

EMERGING PATTERNS IN GLOBAL TELECOMMUNICATIONS ALLIANCES AND MERGERS

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Abstract

This paper examines global telecommunications mergers and alliances. Telecommunications companies are combining with other companies with increasing frequency. OECD customers, companies, and governments are the key players that drive and shape this trend. Customers drive companies to provide local infrastructure and multinational services. Company strategies to penetrate foreign markets, exploit production economies, increase control, and decrease competitive pressure increase merger and alliance activity. These mergers and alliances may actually increase rivalry rather than decrease it, so decreased government intervention may be in order.

International developments in telecommunications alliances and mergers have captured the attention of businesses and governments. Many traditional telecommunications companies, finding themselves in various stages of corporatization, privatization, and liberalization, are seeking to develop their futures by combining with other companies. New entrants, including start-up telecommunications companies and companies from nearby industries, are doing the same. These companies may combine with other new entrants or with traditional telecommunications companies.

Despite the substantial evidence of the need for this business restructuring and the evidence that the new business arrangements are often frail,² many governments are taking aggressive postures towards them. These governments regularly conduct extensive investigations and often require modifications to the business plans. For example, in the cases of British Telecom's (BT's) investment in MCI and of France Telecom's and Deutsche Telekom's investments in Sprint, the US Department of Justice used various tools to force the European partners to treat all competitors the same way that they would treat their US partners. (McDavid, 1997, p. 48)

This paper examines the forces that are driving these global alliances and mergers, the patterns that are emerging, and some implications for business strategy and government policy. Section I describes the primary industry players in the global businesses, these businesses' markets, and the steps these businesses are taking to shape their futures. Section II describes changes in the fundamentals of the telecommunications business. Section III explains how these changes drive the alliances and mergers. Section IV examines relevant government policies. Section V is the conclusion. It describes future lines of research.

Section I. Players, Markets, and Patterns

Because of their size and state of development, the largest Organization for Economic Co-operation and Development (OECD)³ telecommunications markets and largest OECD-based telecommunications companies are the primary players in global mergers and alliances.

² Section I highlights evidence of the frailty of many of the alliances and mergers. Section II explains why restructuring is inevitable.

³ OECD members include Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United

A. Countries

OECD countries account for 85% of the world's telecommunications revenues, 68% of the world's telephone main lines, and 83% of the world's gross domestic product (GDP). The five largest OECD telecommunications markets – (in order of size) Japan, the US, Germany, the UK, and France – make up 81% of the total OECD telecommunications revenues. The two largest OECD telecommunications markets – Japan and the US – make up 57% of the total OECD telecommunications revenues.⁴

International telecommunications traffic patterns and locations of multinational corporations show a pattern that is similar to that of revenues, GDP, and telephone main lines. International traffic indicates the market size for international and multinational telecommunications service providers. The five largest markets for international traffic – (in order of size) the US, the UK, Germany, Canada, and France – account for 65% of the total outgoing telecommunications minutes for OECD countries.⁵ (OECD, 1997, pp. 43, 49)

Large numbers of multinational customers increase the importance of markets because these customers' demand for end-to-end services drive globalization of telecommunications businesses.⁶ A recent study showed that 72% of all multinational corporations' headquarters are located in the US (30%), Japan (26%), Germany (8%), the UK (8%), and France (6%).⁷ (Galbi

States. (Source: <http://www.oecd.org/about/member-countries.html>, downloaded July 3, 1998.) Korea and Poland were not OECD members at the time this paper's OECD data were collected.

⁴ Telecommunications revenues are revenues for public switched telephone networks. OECD revenues were US\$519.1 billion (OECD, 1997, p. 34) and world revenues were US\$601.5 billion (International Telecommunications Union (ITU), 1997) in 1995. The five largest OECD markets were US\$421.3 billion, and the two largest were US\$297.6 billion. (OECD, 1997, p. 34) OECD main telephone lines were 470.4 million and world main telephone lines were 694 million in 1995. (OECD, 1997, p. 49) OECD GDP was US\$20.9 trillion and world GDP was US\$25.2 trillion in 1994. (World Bank, 1996, pp. 210-211) The OECD telecommunications revenue data and main telephone line data do not include Korea and Poland. The OECD GDP data do not include Iceland and Luxembourg. These data points were not available from the sources used for the other data.

⁵ Japan is conspicuously absent from this group. The OECD provides no explanation. It could be that the data were misreported, or that much of Japan's traffic was on dedicated lines that were not measured.

⁶ Section III explains the drivers of globalization in more detail.

⁷ Galbi and Keating explain that "(t)he share of multinational corporations is the share of the Fortune 1000 companies that are headquartered in the given country. The Fortune 1000 consists of the Fortune's Global 500, the 500 largest industrial companies, and Fortune's Global Service 500, a selection of the largest global companies in eight different service categories." (Galbi and Keating, 1996, p. 11)

and Keating, 1996, p. 11) These same countries have 81% of all OECD telecommunications revenues.

Market size, incumbency of major telecommunications carriers (see Table 1), and numbers of multinational customers indicate that France, Germany, Japan, the UK, and the US are of strategic importance for global telecommunications companies. However, other countries are increasing in importance because of their growing telecommunications markets and economies. Non-OECD (referred to as rest-of-world or ROW) increases in telephone lines and cellular subscribers indicate these markets' growth. From 1985 through 1995, the number of ROW telephone lines increased 156%, or 136 billion lines. For the same period, OECD countries' numbers of telephone lines increased more (151 billion), but at a slower rate (47%). Also for this period, the ROW's percentage of the world's telephone lines increased by one-half. From 1990 through 1995, the ROW's share of the world's cellular subscribers increased over 600%. The ROW's cellular subscribers increased 5,762%, or 14 million subscribers. OECD cellular subscribers increased 575%, or 63 million subscribers. (OECD, 1997, pp. 49, 51)

B. Companies

Table 1 lists the 20 largest OECD-based telecommunications carriers in the world. The first column lists the carriers. The second column shows each carrier's primary country. In the case of Cable & Wireless, the country indication might be misleading. The UK is Cable and Wireless's home country, but much of the company's operations are in non-OECD countries. The third column shows each carrier's 1995 revenues in US dollars. The last column shows how these revenues relate to the world market. The five largest OECD telecommunications markets – Japan, the US, Germany, the UK, and France – are the homes for all but 5 of these 20 carriers. These 20 carriers account for nearly 75% of the world's telecommunications revenues.

NTT, collecting 14% of the world's telecommunications revenues, is by far the largest carrier, exceeding the second largest, AT&T, by 60%.⁸ The German carrier, Deutsche Telekom, is comparable in size to AT&T. From there, the company sizes fall off rather quickly. AT&T

⁸ The Japanese government is restructuring NTT into three companies that will be owned by a holding company. The government will own 60% of the holding company, NTT Corp. NTT Corp. will own all of the shares of the operating companies NTT East, NTT West, and NTT Long-distance and International Communications Company. (Japanese Ministry of Posts and Telecommunications, 1998)

and Deutsche Telekom are approximately 70% larger than the fourth and fifth largest companies, France Telecom and Bell Atlantic. As of the time of this writing, SBC is attempting to purchase Ameritech. If SBC succeeds, it would move into fourth place behind Deutsche Telekom and have 5.8% of the world's business. Also as of the time of this writing, WorldCom is attempting to purchase MCI. If WorldCom succeeds, it will move into contention with GTE for the eighth slot.

Almost all of these carriers are traditional telephone companies; i.e., vertically integrated incumbents providing local and long distance services. The exceptions are the US carriers AT&T, MCI, and Sprint, and the Japanese carrier DDI Corp.

C. Alliances and Mergers

The major OECD carriers and other carriers are recombining into various alliances and mergers. It is futile to try to describe in a paper the state of affairs in these recombinations because they change on a regular basis. However, examining some of the major attempts and events provides insights into these businesses' futures.

There have been three primary global alliances -- Concert, Global One, and World Partners -- one of which (Concert) may already be over.⁹ These alliances illustrate different approaches to globalization.

Concert and Global One are primarily equity relationships. In Concert, BT purchased a 20% stake in MCI and sought to purchase the rest. The Spanish carrier, Telefonica, joined Concert and engaged in an equity swap with Portugal Telecom, which was also a member of Concert. The combination of Telefonica and Portugal Telecom gave Concert a strong presence in the Latin American markets where Telefonica and Portugal Telecom are heavily invested. Stentor (a Canadian local exchange company (LEC) alliance that includes Bell Canada) has been a distributor for Concert.

BT's attempt to purchase all of MCI signaled BT's intent to operate Concert as a single business owned by BT. However, MCI's financial losses trying to enter the local exchange

⁹ James Shaw explains that international mergers and acquisitions are more prone to failures than domestic recombinations. (Shaw, 1998, p. 141)

market in the US created concerns for BT's shareholders, so BT was unable to complete the purchase.

BT's attempt to develop Concert indicates some of the complexities of developing a global telecommunications company through mergers. BT encountered at least three problems, the sum of which may have caused the failure of Concert. The first problem was obtaining regulatory approval. US and EU regulators placed conditions on the initial 20% ownership stake that may have decreased its profitability. At the same time, BT's UK regulator, Oftel, required BT to commit to continued domestic investments. Later, when BT was obtaining regulatory approval to complete the purchase of all of MCI, the regulatory processes took sufficiently long for the remaining two problems to occur and apparently stop the merger.

The first of these remaining two problems was information asymmetries between the merging companies. BT was unaware of MCI's financial losses trying to enter the local exchange business. When these losses became known, BT tried to renegotiate the financial aspects of the merger. While BT and MCI were resolving this issue, the last problem, disagreements between management and shareholders on the global strategy, became apparent. BT shareholders appeared unconvinced that the profitability of a global telecommunications company was worth bearing MCI's US losses. This disagreement became so protracted that two other suitors, GTE and WorldCom, emerged, with WorldCom having the upper hand at the time of this writing.

Sprint, Deutsche Telekom, and France Telecom own the second global telecommunications business, Global One. As part of the formation of Global One, Deutsche Telekom and France Telecom purchased 20% of Sprint. Deutsche Telekom and France Telecom also have a partnership, Atlas, which operates in Europe. The Global One companies operate Global One as a profit center, meaning that the owners expect the company Global One to earn positive profits.

The Global One business model appears to have worked so far, but it has not been without problems. On the plus side, each partner has been able to pursue its own business strategy. Also, Global One has been winning large numbers of contracts with multinational customers. On the minus side, management changes have been necessary at Global One and there have been concerns about a lack of profitability. Also, the merger trend in telecommunications has caused

speculation about Sprint's future even though management has publicly disagreed with the speculation.¹⁰

The other global telecommunications business, World Partners, is a combination of equity stakes and agreements on billing, marketing, interconnection, etc. Operated largely by AT&T and Unisource, a European alliance that has included Telecom Italia (Italy), Telia (Sweden), Swiss Telecom, and KPN (Netherlands), World Partners also includes KDD (the incumbent international carrier for Japan), Telstra (Australia), and Unitel, a Canadian long distance carrier.

In contrast with the Concert and Global One business models, which mostly rely on equity ownership to establish the business relationships, World Partners largely relies upon contracts. It is unclear why World Partners uses this business model. It may be that the large number of companies involved makes it the only practical model. It may also be that many of the relationships have grown out of the pre-liberalization contract and settlements arrangements.

It is not yet clear that World Partners' business model will succeed. Two major companies, Telefonica and Telecom Italia, have had inconsistent relationships with the alliance. Telefonica left the alliance to join Concert. Currently, Telecom Italia has made moves to leave World Partners to join Cable & Wireless in multinational ventures. Telecom Italia would provide a strong Latin American presence to such an alliance, while Cable & Wireless would provide a significant presence in Asian markets.

Conspicuous by their absence in these global telecommunications businesses are the US LECs (with the exception of Sprint) and NTT. In the US, the Bell Operating Company (BOC)¹¹ interLATA restrictions keep them from joining global alliances for now. (See Section II) Until recently, Japan restricted NTT from offering international services. Also, Japan has been restructuring NTT, making it difficult for the company to plan any global moves. Until BT's recent problems in Concert, it appeared that European LECs were playing the dominant roles in

¹⁰ "Lessons to be Learned from Telecoms Alliances," *South China Morning Post*, April 18, 1998, downloaded from Infoseek, <http://www.infoseek.com/>, May 15, 1998; "Sprint's Profits Decline: International, Wireless Ventures Drag First-Quarter Earnings Down 27 Percent," *The Kansas City Star*, April 17, 1998, downloaded from Infoseek, <http://www.infoseek.com/>, May 15, 1998, and Henry Goldblatt, "Why Sprint's on the Block," *Fortune*, February 2, 1998, downloaded from <http://www.pathfinder.com/fortune/1998/980202/spr.html>, May 15, 1998.

¹¹ The original BOCs were Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell (later called SBC), and US West. Bell Atlantic and NYNEX have merged to form the new Bell Atlantic. SBC purchased Pacific Telesis and is proposing to purchase Ameritech.

global telecommunications. Problems in the current global telecommunications businesses may create opportunities for the US BOCs to be major players in directing global alliances and mergers, but this is not a certainty.

Some of the US BOCs appear to be readying themselves for global competition. Several have invested in non-US telecommunications companies to build non-US local infrastructures. Some have combined in the US to strengthen their domestic position. The Bell Atlantic/NYNEX merger is one example. SBC's CEO has made clear his intent to solidify SBC's position in traditional markets to help the company succeed in the US long distance markets and global markets.

Despite their consolidations in US markets, the US BOCs may still have an uphill battle for global business. SBC will become only the third largest LEC (behind NTT and Deutsche Telekom) even if it purchases Ameritech. NTT and the Global One combination of Deutsche Telekom and France Telecom dwarf SBC and Bell Atlantic, possibly putting the US companies in less advantageous positions relative to their competitors for global telecommunications business.

Section II. Changes in Business Fundamentals

This section describes changes in the fundamentals of the telecommunications business and how these changes drive changes in business practices. The initial conditions that drove the traditional industry structure and arrangements are explained first. Then the emerging conditions and their effects on businesses are described.

The initial industry conditions – a combination of available technologies, government policies, and standard business processes in the late 1800s and early 1900s – tied geography, network, service provider, and service into a single identity to create a monopoly-dominated industry.

Voice telephone services' domination of telecommunications created the tie between network and service. Telephone handsets, lines, and switches were the initial technologies.¹² These

¹² Telephone handsets are the basic telephones that customers use to place and receive calls. Telephone lines connect customers' premises to telephone switches, or connect telephone switches together. Telephone lines that connect customer premises to telephone switches are called local loops. Telephone switches connect lines together so that customers may complete calls.

technologies and the resulting networks provided voice calling between telephone customers. The technical needs of voice services dominated these networks for the first 100 years of the industry. (Gabel, 1995, pp. 453-455) As a result, the technologies, networks, and services were integrally tied and virtually indistinguishable.

Traditional boundaries in telecommunications extended the tie to include company and market. There are two types of boundaries -- geographic boundaries and company boundaries.

There are three types of geographic boundaries in telecommunications -- exchange, jurisdictional (national, state, municipal), and, in the US, local access transport areas (LATAs). Created by political and early technological considerations, these boundaries define services and markets even though customer needs and marketing seemingly played no role in their creation. Technology limitations and government licensing caused the development of exchanges. Exchanges established two distinct markets -- local exchange and long distance. (Brock, 1981, pp. 96-97) National boundaries created national and international distinctions. In the US, state political boundaries created two jurisdictions -- intrastate and interstate. Also in the US, antitrust created a third set of boundaries called LATAs. The Modification of Final Judgement (MFJ) that caused AT&T to divest the BOCs in 1984 divided the US into numerous LATAs. The MFJ provided that the BOCs could not compete in the interLATA market and that AT&T could not compete in local exchange markets.¹³

Companies formed in conformance to the traditional industry boundaries. In most countries, the government formed a monopoly national carrier that was government owned. In other countries, a combination of local and national government-owned carriers formed along lines of local exchange, domestic long distance, and international long distance. (Jasinski, 1997, p. 130; Chavolla and Samarajiva, 1997, p. 149) In the US, private companies formed along the local exchange, long distance, and state market boundaries, and have remained somewhat distinct. In 1993, traditional LECs in the US obtained only 14% of their revenues from long distance

¹³ United States v. Western Electric Company, Inc., 525 F. Supp. 1336, 1353-7 (D. D.C. 1981); hereafter, *MFJ*. Under the terms of the MFJ, Bell Operating Companies are generally prohibited from carrying calls across LATA boundaries. (*MFJ*, 552 F. Supp. at 229, §IV.(K).)

service.¹⁴ Also in 1993, traditional long distance companies such as AT&T, MCI, and Sprint received 82% of all of the long distance revenues received by US companies.¹⁵

The industry basics that tied the elements of geography, technology, service, and service provider into a single identity no longer hold, prompting an upheaval in ownership patterns. As the next section explains, many countries that had state-owned monopolies have found that internal capital and human resources are inadequate to modernize their telecommunications infrastructure. Technology change has allowed the creation of telecommunications platforms that replace the specialized voice networks and provide a number of different services. These platforms vary in their capabilities, creating opportunities for different platforms owned by different companies, to operate in the same geographic area. Technology change, growth in computer usage, and liberalization of telecommunications and media markets have combined to create market uncertainty and differences in opinion as to the future state or dynamics of the business. (Shaw, 1998, p. 142) These uncertainties and differences have, in turn, led companies to follow different business strategies, prompting some to enter non-traditional lines of business or create new lines of business, and others to entrench in traditional markets.

Section III. Changes in Business Strategy

The changes in business fundamentals create the need for business restructuring, but customer needs, competitive positioning, production, and government policies create the direction. This section describes customer needs, competitive positioning, and production. Section IV describes government policies.

¹⁴ Total LEC revenues in 1993 were \$95.5 billion. LEC long distance revenues in 1993 were \$13.6 billion. LECs' \$30 billion in access revenues are not counted as long distance revenues since they result from use of the local exchange networks. Access is a service that LECs provide to long distance service providers. This service allows long distance customers to make and receive calls over LEC local networks. Long distance providers use their networks to carry calls between local networks. LECs paid other LECs \$1.3 billion in access expenses in 1993. Traditional long distance companies paid the remainder of the \$30 billion of access. (United States Telephone Association, 1994, p. 9; and FCC, 1993, p. 31)

¹⁵ Total long distance revenue for US companies was \$75.3 billion in 1993. Long distance companies' revenues were \$61.5 billion. (FCC, 1993, p. 7)

A. Customer Needs

There are three types of customers whose telecommunications needs are driving telecommunications companies to become global: (1) Local customers whose needs are primarily network access and use, but may also be end-to-end in a limited area (examples include many local residential customers and small businesses);¹⁶ (2) National and regional customers whose needs for multiple voice and data services are end-to-end nationally or regionally, but in a single country (examples would include some insurance companies and retail chain stores); and (3) Global or regional customers whose multiple voice and data service needs are end-to-end globally or in multiple countries regionally (examples would include multinational companies). These customers drive globalization of telecommunications because of their local infrastructure needs and global networking needs.

These customers' infrastructure needs drive multinational investments in local infrastructure because of privatization of government service providers, granting of new operating licenses, and global rivalry. Privatization and new licenses drive multinational investment because serving pent-up demand for telecommunications in developing countries often requires capital and expertise that these countries do not have. (Hudson, 1997b, p. 197) Hungary and Mexico illustrate this point.

Around 1990, Hungary determined that achieving its goal of 38% penetration of telephone lines by the year 2000 would require an investment of over US\$3.5 billion. Financing this 10.8% annual growth in telephone lines was beyond the scope of domestic investors and the government's budget. So in 1993, Hungary moved to privatize a portion of its government-owned service provider, Matáv. Hungary effectively required that the outside investors be telecommunications operators making multinational investments. The government required all bidders to have operating experience of serving at least one million subscribers, financial strength from earning at least US\$1 billion from public telecommunications in the previous two years, and network development experience in the previous five years. In December 1993, the government awarded a 30.2% stake to a consortium of Deutsche Telekom, Ameritech, and Cable

¹⁶ End-to-end means that the customer needs features and functionalities, such as special dialing patterns, that are used for intra-company communications in multiple locations, or for regular communications with partners and customers in multiple locations.

& Wireless. The government – which retained the remaining 69.8% stake – granted an eight-year exclusive license for international and domestic wireline services, but required that telephone lines increase a minimum of 15.5% per year. In addition to the Matáv investments, consortia led largely by US and French companies committed to investing approximately US\$1.5 billion in regional wireline operations in 1994-96. (Canning, 1997, pp. 108-119)

When Mexico decided to modernize its economy, the government realized that it needed a strong signal of its commitment, and that infrastructure modernization was necessary, including the modernization of telecommunications. Effective privatization of the telecommunications provider, Telmex, would serve both of these needs. Allowing foreign investors to participate in and benefit from the privatization of a key national asset would signal the government's commitment. Also, according to government estimates, modernization of Telmex would cost more than US\$10 billion and only 70% of this could be raised domestically. (Chavolla and Samarajiva, 1997, pp. 149-158)

As a result, Mexico revised Telmex's concession to permit outside investors. The revisions require the operator to make commitments on service expansion, quality, and pricing. The revisions also limit the foreign investors' control and rights, and grant Telmex a monopoly over local telephone service until 2026.¹⁷ Based on these revisions, in 1990 the government sold 5% of Telmex to SBC, 5% to France Telecom, and 58.8% to various other investors, and kept 31.2% for itself. By 1995, SBC had acquired another 5% as the government decreased its stake. The telecom investors play roles that are different from the other investors' roles. SBC provides technical assistance in the areas of network maintenance, customer service, billing, Yellow Pages, and office procedures. France Telecom provides technical assistance in the areas of network planning and the installation of long distance and credit card phones. (Chavolla and Samarajiva, 1997, pp. 154-157)

Regional and global customers have networking needs that cross national boundaries, further driving companies to make multinational investments. (Jasinski, 1997, p. 137) Section I described the locations of corporate headquarters of the largest multinational firms. But these companies are only a sample of the many companies who operate in multiple nations. Competing to serve these customers' needs requires domestic operations in countries where these

¹⁷ The long distance monopoly ended in 1996. (Chavolla and Samarajiva, 1997, p. 152)

customers locate. Companies competing in this global business have three basic choices: (1) construct network facilities in the country; (2) interconnect with a competitor who already has the necessary facilities; and (3) join with domestic businesses to share network facilities. Constructing facilities in a foreign country may be inefficient because regulatory barriers to entry and asymmetric information on domestic business practices place the foreign entrant at a competitive disadvantage relative to the domestic companies, and to companies that partner with the domestic companies. Interconnecting with a competitor may create strategic problems because the interconnection charges give the competitor influence over the entrant's cost structure. Also, the competitor's network quality and capability limit the entrant's service capabilities. These problems lead many companies to choose the third option -- join with domestic companies, even though this option also has problems, as Section I explained.

Mexico provides an example of multinational companies joining with domestic companies to enter a market. Non-Mexican telecommunications companies formed alliances to compete against Telmex. At the start of liberalization, MCI was a 45% owner of the joint venture GF Banamex-Accival, which included Mexican banking and financial interests. AT&T owned 49% of Grupo Industrial Alfa, a consortium that included several Mexican industrial interests. Other telecommunications companies involved in ventures in Mexico included BellSouth, Bell Atlantic, and GTE. (Chavolla and Samarajiva, 1997, p. 161)

B. Competitive Positioning and Production Economies

In addition to addressing customer needs, companies form global alliances and mergers for strategic reasons, such as to expand markets. (Shaw, 1998, p. 140; Oh, 1996, p. 714; and Gershon, 1997, pp. 6-9) This may take the form of using alliances to facilitate foreign market penetration or to simply expand market share. Foreign markets may be difficult to penetrate because of lack of market presence and asymmetric information on customer needs, local operating conditions, and government regulations. Allying with a domestic company may provide an established market position and domestic expertise.

Another factor affecting global alliances and mergers is the need for companies to position themselves for future markets.¹⁸ As convergence continues to unfold, telecommunications companies will increasingly need to merge or partner with content providers, media companies, and computer companies. There will be numerous bilateral and multilateral agreements. (Shaw, 1998, p. 138) The interests here are much like the interests involved in current interconnection issues. A telecommunications company can increase its network's value by interconnecting with valuable content and information processing servers, or decrease its network's value through liberal interconnection with rival networks that have lower value. As a result, a telecommunications company's size and position in telecommunications is in part a preparation for bargaining with content providers, media companies, and computer companies. Market share may provide an advantage in these negotiations because size implies a greater customer base and may lead to greater technical and financial resources.

Expanding markets may provide increased production economies, stronger market presence, greater control over industry direction, and decreased competitive pressure. Increased production economies may come in the form of greater purchasing and distribution efficiencies, (Oh, 1996, p. 714) or economies of scale or scope. Smaller carriers have the most to gain from the greater purchasing efficiencies. Carriers with small operations in the foreign market are the most likely to benefit from the greater distribution economies. Because it is too early to tell if there are economies of scale or scope from global operations, production economy improvements may be limited to improvements from increased size of operations in particular geographic areas or for particular service platforms. Stronger market presence decreases marketing and distribution costs. Greater control of industry direction decreases risks from adverse changes in technology and customer expectations. Decreasing the number of competitors generally decreases competitive price pressures. Even in highly rivalrous markets, there is some advantage to decreasing the number of competitors to watch.

The previous discussion highlights many of the benefits for telecommunications companies participating in global alliances and mergers. However, there are also disadvantages. As has

¹⁸ Several authors have described and put numbers to the industries involved in this convergence. See, for example, Gershon (1997), Shaw (1998), Hudson (1997a), and Noll (1997).

already been illustrated, these combinations have proven to be frail, so resources can be wasted negotiating and setting up a multinational operation that may be dismantled in a short time. Also, partnerships and alliances may be tying the futures of companies whose interests and perspectives may be at odds at critical junctures, meaning that the whim of one of the companies may limit the futures of the others. (Shaw, 1998, p. 143) Also, agreeing to share profit reduces the incentive to increase total profit.

Section IV. Government Intervention

This section describes traditional government responses to telecommunications alliances and mergers, and examines the applicability of these responses for today's telecommunications markets. There are two parts. The first part explains why the global mergers and alliances should raise few competition policy issues, at least for the present. The second part describes institutional issues associated with implementing global competition policies.

A. Applicability of Competition Policy Issues

The most common reasons for government intervention in markets are monopoly and market power, externalities, information asymmetries between consumers and companies, distortions caused by other government policies, public goods, and distributive justice. (Jackson, 1997, pp. 186-198; and Viscusi, Vernon, and Harrington, 1995, pp. 2-3) In general, these reasons are weaker with respect to global telecommunications alliances and mergers than with respect to other situations. This is true because of multilateral rivalry, linkages and interdependencies, frailty of the recombinations, and information asymmetries.

Multilateral rivalry exists when diverse rivals compete in different market mixes. This market condition holds true in telecommunications because every company has its own market niche and a different strategy for addressing current and future market opportunities. This multilateral rivalry increases price pressures and decreases concerns with market power in two ways. First, companies may be forced to price below competitors' incremental costs in order to obtain and keep customers, and will generally be pressured to collect only limited contributions to common costs from each of their services. (Jamison, 1996, pp. 380-382) Second, market power is more balanced in interconnection negotiations because each rival has a market niche to

which the other rivals need to interconnect. This may decrease the possibility of collusive outcomes.¹⁹

The frailty of the global alliances and mergers calls into question the importance of governments placing conditions on their formation. Even though both Concert and Global One provoked extensive competition authority investigations in the US and Europe, Concert has likely failed as a business and Global One has not yet achieved financial success. World Partners has experienced member churn. While it is a possibility that these recombinations are viable only if they decrease competition and that their instability is an indication of the success of competition policy, it seems more likely that the frailty is an indication of the complexities and uncertainties of building global telecommunications businesses.

Global alliances and mergers may decrease problems with customer information asymmetries because known domestic companies are involved.²⁰ The involvement of domestic companies means that there are fewer language differences between company and customer, fewer misunderstandings relating to business practices, and greater common understanding of legal systems and contracts. These effects of involving domestic companies also decrease entry costs, which increase the probability of competitive entry in domestic markets.

B. Institutional Issues in Global Competition Policy

In addition to the economic issues with government intervention, there are institutional issues with enforcing competition policies. Governments effect their market interventions through government institutions, such as regulatory agencies, courts, and trade organizations such as the World Trade Organization (WTO). An institution's leadership, processes, structure, authority, funding, and linkages with other institutions determine its appropriateness and effectiveness for intervening in markets. In some countries (a group that includes the US), political leadership influences the interpretation and enforcement of competition policies. (Shaw, 1998, p. 140) There are also situations where entrenched bureaucracies with their traditions and internal

¹⁹ Laffont, Rey, and Tirole researched the single market case and found situations where there may be collusive outcomes. (Laffont, Rey, and Tirole, 1998, p. 11)

²⁰ Unfortunately, this may also carry with it unwanted baggage such as unfavorable reputation with at least some customers.

politics have significant influences on how competition policies are implemented, which does, of course, determine the real effects.

While leadership is important for keeping competition policies flexible and ruled by reason, the attributes of transparency, predictability, credibility, and legitimacy are also necessary. These are necessary to: (1) allow the business planning that is necessary for corporations and private entrepreneurs to invest; and (2) ensure that the citizenry views the rules and their enforcement as fair. (Smith, 1997, pp. 25-27) As a result, institutional processes need to be rules-oriented and open to stakeholder participation. (Jackson, 1997, p. 190)

Proper institutional authority is important to ensure that special interests do not overtake the institution, and to protect property. Oversight, checks and balances, and audits provide assurances that institutions do not abuse their discretion. Recent regulatory events underscore the importance of discretion. Regulators in the US, Australia, the UK, and Chile have begun adopting cost models for estimating costs for universal service and network prices. In the US, cost model decisions to date would not allow a company to cover even its forward-looking costs. One of the US models requires regulators to make approximately 600 input assumptions. In the UK, cost model decisions led Oftel to conclude that British Telecom had no net universal service costs. In Chile, regulator estimates of forward-looking costs for electricity distribution are generally 50% below company estimates. Chile is unique in that prices are based on a weighted average of regulator and company estimates. This provides strong incentives for strategic calculations. (Jamison, 1997, p. 57; and Bitran and Serra, 1994, p. 180)

In international settings, one of the primary competition policy needs is cooperation. Cooperation is important for several reasons. Perhaps prompted by the prisoner's dilemma problem to pursue narrow agendas, individual governments and agencies may take actions that add up to disasters for the world. (Jackson, 1997, p. 189) Increasing numbers of competition issues and mergers are multinational. Inconsistent and undependable application of rules in some countries can discourage efficient industry reconfigurations and so adversely affect market outcomes in other countries. Inconsistencies among competition rules can increase compliance costs. The trend to extend the territorial reach of national competition rules creates international conflicts. Some developing countries may lack appropriate domestic rules. These countries may be vulnerable, or may create multinational problems, in the context of the Uruguay Round and

other multinational trade agreements that have lowered market access barriers. (European Commission, 1997, pp. 266-267)

The recent frictions between the US and the European Union over Boeing's acquisition of McDonnell Douglas highlight how differences in competition laws can cause conflicts and externalities. Competition policies in the US focus on how mergers affect customers. EU policies also do this. But in addition, EU policies consider effects on competitors. (Fox, 1997, p. 21) This difference could be problematic if US BOC entry into global markets (for example, through a combination with a US long distance company) were thought to weaken European companies.

Section V. Conclusion

This paper examines the business strategies and government policies affecting the formation of global telecommunications businesses. It reveals several areas of research that need to be followed.

One area of need is a more complete investigation into the business concerns that lead to formation of these global businesses. Research to date has been conjectural, so both theoretical and empirical studies are needed. Theoretical research should determine conditions under which choices to join or stay out of global alliances and mergers are Nash equilibria. Theoretical research is also needed for formal research into the business models the global businesses could use. The theoretical models could provide the bases for empirical studies that assess the relative importance of the factors affecting businesses' choices, the effects of changes in these factors, the effects of the alliances and mergers, and the factors that determine when to apply a particular business model. This research should also examine information asymmetries. For example, information asymmetries in interconnection negotiations, government regulation, and entry conditions may increase the efficiency of partnering relative to competing. On the other hand, information asymmetries in negotiating and managing a multinational business and in finding partners may decrease the efficiency of combining.

A more thorough comparison of competition laws is also needed. Legal comparisons of US and EU exist, but comparisons with other countries are difficult to find. Economic studies of the impacts of multiple competition laws is needed. These studies should examine whether countries

can and do use competition laws to favor some companies over others, the economic effects of a proposed alliance or merger having to satisfy different jurisdictions' competition laws, and the effects the various legal processes have on the businesses.

A model of global rivalry is needed. This model should recognize that companies might be incumbents in some markets and entrants in others. It should also incorporate multilateral rivalry, as it appears likely that not all telecommunications businesses will be in all markets. This model should incorporate the effects of multilateral bargaining of interconnection (including new media and computers), market entry, and product characteristics to see if the rivalry or oligopoly will be the norm.

This paper contends that competition concerns should be given less attention than they are in these alliances and mergers. While it is too soon to test this hypothesis in telecommunications, perhaps empirical research in other industries with similar characteristics could be undertaken to test the hypothesis.

Lastly, research is needed on the effective roles of multinational competition authorities and policies. Institutions such as the EU, the WTO, and other multinational treaty organizations are increasing their roles in competition policy. Empirical and theoretical guidance on the effects of this trend could help guide policy makers.

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Table 1. 1995 Relative Sizes of OECD Major Telecommunications Carriers²¹

Carrier	Primary Country	Primary Business	1995 Revenues (US\$ billion)	Percent of World
NTT	Japan	Local and long distance	\$84.0	14.0%
AT&T	US	Long distance	\$51.4	8.5%
Deutsche Telekom	Germany	Local and long distance	\$46.2	7.7%
France Telecom	France	Local and long distance	\$29.6	4.9%
Bell Atlantic	US	Local	\$26.8	4.5%
British Telecom	UK	Local and long distance	\$22.8	3.8%
SBC	US	Local	\$21.7	3.6%
GTE ²²	US	Local and long distance	\$20.0	3.3%
Telecom Italia	Italy	Local and long distance	\$18.5	3.1%
BellSouth	US	Local	\$17.9	3.0%
MCI	US	Long distance	\$15.3	2.5%
Telefonica	Spain	Local and long distance	\$14.0	2.3%
Ameritech	US	Local	\$13.4	2.2%
Sprint	US	Local and long distance ²³	\$12.8	2.1%
US West	US	Local	\$11.7	1.9%
Telstra	Australia	Local and long distance	\$11.3	1.9%
Swisscom	Switzerland	Local and long distance	\$8.9	1.5%
Cable & Wireless	UK	Local and long distance	\$8.7	1.4%
KPN	Netherlands	Local and long distance	\$8.5	1.4%
DDI Corp.	Japan	Networking and wireless	\$7.1	1.2%
Total			\$450.6	74.9%

²¹ Sources: OECD, 1997, p. 13; and ITU, 1997, Table 1.

²² At the time these data were collected, GTE only provided local services. It now also provides long distance services.

²³ Even though Sprint provides both local and long distance, regulation has kept the businesses separate.