one generating pressures for
harmonization.140 One such pressure comes from trying to have a
global tax system that is an effective complement to the
international trade system.141 In other words, the GATT and WTO
trade reforms have created a globalization process that creates
more a harmonized international trade regime. Harmonization in
tax can be seen as a logical complement to this.

There are fierce debates on how to achieve international
tax harmonization in support of the WTO. A major example for
the United States is the declaration by the WTO that the Foreign
Sales Corporation (FSC) tax system provides for an illegal

139 See id. at 118-19.

140 See Robert A. Green, Antilegalistic Approaches to Resolving
Disputes between Governments: A Comparison of the International

141 See id. at 87-90.
subsidy under WTO. The replacement legislation that was signed into law by President Clinton on November 15, 2000, is under attack by the European Union as continuing illegal subsidies to U.S. firms.

V. The Application of Tax Competition to the Telecommunications Industry

International tax competition has had and is having a significant impact on the dynamics of the telecommunications industry under globalization. These influences can be best understood by looking at case studies. The most effective use of tax incentives has been made by Ireland. In addition to the “Irish Model,” Singapore is examined as another important


jurisdiction for understanding the dynamics of tax competition and the international telecommunications industry.

A. The General Impact of Tax Competition on Telecommunications

The ways in which tax competition has influenced telecommunications development can be subdivided into five categories. First is the basic nature of the tax regime and tax rates that it applies. Second is the jurisdiction that the tax authority exercises over business activities and income. Third is the network of tax treaties that the tax jurisdiction has entered into. Fourth is the way in which business activities are characterized by the tax authority. Fifth are the economic development tax waivers that may be granted by the tax authority or a related economic development agency.

1. Different regimes and tax rates

The most fundamental tax considerations that affect investment decisions are what type of income is taxed and at what rates it is taxed. Differences in these concerns between tax jurisdictions may well be determinative of where an investment occurs.

Many of the location and other related issues also show up as transfer pricing considerations. Transfer pricing rules set the parameters for the international allocation of income
generated by related companies located in more than one international jurisdiction. The OECD’s guidelines typically set the international standard and basis for the law adopted by many countries.144

2. Jurisdiction

Telecommunications raises a number of interesting jurisdictional issues. Many of these issues simply arise from the multinational nature of the provision of many telecommunications services. One context where these issues arise is in the international fiber optic cable networks.

The laying of subsea fiber optic cable involves a highly sophisticated geological survey of the seabed to find the most effective and efficient routes. These engineering considerations effectively dictate where the cables will be, generally swamping any tax concerns.145 Where the cables are


may, however, have significant tax implications. To avoid coastal shipping lanes and other ocean activity, most cable tends to lie outside the usual 12-mile territorial waters limit.

U.S. states generally exercise a three-mile tax jurisdiction limit, the U.S. and most countries a 12-mile jurisdiction limit, while a few countries exercise a 200-mile tax jurisdiction limit.146

Jurisdictional questions have a fascinating illustration in an issue that may have important implications for the telecommunications industry by potentially dictating where businesses will be located and, possibly by analogy, how similar taxes may be applied to certain telecommunications services. The issue is the imposition of sales and value-added taxes to transactions made via the Internet. There is currently a major of undersea communications cables and the range of modern technical concerns that dominate the determination of where and how to lay subsea fiber optic cable).

146 See Frederick W. Quattlebaum & David Edquist, Ventures on the High Seas U.S. Federal Tax Treatment of a Sale of IRU Capacity, 1192 Prac. L. Inst. / Corp 583, 600-01 (2000) (pointing out that while the 12-mile limit is the usual cable industry standard, 3-mile and 200-mile limits may also apply under certain circumstances).
debate between the United States and the European Union on taxing Internet sales.\textsuperscript{147}

3. Tax treaties

A jurisdiction’s network of tax treaties is a critical component of the tax package that an international investor is looking for when deciding where to place an investment. Bilateral tax treaties allow monies to be transferred between the two contracting states at lower rates than would normally exists in the absence of a treaty. A jurisdiction that allows for the easy and cheap flow of money in and out of its territory may be very attractive to the international investor. Because what matters to the investor is the flows related to the other jurisdictions it does business with, the treaty tax rates--when they exist--will override the non-treaty rates.

\textsuperscript{147} See David Hardesty, \textit{EU Withdraws Proposals for VAT on Digital Sales}, EcommerceTax.com, Feb. 4, 2001, at http://www.ecommercetax.com/doc/020401.htm (last visited Mar. 22, 2001) (indicating that the EU’s proposal to have non-EU online sellers collect value added tax (VAT) on sales into the EU was challenged by the U.S. and others and has resulted in the EU rethinking its approach).
Consequently, certain jurisdictions have been very aggressive in developing treaty networks in the last few years. Ireland, for example, has comprehensive double taxation agreements in force with 39 countries—many of which were concluded in the last few years—and continues to add additional treaties.\textsuperscript{148} Similarly, Mauritius has 26 bilateral tax treaties in effect and another 14 treaties in various stages of completion.\textsuperscript{149} Singapore, another tax friendly jurisdiction, has a growing network of 40 tax treaties.\textsuperscript{150} Importantly, of these three jurisdictions, the United States only has a treaty with Ireland and lacks ones with Mauritius and Singapore.\textsuperscript{151}


4. Characterization of activities

Modern telecommunications raises a number of interesting characterization issues.

The provision of international telecommunications involves the communication between people or entities in at least two countries. The provision of this communication may also involve facilities and people located in other tax jurisdictions. This can include anything from transmission lines and cables to operational headquarters. In addition, it may be difficult, if not impossible, in certain circumstances to separate out and identify one communication from another in a global system. Under these circumstances it is very problematic to allocate income to the appropriate location.

Currently, an excellent example of this problem is found in the IRS’s Proposed Regulation 1.863-9 concerning the source

152 We have moved well beyond the traditional international telephone call that involves a party in one country and a party in another. Conference calls can involve people in more than one country. The same can be said when e-mails are sent to multiple addresses, when an corporate intranet exists for a transnational corporation active in a variety of countries, or other information is provided over the Internet.
rules applicable to communications income.\textsuperscript{153} This regulation illustrates the difficulty in providing for the communication services by activities outside the endpoints of the communication. It also points to the difficulty in identifying individual communications. Problematic rules along these lines may create a disincentive for efficient organization and location of telecommunication functions because they are likely to result in double taxation.

A significant part of international telecommunications goes, in whole or in part, through subsea cable systems.\textsuperscript{154} In laying and servicing this subsea cable, there is a question of how such activities should be characterized. Many income tax treaties explicitly account for shipping income or income derived from exploiting the seabed as categories that deserve

\textsuperscript{153}Prop. Treas. Reg. § 1.863-9, ?? Fed. Reg. ???? (date). <HBB 14.5.1>

special tax treatment.\textsuperscript{155} Depending upon their specific formulation, some subsea telecommunication activity may fall under exemption generated by these categories, may be explicitly accounted for, or fall outside these categories. Each characterization results, of course, in different tax consequences.

5. Economic development tax waivers

In the modern information age, a well-developed telecommunications infrastructure is vitally important to ensuring an economy’s effective participation in the global economy. While a variety of government expenditure and other domestic programs are used and may be important in achieving this, tax waivers and benefits specifically targeted at certain types of firms or activities are another set of effective tools to stimulate the development of a state-of-the-art

telecommunications infrastructure. For example, <example of a tax incentives directly aimed at telecom development>.

These types of economic development tax waivers and incentives are most often tied to the employment generated by a company’s investment. For example, the Industrial Development Commission (IDC) of the U.S. Virgin Islands is authorized to extend tax benefits for “the promotion of growth, development and diversification of the Virgin Islands.” These tax benefits include a 90% exemption on local income taxes, a 1% customs duty rate, and 100% exemptions on dividends, property taxes, excise taxes, and gross receipt taxes. The key development requirement for investments in the U.S. Virgin Islands is...

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156 These tax waivers and benefits can be characterized as “tax expenditures” and be directly compared with direct government expenditures to achieve the same goals. See Stanley S. Surrey & Paul R. McDaniel, Tax Expenditures 99-117 (1985).


Islands is that they employ at least ten Virgin Islands residents on a full-time basis.\textsuperscript{159} This employment requirement is likely to swamp the minimum $50,000, non-inventory investment requirement as firms with ten employees will generally require a larger amount of investment.\textsuperscript{160}

\subsection*{B. The “Irish Model”}

One of the most successful jurisdictions in attracting high-technology and telecommunications investment is Ireland.\textsuperscript{161} The key components of the policy leading to the Irish success include a lowering of taxes, developing a modern communications network, and having an inexpensive, but educated work force.\textsuperscript{162}

\begin{footnotesize}
\begin{enumerate}
\item See id.
\item See id.
\item See John Hamilton, Irish Recipe Is Touted As Nourishment for Bulgaria, Wall St. J. Europe (Oct. 6-7, 2000).
\end{enumerate}
\end{footnotesize}
Stable legislation concerning large international investments is cited as an additional factor.\textsuperscript{163}

1. The New Tax Regime in Ireland

The tax regime that is a key component of Ireland’s success is, of course, more sophisticated than just “lower taxes.” The tax structure, tax incentives, and the treaty system are the key tax factors. Being a multifaceted gateway to the European Union is another key component of Ireland’s success.

Other countries are now explicitly trying to emulate the “Irish Model.” Bulgaria is one such economy.\textsuperscript{164} The Bulgarian telecommunications market will be fully opened up on January 1, 2003. A private, foreign-owned company, Cable Bulgaria, is building a countrywide state-of-the-art fiber optic network to be completed by that date.\textsuperscript{165}

2. The Irish tax treaty system

\textsuperscript{163} See id.  
\textsuperscript{165} See id.
The Irish income tax treaty network is an important component part of Ireland’s successful tax regime. Ireland sees its tax treaties as a mechanism to protect the benefits of its low tax rates from double taxation of corporate profits.\textsuperscript{166} Ireland currently has tax treaties with thirty-six other countries, including the United States.\textsuperscript{167} There are also three signed treaties, not yet in effect, that are expected to be in force in 2001, as well as three other treaties that are in the process of being negotiated.\textsuperscript{168}

3. Tax incentives for economic development

Part of Ireland’s fiscal policy is directly aimed at economic development. Ireland offers a variety of grants as


\footnotesize \textsuperscript{167} See id. at 2-3.

\footnotesize \textsuperscript{168} See id. at 3.
part of its fiscal incentives. These include capital grants, employment grants, training grants, and research and development capability grants.

The tax incentives are to “encourage development and sustain investment.” These include a low corporate tax rate for industry. Certain activities can get a preferential rate of 10% until December 31, 2002. These activities include the manufacture of goods in Ireland and international financial services activities carried on at the International Financial Services Centre, Dublin. From January 1, 2003 onward a corporate tax rate of 12.5% “will apply to Irish trading profits in all sectors.” Dividends and other profit distributions are subject to a withholding tax of 22%, unless overridden by EU

169 See id at 4.
170 See id.
171 Id. at 2.
172 See id.
173 See id. Other activities of note include certain computing, design, and planning services. See id.
174 Id.
rules or tax treaties.\textsuperscript{175} Tax incentives are also available with respect to certain patent royalties, expenditures on scientific research, and capital allowances.\textsuperscript{176}

Certain non-tax factors have been crucial to Ireland’s success. First, it is a member of the European Union, thereby allowing companies located in Ireland open and duty free access to a market of 370 million people. Second, Ireland is also a member of the European Monetary Union (EMU) that is moving toward the sole use of the Euro.\textsuperscript{177} This eliminates exchange rate risk for companies trading from Ireland with other members of the Euro zone.\textsuperscript{178} Third, Ireland provides an English-speaking workforce and close proximity to the United States—important considerations for American firms. Adding these factors to an educated, low-cost workforce, which is also found in other

\textsuperscript{175} See id.

\textsuperscript{176} See id. at 3.

\textsuperscript{177} It is important to note that the United Kingdom is not an EMU member, even though it matches Ireland on the other two non-tax elements of success.
European locations, has been central in generating Ireland’s success.

5. Harmonization, Coordination, and the Irish Model

The European Union has always been about trying to develop a single, coordinated economy. Recently, the European Commission is starting to push for greater coordination in the EU. Part of this is aimed at Ireland and its economic policies being more in line with the rest of the European Union. Some

178 Having transactions only denominated in the Euro, as opposed to various currencies, also reduces administrative and other transaction costs.


are reacting to this tax harmonization as “both unnecessary and potentially damaging.”\footnote{See Ed Crooks, EU Tax Harmony “Could Cause Damage”, Financial Times (Nov. 29, 2000), at http://news.ft.com/ftgx/cgi/ftc?pagename=View&c=Article&cid=FT3712V94GC&live=true&useoverridetemplate=ZZ (last visited Jan. 26, 2001).}

C. Singapore

Singapore is a city-state covering only 659.9 square kilometers (257.8 square miles), inhabited by 4.0 million people, and without any significant natural resources that has grown rapidly to be one of the top Asian economies.\footnote{See Statistics Singapore, Top-Line Indicators, at http://www.singstat.gov.sg/FACT/SIF/sif1.html (last visited March 9, 2001); Statistics Singapore, Minimum National Social Data Set, at www.singstat.gov.sg/STATSTD/UNSOC/unsoc.html (last visited March 9, 2001).} It is recognized as one of the “Asian Tigers” of economies that grew very fast in the last quarter century. Singapore has become an important regional financial, communications, and administrative
center. An important factor for this success has been a continually developing communications infrastructure.\textsuperscript{183}

Singapore’s tax policy is explicitly aimed at both raising revenue and promoting economic development. Singapore’s tax system is structured to have a broad tax base, low corporate and individual tax rates, attract foreign investment, and promote risk-taking. Singapore’s tax regime includes a significant tax treaty network covering many Asian countries, as well as key developed economies and financial centers. Its development-oriented tax policy focuses on providing a broad spectrum of general tax incentives. In combination, this multifaceted tax system has been very effective in attracting foreign investment and providing significant benefits to the local economy and population.

1. Tax rates and the tax regime

Singapore’s tax policy is an integral part of its overall fiscal policy and is an instrument to raise the tax revenue that is a substantial funding source for government expenditures, as well as an instrument to influence behavior in promoting economic and social goals.\textsuperscript{184} The two fundamental tenets of Singapore’s tax policy are to keep both corporate and individual tax rates low and to keep the tax base broad.\textsuperscript{185} The corporate tax structure is aimed at attracting “a good share of foreign investment” and to “make risk-taking worthwhile.”\textsuperscript{186}

Singapore is, in general, a tax jurisdiction that is relatively friendly to foreign business. Singapore has a general corporate tax rate of 26\% and no capital gains tax, except for gains on real property held for three years or less.\textsuperscript{187} Generally, Singapore has a withholding tax of 26\% on dividends.

\textsuperscript{184} See IRAS, An Overview, supra note 88.

\textsuperscript{185} See id.

\textsuperscript{186} Id.

\textsuperscript{187} See Stephen McLaren Consultants Pte. Ltd., Singapore Business Profile 5, at www.rowbotham.com/knowledgenet/countryprofiles/PORFILE-
and a withholding tax of 15% on interest, commissions, and royalties.\textsuperscript{188} Singapore’s tax treaties allow, of course, for lower rates under the appropriate conditions.

The implications for the telecommunications industry are that there are relatively low corporate tax rates that may make foreign investment desirable. If they are not low enough, then they would not override most business considerations. The relatively low individual tax rates in association with a good infrastructure contribute to the attractiveness of Singapore for setting up footloose operations using highly skilled Singapore residents and expatriates.

2. Tax treaty system

Singapore has a relatively comprehensive tax system. It currently has tax treaties with forty other countries.\textsuperscript{189}

\textsuperscript{188} See id. at 7.

Singapore’s tax treaty network is useful for the telecommunications companies in a number of ways. First, Singapore is comprehensively linked by treaty to many Asian jurisdictions—such as Taiwan (ROC), China, Vietnam, South Korea, Japan, The Philippines, Indonesia, Malaysia, and India—that are often heavily regulated, normally have tax disadvantages, or are sometimes out of the international loop.\textsuperscript{190} Second, the network links to tax planning jurisdictions, such as Mauritius, Hungary, and Luxembourg.\textsuperscript{191} Third, Singapore’s treaty network is also linked to certain major developed economies, such as Germany, France, Japan and the United Kingdom, but not the United States.\textsuperscript{192} Bringing these three characteristics together means Singapore is an important conduit for transactions by corporations active in its treaty partners. As such, Singapore is an attractive location for regional operational headquarters.

\textsuperscript{190} See id.
\textsuperscript{191} See id.
\textsuperscript{192} See id.
3. Income Tax Incentives for Development

In addition to the traditional goal of revenue raising, Singapore’s tax policy also has the explicitly stated objective of promoting economic and social goals.\textsuperscript{193} This objective means there are a series of income tax incentives structured so as to promote specific types of economic activities.\textsuperscript{194} Primarily administered by the Economic Development Board, these incentives include the Pioneer Incentive, aimed at new technology companies and providing a profit-tax exemption for five to ten years; the Development and Expansion Incentive, providing a concessionary income tax rate of not less than 10\% for a period of five to twenty years; and an Export of Services & Operational Headquarters incentive, also providing a concessionary income tax rate of not less than 10\% for a period of ten to twenty years.\textsuperscript{195}

These tax incentives are the key ones telecommunications companies can take advantage of to complement the general tax

\textsuperscript{193} See IRAS, An Overview, supra note 184.

\textsuperscript{194} See McLaren, Singapore Business Profile, supra note 187, at 9.

\textsuperscript{195} See id. at 10.
benefits and treaty networks that Singapore provides. The Export of Services & Operational Headquarters incentive reinforces what the tax regime, tax rates, and tax treaties point to—that Singapore is an attractive location for telecommunications regional operational headquarters.

VI. Evaluating Tax Competition in the Telecommunications Industry

Tax instruments are, of course, only one category of factors determining corporate investment decisions in the telecommunications industry. Geographical influences, market size, and other economic considerations are some of the alternative factors that have been discussed above. Some academic literature finds, in fact, that these factors swamp any tax considerations in influencing corporate investment decisions.\(^{196}\) In today’s telecommunications industry, however,

\(^{196}\) <use Avi-Yonah’s discussion at 1643–48; possibly use it as an introduction to the whole paper or this section in particular; i.e. repeat the arguments in this part (including Avi-Yonah’s own argument re forced competition) & then refocus on telecom>.
tax considerations can have a determinative impact on corporate investment decisions.

From the discussion above, the tax considerations can grouped into three useful categories: (1) tax considerations that impact on the access of a market to telecommunications services, (2) tax considerations that have an impact on the location of support services, including operational headquarters, and (3) tax considerations that influence financial portfolio choices and the international movement of financial assets.

A. Tax Considerations and Access to Telecommunications Services

Access to particular telecommunications services either exists or does not exist. If tax considerations have a significant impact on telecommunications investment of this type, then these considerations are determinative of whether the corporation provides the service or not. This type of investment is specific to a location and is not footloose. Such investments are made because the anticipated profits are sufficiently high. Tax considerations may determine whether the level of absolute profits is high enough to stimulate the
private sector to carry out the investment and generate the employment. A more subtle impact may arise if these tax considerations result in some type of provision of partial or lower grade services, or result in delaying the investment.

These situations may correspond to what have been labeled “demand jurisdictions.” Demand jurisdictions are those that provide large consumer markets and thereby attract the large transnational corporations. The absolute profit threshold required for these firms to invest in a jurisdiction is easily met in these markets. Tax incentives and government grants can push a jurisdiction over the required threshold. The level of absolute profitability required may be mitigated by engineering considerations.

197 Avi-Yonah, supra note 1, at 1587.

198 See id.

199 It may be the case that a terrestrial cable connecting two large markets need to pass through a small market for engineering reasons and, therefore, makes it cost-effective to service the small market that otherwise would not have received service.
A telling illustration is provided by the large subsea fiber optic cable systems. Often they bypass countries without landing there. For example, 360networks’ 360americas fiber optic cable network linking North and South America only lands in Bermuda, Venezuela, Brazil, and Argentina.\textsuperscript{200} This network bypasses all other Caribbean countries and Guyana, Surinam, French Guiana, and Uruguay on the eastern coast of South America.\textsuperscript{201} It also does not link to the western side of Central and South America.\textsuperscript{202} While market size and development play an important role in this decision, it is plausible that government investment and tax incentives could be sufficient to create landings of a system in countries currently bypassed.

The timing question can be also be illustrated by the construction of international fiber optic networks. For example, 360networks’ European network was initially built to

\textsuperscript{200} See 360networks, South America, at http://www.360.net/Our_Networks---South_America.asp (last visited Mar. 13, 2001).

\textsuperscript{201} See id.

\textsuperscript{202} See id.
cover England and northwestern Europe.\textsuperscript{203} It is now being extended to cover southwestern and part of central Europe.\textsuperscript{204} Currently, there do not seem to be any plans to extend the network to most of central and eastern Europe.\textsuperscript{205} Clearly, different markets are receiving earlier access to modern telecommunications networks than others.

B. Tax Consideration And The Location Of The Production Of Goods And The Creation Of Support Services

Much more sensitive to tax considerations are the decisions determining the location of mobile or footloose business activities. The tax considerations that affect the location of business activities can be divided into two categories that are relevant to the structure of the telecommunications industry. First are the considerations that affect the location of production and manufacturing operations. Second are the tax considerations that influence the location of support services.


\textsuperscript{204} See id.

\textsuperscript{205} See id.
1. Tax Considerations and the Production of Goods

The stereotypical tax competition scenario deals with the determination of the location of production of goods. Intertwined with other globalization considerations, such as labor costs and exchange rates, tax rates and other tax characteristics of a tax regime may be determinative in a transnational corporation locating manufacturing operations in one jurisdiction, as opposed to another. Such “production tax havens” are important in determining the international allocation of production facilities and giving transnational corporations bargaining strength against other jurisdictions.206 Such considerations may lead to the closing of a plant in the United States and a shifting of the operation to Mexico.207

With respect to the telecommunications industry, these production considerations are only important to that segment of 206 See Avi-Yonah, supra note 1, at 1577. 207 See Public Citizen, A Sampling of NAFTA Related Job Loss, at http://w.citizen.org/pctrade/taa97acs/KEYTAA.html (last visited Mar. 20, 2001) (pointing to the shifting by Guess Inc. of sewing operations from Los Angeles to Mexico).
the industry involved in the manufacture of consumer products or component parts used in telecommunication infrastructure.

Clearly, manufacturers mobile phones and other consumer communications products such as Nokia, Ericsson, and Motorola have manufacturing operations in many different countries.\(^{208}\) The same can be said for equipment manufacturers such as Nortel, Alcatel, Lucent, and Cisco.\(^{209}\)


2. Tax Considerations and Support Services

Some constituent elements of providing telecommunications services can—within reason—be located anywhere. These include operational headquarters, planning and engineering services, billing and finance services, and the like. In fact, the better international communications are, the less there is a need to locate these activities in any particular location. In contrast to the decision to provide particular customer telecommunications services, these support services investment decisions are basically a question of where to locate. The decision is already made that the investment will happen; it is just a matter of determining in which location it will happen. As such, tax considerations are more likely to be important in these types of decisions, as compared to those “yes” or “no” decisions on providing customer services.

If location is what needs to be decided upon, then small changes in the tax considerations may affect the investment decision. If the question is whether to go ahead with an investment, then once the investment is seen to be sufficiently profitable, additional tax incentives will not matter. In this case, tax incentives matter only if they change an investment
from insufficiently profitable to sufficiently profitable. The lack of tax incentives is only important if they prevent an investment from being sufficiently profitable.

C. Portfolio considerations and the movement of financial assets

The third category of tax considerations incorporates those that revolve around the shifting of income, the transfer of financial assets, and traditional tax avoidance behavior. This is the category that matches with the OECD concern for harmful tax competition. The OECD’s concern is focused on low or zero tax rates that exist in combination with “no effective exchange of information, lack of transparency, and ‘no substantial activities’/ring fencing.”\(^ {210} \) These activities may affect the income tax base in a way that is separate from the creation of business activities and employment.

In essence, telecommunications raises few special concerns in this area. First is the interrelationship that may exist between the considerations in this category and those of the other two categories. Portfolio and financial tax factors may help determine the absolute profitability of foreign investment

\(^{210}\) Briefing Paper, supra note 119.
in the first category and the relative profitability in the second category. The nature and enforcement of transfer pricing rules may influence the allocation of income and the possible shifting thereof. Sourcing of income rules are also important. Most of it comes down to rules that exist in financial centers and how other jurisdictions allow companies to transfer income and financial assets to those jurisdictions.

VII. Future Tax Challenges Facing Telecommunications Companies

The world facing telecommunications companies will keep on changing. New technologies and products are continually being developed. By merger, acquisition, privatization, and regulation, the players in the telecommunications industry are a dynamically changing group. Tax authorities are searching for ways to have stronger enforcement of tax laws, trying to create greater tax harmonization, and are explicitly attacking harmful tax competition.

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211 See supra Section V.A.4.a (discussing the IRS Proposed Regulation 1.863-9 on sourcing rules applicable to communications income)
In addition to these types of changes, the telecommunications industry will be facing the challenge of extending service to geographical areas, industries, and people currently under-serviced. Development questions and incentives will be important. The success or failure of the industry in addressing such questions will be seen most starkly in Africa.

A. Tax And The Provision Of Telecommunications To Under-Serviced Areas And People

One of the key challenges facing national governments and telecommunications companies is the provision of telecommunications services to those areas and people that are currently receiving inadequate services. The African example discussed below is the most glaring situation that needs addressing. Creative planning involving transnational telecommunications companies, multiple national governments, and international organizations will be needed to effectively accomplish this goal. Multinational tax incentives have the potential to play a crucial role in doing this. There is

\[\text{See infra Section VII.B.}\]
significant room for a symbiotic relationship between the private sector and the public interest.

Some telecommunications carriers are moving aggressively into underdeveloped countries. Some carriers are rejecting the old model that involves initially establishing a company at home and then expanding into developed markets such as Europe and Japan. Instead, they are avoiding the saturated hub markets and moving directly into developing markets. Fusion Telecommunications International is an example of such a company that is using domestic partners to move directly into such markets as Peru, Argentina, and India.

214 See id.
215 See id.
216 See id.
B. The Africa Question

Africa is the most underserved continent in terms of provision of and access to telecommunications services. For example, Africa has only 2.44 main telephone lines per 100 inhabitants, compared to 8.31 for Asia, 33.72 for the Americas, 38.52 for Europe, 40.28 for Oceania, and a worldwide average of 15.23.\textsuperscript{217} Africa, on average, lags behind the rest of the world in a similar fashion when it comes to cellular subscribers.\textsuperscript{218} It

\textsuperscript{217} See International Telecommunications Union, Basic Indicators: World, Dec. 15, 2000, available at http://www.itu.int/ti/industryoverview/at_glance/basic99.pdf (last updated Jan. 22, 2001) (also indicating that there is wide range within Africa, ranging from a high of 38.86 main telephone lines per 100 inhabitants of Réunion, through 13.77 for South Africa, to many countries that have less than one main telephone line per 100 inhabitants. In the United States there are 68.18 main telephone lines per 100 inhabitants. All these figures are for 1999).

is important to note, however, that the percent of total telephone subscribers that are also cellular subscribers is, on average, what exists on the other continents.\textsuperscript{219} Of the world’s 260 million Internet users in 1999, only 2.7 million or 1.0% were African.\textsuperscript{220} Of the African Internet users, 1.8 million or 68.5% were inhabitants of South Africa.\textsuperscript{221} Of Africa’s estimated 5.9 million personal computers, 2.4 million or 40.8% are in

\textsuperscript{219} See id. (On average, 29.1 percent of total telephone subscribers are cellular mobile subscriber in Africa, while 32.8 % in the Americas are, 35.2 % in Asia, 36.7 % in Europe, and 38.3 % in Oceania. There is, of course, a wide range of data for the different African countries).


\textsuperscript{221} See id.
South Africa, with Egypt having 750,000 or 12.8%, and Nigeria having 700,000 or 11.9%.  

The African telecommunications question is how to connect fifty-five ITU members, with extremely different economies and telecommunications infrastructures, with each other and to global networks. The ITU is promoting telecommunications business fairs in order to help bridge the digital divide that exists between Africa and much of the rest of the world.  

It is recognized that privatization and liberalization are important in developing Africa’s telecommunication’s sector.  

Some private African companies are leading the push. The largest Pan-African telecommunications operators include MobiNil

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222 See id.  
224 Id.  
of Egypt and M-Cell and Econet Wireless of South Africa. While there is strong support from the World Bank and the IMF to develop and open up Africa’s telecom markets, Africa is still considered over-regulated and fraught with uncertainties. Deregulation and privatization is slow and difficult, requiring court cases in some instances to force open markets.

VIII. Conclusion

From what has been discussed above, there is a worldwide process of tax harmonization occurring that is the logical outcome and corollary to the general globalization process. The challenge for tax planners will be to find ways to take advantage of, adapt to, and find benefits from the international tax harmonization process. Tax planners will be less and less


See id.

See id.

See id. (describing Econet Wireless cases against the Zimbabwe government to declare the incumbent monopoly unconstitutional and get a GSM network license).
able to rely on a divide-and-conquer strategy to obtain tax incentives, benefits, and preferences.

Within the telecommunications industry, globalization, the attack on harmful tax competitions, and the trend toward tax harmonization can be expected to create shifting opportunities for tax planning. Because certain segments and countries are behind the curve in the globalization process, economies and sectors will continue to open up to international competition and privatization. As this process matures, the national and international interest will shift to finding mechanisms to give under-serviced areas and people access to telecommunications services. Development tax incentives may be crucial in providing the absolute profits required to stimulate the private investment needed to create the appropriate telecommunications infrastructure and services. The international telecommunications companies can play an important role by making tax authorities aware of the significance of this.

To the extent the OECD is successful at attacking harmful tax competition, the financial centers component of tax planning will become harder to accomplish. The difficulty may create
greater costs and rewards for effective planning in this area. Tax planning resources may also be shifting to other activities.

International tax competition for footloose production, services, and headquarters activity is likely to be negatively affected by tax harmonization, to whatever extent it is achieved. This harmonization may be partially created via ancillary effects generated by the attack on harmful tax competition. It may be via the explicit tax harmonization policies, such as those promoted by certain parties within the European Union. The adoption of the OECD’s transfer pricing guidelines by more and more countries is also adding to global tax harmonization. Tax harmonization will lead to non-tax factors having a more dominant effect on where footloose operations will be located.

The trend against harmful tax competition and for tax harmonization will tend to create a greater need and opportunity for symbiotic relationships between transnational corporations and tax authorities in creating development incentives that meet the need for both. In other words, these tax trends will reinforce the pressures created by the maturation of the globalization process in telecommunications. Both trends push
for creative ways to enhance development of telecommunications in under-serviced areas. Coordinated tax incentives may be crucial here. The African example will be a clear illustration of the willingness of national and international tax authorities to create a tax regime supportive of the development of the telecommunications sector.