The Impact of the AT&T Divestiture on U.S. Trade

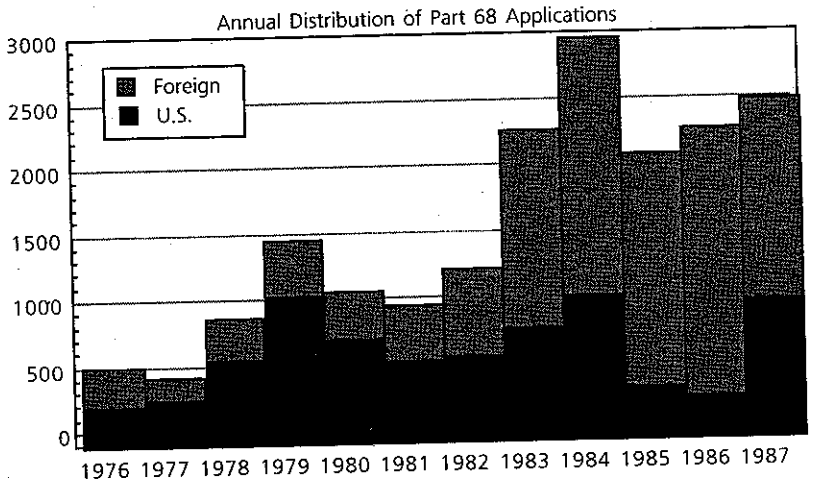
ing the initiative in the near term. The probabilities, unfortunately, are that the United States will likely continue to muddle along in this sector, as telecommunications trade deficits mount.

Eli M. Noam

The trade issue has become arguably the primary problem of the post-divestiture environment. The numbers say it loud and clear: the trade balance in terminal equipment moved from a $275 million surplus in 1982 to a $2.6 billion deficit in 1988, and things may get worse. Kenneth Robinson warns us that this deficit could grow, according to some estimates, to $4.9 billion by 1992, when the Bell companies could possibly buy an incredible 58 percent of their procurement from foreign-based companies. AT&T would cut 50,000 American jobs. One can add other horror statistics: registration of new equipment (so-called Part 68 filings) show that in 1988 only 43 percent of registrations were by American companies—many of which may well be foreign-owned subsidiaries—while 48 percent were by Asian firms. Europeans, interestingly enough, had only five percent of registrations (figures 12.6 and 12.7).

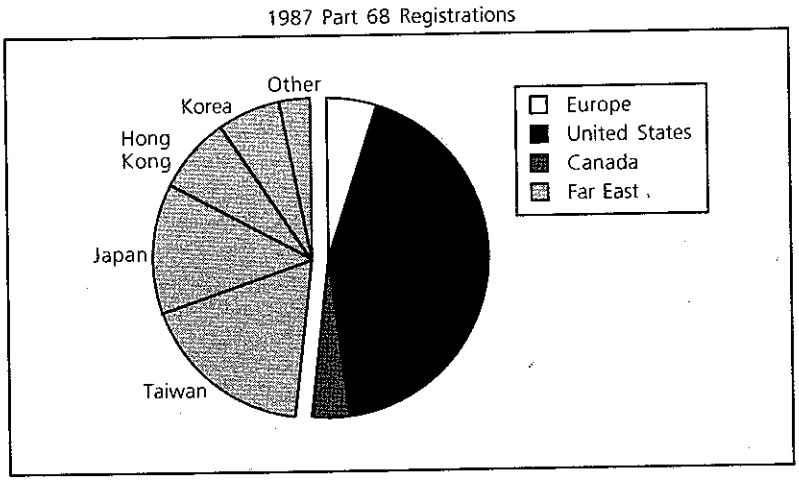
The twin reasons for the deficit are usually seen as the closed mar-

FIGURE 12.6



Source: W. Von Alven, FCC, Washington, D.C. 1988.

FIGURE 12.7



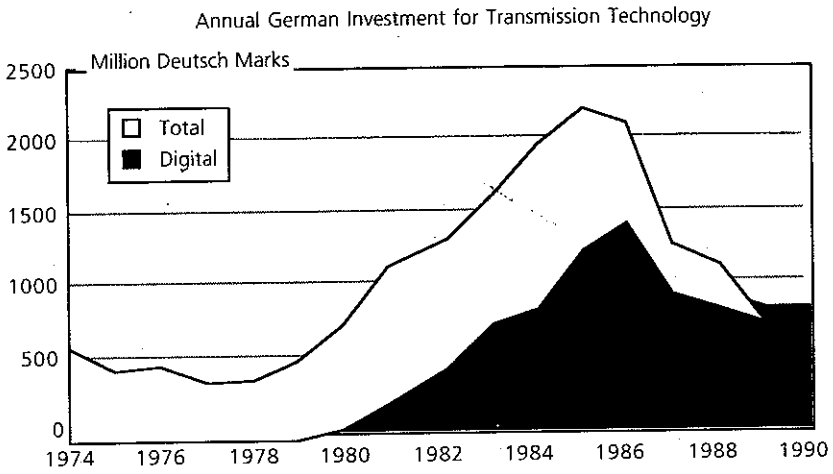
Source: W. Von Alven, FCC, Washington, D.C. 1988.

kets abroad and the open ones at home—open due to the divestiture. Both these reasons are partly correct; at the same time, things are often more complicated than they seem at first, and one needs some dispassion before blaming divestiture for our trade balance problems.

It is first necessary to understand the forces that are changing the international equipment market. Many people assign the prime role to changing technology, but one must recognize that networks in industrialized countries have reached a certain maturity, which in turn leads to a change in development strategy. The key variable is the saturation of basic service. The achievement of universal service is a very recent phenomenon; in Germany, for example, overall telephone penetration in 1960 was only 12 percent of households. A minuscule 6 percent of households headed by blue- and white-collar employees had a telephone. But in 1980, overall telephone density was up to 75 percent. In France, overall penetration in 1967 was an anemic 6 percent, and it is over 80 percent today. For the national telecommunications equipment industries, the achievement of universal service creates a serious challenge. The industry must reorient itself enormously, because its activity level would otherwise fall dramatically. Figures 12.8 and 12.9 illustrate the great drop in equipment investment in Germany.

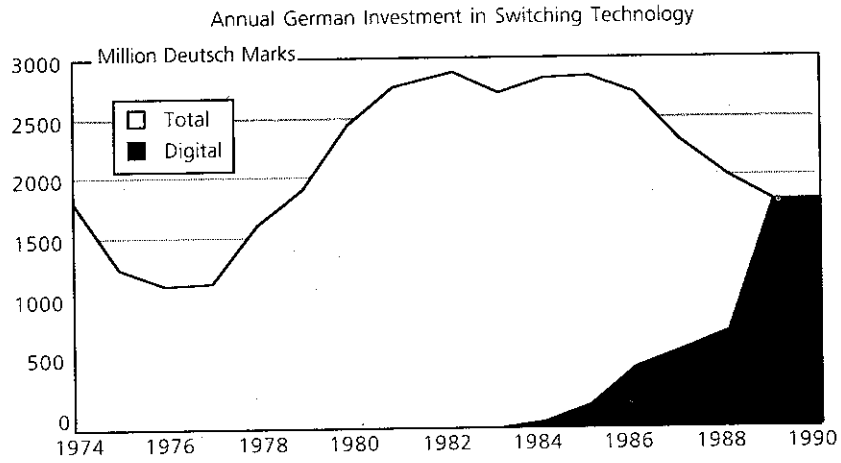
Thus, having been successful in spreading telephony, the supplying

FIGURE 12.8



Source: Helmut Schön, "Das ISDN im Investitions, Industrie Und Fernmeldepolitischen Kontext," in W. Kaiser, ed., *Integrierte Telekommunikation, Münchner Kreis,* no. 11.

FIGURE 12.9



Source: Helmut Schön, "Das ISDN im Investitions, Industrie Und Fernmeldepolitischen Kontext," in W. Kaiser, ed., *Integrierte Telekommunikation, Münchner Kreis,* no. 11.

TABLE 12.1
Telephone Carriers' Share of Total Formation in Telephone and Telegraph, 1970–1986
($B)

	Common Carrier Capital Expenditures[a]	*Total Investment in Telephone and Telegraph*[b]	*Ratio*
1970	9,275	8,835	1.05
1975	12,833	12,683	1.01
1980	23,620	26,081	1.09
1986	25,890	38,930	0.67

[a] Calculations of Robert Crandall, Brookings Institution.

[b] U.S. Department of Commerce data for equipment and structures in telephone and telegraph.

industry of several industrialized countries became a victim of its own success in saturating the basic market. Domestically, it had no place to go but down in terms of basic equipment. This left several complementary options: *Strategy 1: Upgrade* This means a supply push into videotex, ISDN, IBN, and cable television as ways to provide the industry with procurement orders. This partly explains national initiatives in that direction, and the emphasis on setting standards. *Strategy 2: Export* Increased international activities can substitute for the shrinking basic domestic market. However, most interesting markets in industrial and industrializing countries are protected by their own governments. Therefore, everyone either concentrates on those markets that are more open, most particularly the United States, or engages in bilateralism and reciprocity. Part of the U.S. problem is that it unilaterally relaxed structural protections without extracting a reciprocal lowering of barriers. *Strategy 3: Retarget* Perhaps most importantly for the long term, manufacturers should target large private *users* as a market for equipment. Whereas in 1975 virtually all of capital equipment in telecommunications in the U.S. was invested by the carriers, in 1986 it was only two-thirds (table 12.1). About $13 billion were invested by noncarriers, mostly large users.

The implication is that the equipment industry, in the past a protector of the old order, is increasingly part of the process of creating alternatives to the traditional carriers. With this supply push, the peripheral equipment market is expanding into what used to be the realm of the traditional core network. This is partly a secular trend, based on

the demand pull of what may be called a pluralism in the network, as users and user groups increasingly set up specialized networks and higher-level enhanced services.

In other words, it is not just the changed market structure in the United States that leads to the changed trade situation. It is also the domestic market conditions of telecommunications manufacturing in other countries that has changed.

The manifestations exist on multiple levels: the *first* wave of imports into the United States was in terminal equipment. Here, it was not the divestiture that made CPE interconnection legal, possible, and convenient, but rather the *Carterfone* decision more than ten years earlier. Once one permits CPE interconnection, equipment can originate from Taiwan as well as from San Jose, and it would be surprising if the general strength of Asian producers in consumer electronics would not show itself in CPE, too. A country that can build cheap tape recorders can also build cheap answering machines. Of course, one could structure a set of restrictive type-approval rules on the books in order to protect the domestic manufacturers. But the European experience shows that what God wants interconnected, government cannot keep apart.

In Switzerland, for example, the PTT in 1984 set standards for cordless phones. The fifty-five pages of specifications required a virtual Rolls Royce among such equipment, including forty duplex channels and automatic scanning. The rules were supposed to protect the users from unauthorized usage, but, as it happens, only one company (a Swiss one) could meet the standards quickly. This was not surprising since the company had played a major role in writing the rules. That manufacturer's price to the PTT was about $600, and rental price to users came to over $180 per year. At the same time one could *buy* a simpler but perfectly adequate cordless phone in the United States for under $75. As one may expect, Swiss consumers started buying cheaper unlicensed equipment, willingly supplied by numerous "for export only" outlets. Pressured by industry, PTT, and unions, the Swiss Parliament passed a law, described as a liberalization. It prohibits the sale and purchase of unauthorized equipment, while making it easier to search private residences to stamp out the threat.

The implications are that for CPE, with or without the divestiture, and with or without attachment and type-approval rules, a flood of Asian imports would have entered, just as it did for VCRs, compact disc players, and television sets.

When it comes to *network* equipment, the divestiture has made a greater difference. The RHCs can now buy equipment competitively,

TABLE 12.2
Cost of Digital Central Office Switch
($M)

	1983	*1984*	*1985*[a]	*1986*[a]	*1987*[a]	*1988*[a]
10,000 Line Switch	2.73	2.53	2.29	2.08	1.91	1.73
20,000 Line Switch	4.60	4.16	3.80	3.36	3.08	2.88

Note: Switch costs exclude installation.

[a]Estimated by New York Telephone.

and are not tied anymore to Ma Bell's apron strings. As a result, AT&T's market share for network equipment has dropped considerably. Before we pronounce this a disaster, we should examine the price trend (table 12.2). The costs per line of a digital central office for NYNEX have come down from $230 in 1983 to an estimated $125 in 1990.

A third problem area in trade is emerging in *services.* Foreign resellers, VANs, and cellular carriers now operate in the United States; they could evolve into local and long-distance service providers. This is fine, up to a point, but provided there is reciprocity.

The trade issue had not been thought through sufficiently when the divestiture was conceived by the policymakers. But others were not much smarter, either. France's premier newspaper, *Le Monde,* once ran a series of noted articles on the divestiture, which emphasized this was part and parcel of a large American export offensive. How wrong they were. But the policies such views brought, which can be called political telematique, still haunts transatlantic telecommunications trade.[2] Both GTE and ITT, the main American participants overseas, were squeezed out of Europe, with hardly a whimper or offer of help from the U.S. government. ITT used to dominate the French market, but after several rounds of politics, plus its own internal problems, it had no place to go but sell out to the French CGE. AT&T tried to get an allocation of 16 percent of the French market by offering major concessions, but the German firm Siemens would have none of it.

And this is part of the problem. The Europeans are now preoccupied with unifying their Common Market. To reduce national compartmentalization they lower barriers and make concessions to each other, and partly at the expense of outsiders. It is difficult enough for an American

firm to get a major telecommunications procurement order in Europe. But for Japanese or Koreans, the odds become even smaller. These are highly political markets dominated by governments, and to view them with somewhat rosy glasses would be to distort reality.

On the plus side, imports make the cost of telephone service cheaper in the United States. And as a state regulator, that of course pleases me. But if I stop defining my job as merely keeping residential rates low, and view the "public interest" more broadly, I, too, must be concerned with the trade problem, and do my share to address it. Also, the nationally compartmentalized markets abroad impose a direct cost on American telephone users. They cannot benefit from economies of scale if AT&T cannot sell in France, or if Ericsson cannot sell in Japan. In other words, equipment sold in America would be cheaper if other countries, too, would open their markets to international competition. And this would translate itself to lower phone rates. So there is a direct link even to the traditional concerns of state regulators.

Trade politics, however vocal, will only open the door. One still needs superior products. Ultimately, the trade balance is determined by the competitiveness of the industry. If we had better and cheaper facsimile machines than the Japanese, we would buy them here and sell them there. This does not excuse other countries, but neither does it let domestic producers off the hook.

For the future, the most worrisome area is that of technology development. And while the private sector is working hard in that regard, telecommunications with its network characteristics frequently leads to chicken-and-egg situations. This has led the New York Public Service Commission to act as a catalyst for the industry's ISDN interconnecting trials. The various federal agencies involved in telecommunications must be forward-looking in technology questions. The FCC has started to do so, and I hope it can formulate a coherent long-range vision on how telecommunications policy should assist the evolution of advanced networks. For example, it could consider developing a blueprint for interface points and interconnection standards that would permit compatibility by hardware and software suppliers.[3] NTIA has issued calls for action. Robinson lists several initiatives upon which the federal level should embark. Standards and procurement policies should be priorities. When I served on the advisory board of the FTS-2000 federal phone system, a $25 billion procurement giant, it was astonishing to learn that of all the many criteria for evaluating the bids, the factor of how the governmental network would advance civilian technology and applications, was largely missing. It is unlikely the Japanese would proceed in that fashion.

In the past, state regulators tended to be preoccupied with the domestic conflicts and turf fights with the FCC, and not focused on the interrelations with the rest of the world. Yet in a few years, the difficulties of maintaining a national policy, let alone a state policy, in an electronically interdependent world will become increasingly apparent. In the past, perhaps the United States could afford the luxury of tying itself into regulatory knots and spending ten years on developing policies governing cellular radio and AM stereo. But the times are changing, and regulators must, too. The trade balance figures are only a symptom of the more general problem of economic performance, innovation, and international interdependence. The time for localism is running out, and regulators on all levels of government must think in global terms.

Robert T. Blau

No one seriously believes that AT&T's divestiture is solely responsible for the erosion of U.S. competitiveness in global telecommunications equipment markets. But many industry observers and participants do believe that the MFJ has made a bad trade situation worse, unnecessarily. There are three principal reasons.

First, by breaking up the former Bell System in the manner it did, the government unilaterally opened the U.S. telecommunications equipment market to foreign competitors without even trying to extract reciprocity from Japan and other major industrial trading partners. Second, the MFJ restrictions have encouraged the RHCs to buy from foreign firms in order to reduce their dependence on equipment produced by AT&T, the sole U.S. manufacturer of central office switches and other major types of local telephone network technology. The RHCs have taken this step out of concern that AT&T can use its control over the introduction of new network technology to create a competitive edge in local service markets where the two compete. Third, and perhaps most important, by denying the RHCs the right to manufacture equipment or provide information services, the MFJ has eliminated virtually all incentives for seven of the nations' largest telecommunications companies (with combined revenues of $75 billion in 1988) to invest in the development of new technology that the U.S. clearly needs to compete in world markets.

In response, apologists for the AT&T consent decree assert that America's trade problems are not confined to telecommunications markets, and have far more to do with U.S. fiscal and monetary policy than