

## The Swedish road to liberalization

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*The recent Swedish parliamentary decision (June 1988) is described against the history of the country's telecommunications, which allows Sweden an unusually straightforward road to liberalization, starting from 'zero-based' legislation, and adding only the minimum of rules which might be needed to meet existing international obligations and national objectives.*

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By the end of 1989 the last few barriers to a free telecom market were removed in Sweden. From 1990 onwards not only the markets for all kinds of terminals (including PBXs, payphones, etc) but also network services are open for competition. In fact, the building of separate, privately owned networks for any purpose has never been covered by any statutory monopoly. Thus market conditions in Sweden can be claimed to be among the most open in the world, and well in line with the recommendations of the EC Green Paper, as well as contemporary conditions in the US, the UK, the Netherlands and Japan.

### Background

Actually, this 'zero-based regulation' is nothing radically new, but rather traces its roots back to events of more than a century ago. In contrast to the PTTs of Continental Europe (and the UK) Televerket (Swedish Telecom) was born into a free market, with commercial telecom as its one and only mission. There was never any link to the postal service and the separation from the government budget has been clear cut. No subsidies to or from other bodies are given or taken.

The first few decades of telephony in Sweden witnessed rather intense competition between a number of local and regional network operators, including subsidiaries of Bell Tele-

phone and LM Ericsson, as well as a number of companies formed by local communities. At the time Swedish Telecom had its major competitive strength in the emerging long-distance business, but gradually increased its market share in other parts of the market. For its time, the market in Sweden was significant. Only a few years after Bell's invention was patented, the city of Stockholm actually had more telephones in absolute terms than larger cities like London, Berlin or Paris. Intense competition fuelled by the peak of the Industrial Revolution (which came later in Sweden than in the UK) began a positive circle of low prices and high rates of penetration, which allowed more efficient network design, and so on.

Around the turn of the century, Swedish Telecom successfully gained a major market share, and was able to buy an increasing number of the local companies. At that stage the Swedish parliament spent ten years debating whether Swedish Telecom's increasing market share should be converted to a full-fledged statutory network monopoly or not. The argument was that such a monopoly would be able to carry the burden of providing service to the sparsely populated areas only sluggishly served by commercial operations. In the meantime Swedish Telecom demonstrated not only its eagerness to buy more local companies, but also its readiness to invest

in less profitable parts of the country. As a consequence the parliament took the typical Swedish position: that this was fair enough (*'lagom'*). No need for a statutory monopoly. The *'de facto monopoly/de facto competition'* formula was accepted and prevailed up to the 1970s, when the first demands for further liberalization (of the markets for terminals attached to the Swedish Telecom network) were voiced.

### Swedish and US developments

In brief, developments in Sweden have been more like the chain of events in the US than in most other European countries. From the start the penetration levels have been as high, or higher, than in the US. The growth of Swedish Telecom, like that of AT&T, has been marked by acquisitions based on efficient utilization of economies of scale rather than by political or legal decisions. There are differences, of course. Swedish Telecom, like other European entities, has had no restriction on entering the data communications market and other new areas. However, Swedish Telecom has been responsible for providing coverage of the entire country, including sparsely populated areas, which in the US are often served by independent companies. Another obvious difference is of course scale. Sweden is only the size of California with far less population (8.4 million today).

As Sweden is a small country, it has never been possible to neglect the major transnational companies such as Volvo, SKF, Saab-Scania, Electrolux, and ABB/ASEA. These and other companies have long since had 50% or more of their activities outside the national borders. One consequence of this is that they have constantly been able to make accurate comparisons with the best services available internationally, and to keep Swedish Telecom on its toes to meet these standards domestically. Given the lack of legislation, customers this size make no empty threat when they say they will go elsewhere if their requirements are not met. One example of this crucial customer pressure was the

early deployment of large digital PBXs. Swedish Telecom, back in the mid-1970s, was the first in Europe to buy the licence, and spent the R&D monies needed, to produce and market the Northern Telecom SL-1, and later on to co-develop the MD-110 with Ericsson. As a result, more than 90% of the major PBX lines are now digital.

### Parliamentary decision of 1980

Thus the parliamentary decision of 1980 to begin opening the markets for terminals attached to Swedish Telecom networks was quite logical. Swedish Telecom realized that it could not possibly meet all the possible customer needs for variation (at least not with a profit). Therefore the markets for all kinds of terminals (data terminals, telex terminals, modems and telephone sets, including the 'first telephone') were opened to competition during the 1980s.<sup>1</sup>

The 1980 parliamentary decision also gave Swedish Telecom the right to form a holding company, Teleinvest plc, which enabled the Swedish Telecom Group to get direct access to domestic and international finance markets, to form joint ventures and so on. This is a 'structural separation' as in the US. Activities carried out within Televerket require separate accounting, supervised by external auditors. As long as these requirements are met, management and planning are permitted, or rather encouraged, to cover the full range of corporate activities, within both 'regulated' and 'unregulated' areas. One could say that Swedish Telecom is working under Computer III rather than Computer II conditions compared to the US.

Also back in 1981, Comvik, a private competitor to Swedish Telecom, started building its own nationwide cellular network in competition with the NMT system run by Swedish Telecom and the other Scandinavian telecom organizations. By the end of 1989 the Swedish part of the NMT system will have close to 350 000 users and there will be more than 700 000 users throughout Scandinavia, all having bought their terminals from a free

<sup>1</sup>Since Swedish Telecom has installed 'plugs and sockets' in almost every room in every building, for decades there has been no way to make any distinction between the first and subsequent telephones. The customers simply buy the sets, plug them in, and, if needed, also install any further inside wiring on a do-it-yourself basis. Swedish Telecom, however, is still under obligation to deliver a 'basic telephone set' on a customer's request. This apparatus is also adapted to heavy-duty work under difficult conditions in sparsely populated areas, etc. Nevertheless, the customer is free to buy sets elsewhere.

market with close to 20 different suppliers. The Comvik system, using its own proprietary terminals, has less than 20 000 users. Even so, Comvik represents real competition in both price and service levels.

Another competitive area is cable TV, which by the end of 1989 will serve close to 1 000 000 households, corresponding to about 50% of the potential market (namely the more densely populated parts of Sweden). As an option customers can instead buy their own dishes (TVRO) from a number of suppliers in the market, which may be used individually or in cooperation with nearby neighbours. As receiving any radio or TV signal is considered an essential citizen's right, protected by the Constitution, no permit or registration is needed for individual use or joint use by less than 100 households. At present Swedish Telecom has the largest market share in the 'regular' cable TV market. However, others, such as United Cable from the US and companies formed by private and co-op house owners, are successfully price-competing in an increasing portion of the market.

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**'The historical tradition is to consider freedom as the natural state'**

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**Parliamentary decision of 1988**

The parliamentary decision of spring 1988 contained some final steps of the process. The markets for PBXs and (coin) payphones were completely opened by the end of 1989 and 1988 respectively. (The market for card payphones was already competitive.) All markets are on an 'open for all' basis.

Another significant part of the parliamentary decision was to relieve Swedish Telecom of its earlier responsibility for the testing and approval of customer equipment. Even before that Swedish Telecom has for some years accepted test results from approved private laboratories, in or outside Sweden. A new independent body, Statens Telenämnd (STN) or 'The National Telecommunications Council' started its operations 1 January 1990. This body can be considered as a 'micro-version' of Oftel or the FCC. However, in contrast to the British Oftel the responsibilities for

consumer protection and fair trade practices will rest with the existing authorities (the Ombudsman). This underlines the concept that telecommunications is increasingly considered a 'normal business', with only the minimum of special rules and legislation needed to meet international and national obligations.

Later in 1988 the Swedish government also took a precedent-setting decision to permit the private company Comvik to access the frequencies needed to open up competition by satellite over the Atlantic, between Sweden and the US.

**Summary**

The common view, among Swedes as well as non-Swedes, is that the country has been more 'tightly regulated' than 'laissez faire' in a number of respects. This might still be a valid picture in some areas, such as liquor sales, farming and other traditional areas of public concern, but not in others such as telecommunications, long since exposed to international competition.

Thus, when it comes to telecommunications (and all publications media), the historical tradition is to consider freedom as the natural state. Advocates of restrictions must carry the burden of proof that they are necessary. Hence the lack of legislation and the caution in creating any new rules which might unduly hamper the dynamics of markets and technology, or which might simply be 'bypassed' by reality, as experiences from other countries prove. Consequently the 1988 parliamentary decision was taken with a very large majority and with a minimum of debate, guided by a pragmatic, matter-of-fact attitude.

There are, of course, some remaining issues, the most crucial being the conditions under which open resale of leased circuit capacity can be allowed. This issue has been entrusted to a government committee, which includes datacom users' representatives and is to report before the end of March 1990.

Presently, no class licences or other permits are needed for data traffic and quite a number of what in the UK are called VANs have been operating for

years. Also, the absence of legislation means that no distinction is made between voice and data in a digital world. It is not realistic to make such a distinction in a network where more than 50% of the trunks are already digital, providing switched 64/56 kbps services, pre-ISDN services and so on.

Here, as in other areas, Sweden

must of course take due account of international agreements and recommendations. Taking part in international fora (the ITU, GATT, CEPT, etc) is therefore a necessity for further development, as well as for maintaining as much consistency as possible with ongoing activities within the EC, the US and other international markets.

## Appendix

### Conditions in Sweden, 1989

*CPE markets (including payphone).* Open, on a free-for-all basis. No requirement to register before market entrance; test data from international as well as domestic laboratories accepted. The principle of self-testing by manufacturers in accordance with IEEE conditions accepted. The concept of type approval abolished and replaced by simple registration.

*Enhanced services.* Open, on a free-for-all basis. No requirement to obtain a licence or to register before or after offering services.

*Cellular services.* Competing networks, with different technology, in operation nationwide since 1981. No requirement for inter-operability.

*TVROs (and VSATs).* Open, on a free-for-all basis. No requirement for permits or registration for receive-only. Two-way transmission requires frequency permit, no other constraints on VSAT operations.

*Cable TV.* Open, on a free-for-all basis. No franchising, thus competitive tenders for building of networks available also in the same geographical area. Cable operators are considered carriers not concerned with media content. (Content is regulated through media laws, outside the area of telecommunications.)

*Structural separation.* Competitive activities, such as VANs and CPE marketed by the Swedish Telecom Group, are structurally separated into

subsidiaries operating under private law, or under requirement for separation accounting (comparable to Computer III conditions in US). Compliance is supervised by external chartered auditors.

*ONP.* Provision of network capacity on equal terms (transparency) is practised within the area of cellular radio, where competing networks have had access to the PSTN since 1981.

*Regulatory functions.* General supervision of fair trade practices, consumer protection, etc, is covered by the regular authorities (Ombudsman) covering all kind of businesses including telecommunications, computers, etc.

Also, regulatory functions earlier performed as part of the Swedish Telecom administration are being transferred to new bodies. Thus, following a parliamentary decision in 1988, the registration of CPE will be the responsibility of a new, separate agency, the National Telecommunication Council (Statens Telenämnd, STN). The development of standards is carried out by another body (SIS-ITS) with direct and open participation of all parties concerned, including international computer firms present in Sweden. The standardization process is focused on active participation in international standard-setting (CCITT, ISO, ETSI, etc) rather than on establishing any deviating national standards.

Frequency allocation is still part of

the administration's duties, but under strict separation from other activities and subject to appeal by an external agency.

*GATT.* As a country, Sweden is actively promoting the view that trade in telecom equipment should be included in the GATT procurement code. Sweden is also supporting proposals that trade in telecom services should be included in a future GATT agreement on trade in services.

*Remaining issues.* Swedish Telecom is on record as requesting that the still existing restriction on 'pure resale of leased circuits' (also for telephony) should be removed, pending implementation of full market/cost-based pricing for business customers. Swedish Telecom has also announced its support for flat rates instead of any kind of 'usage-dependent charging'. The matter has been referred to a special government committee, with representation from datacom user organizations.

The historical absence of any statutory monopoly, and consequently of any 'common carrier' concept, might require a pragmatic solution. One possibility could be the use of some kind of access charge as in the US to 'bridge' the time gap until fully non-compromised market pricing can be implemented for all business customers. It is also sensible not to block the possibilities for harmonization with the outcome of ongoing international work on open network provision (ONP), CEI/ONA, etc.

*Comment*

## Some orders of magnitude

### Swedish telecommunications market

Sweden has 8.4 million inhabitants and an area of 450 000 km<sup>2</sup>, roughly the size of California, or twice the area of the UK.

Main telephone lines	5 600 000	667:1000 inhabitants
Data terminals/PCs	1 000 000	500:1000 office employees
NTPs	250 000	125:1000 office employees
Cellular radio terminals	350 000	100:1000 cars
Fax	150 000	75:100 workplaces

Because of competitive supply, official figures are no longer available for modems, fax terminals, etc, only estimates based on surveys, etc.

Prices at 1.7.89	SEK	\$	£
Local calls (within a radius of two miles in Stockholm)	0.23 (for 6/3 minutes)	0.04 (for 6/3 minutes)	0.02 (for 6/3 minutes)
Trunk calls (90 up to 1500 km)	0.66–1.25/min (low/peak time)	0.11–0.20/min	0.07–0.12/min
Sweden–USA	5.35–6.90/min	0.87–1.17/min	0.53–0.69/min
Monthly charges:			
Residential	59–62/month	9.35–10.03/month	5.87–6.17/month
Business	106/month	17.35/month	9.60/month
Installation charge:			
Residential	93	151.29	93.03
Business	1410	228.18	140.30

US\$ 1 = SEK 6.18, and £1 = SEK 10.05, at 1.1.90.