

## 6. OUTLOOKS, SPECULATIONS AND IMPLICATIONS

The authors suggest several outlooks to the future, some of which are, by their very nature, hypothetical and speculative. Here a simple twofold grouping of the outlooks is provided, while a more in-depth outlook and discussion is given in the final and concluding chapter.

First, a common theme running through many of the outlooks is a sort of international division of labor, shake-out, bifurcation and segmentation of the actors involved in different strategic clusters, regions covered and customers served. The BT strategic learning experience is suggestive of similar strategic evolution processes among other telcos currently in such a trial-and-error phase. Hence, telco strategies can be expected to become more distinct in terms of overriding goals and means to carry this out. There are several dimensions around which such strategic positioning could develop: regions and customers served, telecommunications service offerings, R&D intensity, etc. Examples of emerging strategic positioning are offered by Dang-N'guyen/Pouillot who predict that France Telecom will focus its strategy, Elixmann/Schnöring who suggest that DBP Telekom will be most successful in the East European area, Antonelli/Geuna who believe that STET will pursue basic telephony in developing countries, and the advice by Henten/Skouby that small players should aim for specialized services and niche markets. (For Cable & Wireless, Kramer/NiShuilleabhain suggest that its conglomerate structure makes it vulnerable to takeover.) Hence, even among those intending to become global, strategic differentiation and search occur—suggesting that the telecommunications service market may become more heterogeneous with time. An important implication of this trend is that it is crucial to develop the following: a more finely tuned grasp of the telecommunications service concept, the attendant strategic differentiation concepts and an analysis of the technology and management base necessary to carry the strategy forward.

A second set of outlooks that is recurring pertains to the conflicts between national interests and the internationalization process. These conflicts will surface not only in regulatory and jurisdictional spheres but will certainly be felt in the pockets of some of the internationalizing telcos. The question is how much the nationalistic interests will surface and how deep they will be—will they, as suggested by Noam, delay the internationalization process? The questions are many and the stakes are indeed high. One thing is sure, though—the future will always hold surprises.

## Conclusions and Speculations\*

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### 1. INTRODUCTION

In drawing to a close it is natural to step back and review the current and future relevance of the main theme and the title question of this book. Is internationalization of the telecom service industry and markets to be taken seriously? And if so, who stands the best chances to gain advantages by becoming MNCs? This final chapter will first summarize some of the findings from preceding chapters, then try to assess the conditions for continued internationalization. Given the likelihood that internationalization of telecom actors and markets will actually continue, some speculations about future developments are made, drawing also on received theory, the applicability of which to the telecom service industry is discussed. Finally, the chapter attempts to identify what characterizes a winning company in the hopefully positive-sum game of internationalization of telecom service markets.

### 2. SUMMARY

Let us first briefly recapitulate some of the findings in the preceding chapters, especially the previous two chapters by Johansson and Bohlin. Despite the fact that the post-war internationalization of telecom actors and markets, starting in the 1980s, is a recent phenomenon with a great deal of trial-and-error behavior, there are already a number of more general findings and indications that deserves to be pointed out, for example that:

- a) (Pace) Apart from more or less singular earlier events, internationalization among typical telcos started in the mid-1980s, and grew particularly rapidly in the late 1980s in terms of number of foreign market entries. In summary, the pace of internationalization seems to have been influenced by the paces of liberalization in home and host countries respectively, the pace of internationalization of demand in various forms, the market opportunities offered (much based on new technologies), a certain urge for reciprocity and finally a bandwagon effect.
- b) (Actors) Anglo-Saxon operators were dominating the group of first movers, with AT&T entering early in Europe, followed by the RBOCs, and C&W and the RBOCs entering early

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in Asia. There is currently a group of telcos emerging who explicitly try to globalize (e.g. AT&T, BT, NTT, DBT, FT and Unisource). As yet there is no clear indication that large size is positively related to the propensity to internationalize. Several telcos (e.g. C&W, FT) have adopted a strategy of internationalization and diversification simultaneously (which in other industries has proved risky). However, on average there seems to be a certain specialization, complemented by trial-and-error, among the actors in connection with internationalization. The home market and regulatory regime and the way technological and managerial competence have been accumulated have been important for the internationalization behavior of the various actors.

- c) (Country markets) UK and France were early target markets in Europe, followed later by Germany. In general, the main countries in a region have been the early, primary targets for foreign entries, complemented by entries in smaller countries for special reasons, e.g. that they offer good learning opportunities for the foreign entrant. In summary the choice of country for FDI seems to have been influenced primarily by three factors—the size of the host market, the learning opportunities it offers and its geographic and/or cultural closeness to the actor's other operations, which almost always means closeness to the home markets, at least initially.
- d) (Services) Many FDIs have been made early on in CATV as well as in some basic telephony services, wired as well as wireless as a platform for further expansion. Thus, internationalization has often directly affected the traditional core business (telephony) and core technology (wire) of a PTT in its core market (home country). The common moves then of the foreign entrant in the foreign service expansion (i.e. diversification) process have been according to (→ indicate 'subsequent move to'):

Mobile services ↔ Wired telephony services ← Satellite services

That is, first entries have commonly been made in mobile, wired or satellite services while subsequent entries have been into wired services from satellite or mobile services, or into mobile services from wired services. This points to the importance of new technologies for foreign entry.

- e) (Strategies) Cross-border joint ventures and alliances have been the most common foreign entry strategy. Acquisitions have been a rare strategy for foreign entry into core telephony services, but more common for foreign entry into data services. Foreign entry through greenfield operations has been a rare strategy in general. The cross-border cooperative mode of internationalization has been motivated by the need to save money and time and the need to overcome barriers to foreign entry, regulation-based or not.
- f) (Investments) Although any rough approximation of the aggregate European FDI level does not indicate a large spending activity relative to total telecommunications investments as yet, actor strategies, commitments and market opportunities make an aggregate FDI size escalation credible and probable.

### 3. THE RACE TO EUROPEAN EMINENCE

#### 3.1 Is there a race?

Without doubt the issue of internationalization has rapidly raised a significant amount of awareness and interest since the late 1980s. From the preceding chapters it is moreover clear that a process of internationalization in telecommunication services has rapidly gained momentum in terms of FDI decisions and actions by various actors in various countries. Thus, internationalization is not an ephemeral fad, although to some extent clouded with tactical PR announcements and moves. Nevertheless, internationalization is still by and large a marginal, although embryonic, element on world telecom service markets.

It is yet too early to evaluate the alleged pay-offs to the service users and providers from this internationalization. Moreover, it is not immediately clear that this internationalization process is sustainable. It is easy to become misleadingly impressed by current announcements and figures surrounding internationalization and conclude that the process will continue to evolve. Thus, one has to take a closer look into the prospects of continued internationalization.

#### 3.2 Will the race go on or will internationalization be stopped again?

As mentioned in Chapter 1, internationalization and international competition in telecom services, typically telephony, are not a new phenomenon. However, for various reasons the early internationalization process, spurred by telephony developments in the US, was curbed and regulation transformed the evolving industrial organization into what essentially became an international cooperative network of local, public monopolies. (See further in particular Brock 1981, Bradley and Hausman 1989, Cowhey 1990 and Noam 1992.)

A natural question then is whether the current tide of internationalization—or in fact the current reinternationalization—will again be dammed up and diverted by regulation and/or other factors. As described in several of the preceding chapters, regulation conditions the pace and extent of internationalization, and the regulatory pendulum may swing.

However, the field of driving and hampering forces behind the current reinternationalization is different from the field of forces behind internationalization in the early days of telephony (cf. Figure 4.1 in Chapter 1). A thorough analysis of the complex nature and compound significance of these differences cannot be made here but a few of them may be pointed out.

1. First, there has been an apparently lasting shift in institutional powers surrounding telecommunication services. The nation state and their public institutions have become weaker relative to corporate powers, including the MNCs, in general. The cooperative institutions of nationalized telecom monopolies (ITU, CCITT etc.) have also been weakened relative to other international institutions with a wider scope (GATT etc.). The legislation and legal institutions supporting competition in general are moreover stronger today.
2. Second, internationalization in various sectors of national economies has increased during the whole 20th century and the international economic interdependence is much higher in the 1990s than in, say, the 1920s. In this connection there has specifically been a steadily growing demand for international and differentiated telecom services, e.g. within globalizing MNCs, and the significance of nationally confined telephony as a bulk, public service has declined in relative terms.
3. Third, technological innovations have by and large been fostering rather than hampering competition. Judging from history, this in itself is not necessarily a sufficiently strong factor

for lastingly breaking up an industrial organization consisting of national monopolies. The century-old national postal monopolies in Europe mostly absorbed the radical innovations of both telegraphy and telephony without a major lasting disruption, only transforming themselves into PTTs and the like with essentially preserved status as national monopolies, in some cases after a period of internationalized competition as mentioned. National interests hampered an innovator like the Bell Company in internationalizing, and not only national interests in its host countries but also, and decisively, national interests in its home country where the public wanted the company to focus. A stable situation with reciprocal national monopolies remained.

Although such historic examples illustrate that even radical technological innovations have been accommodated in the wider communications service industry without "creative destruction", it could be argued that sooner or later technological changes and options will have accumulated in such a way that an old industrial organization structure has to yield. This argument is admittedly general and imprecise. Nevertheless, there are instances of technological innovations that are apparently undermining the analytical as well as empirical economic foundations of national telecom monopolies, and probably also their political foundations on which the argument for a given natural monopoly rests. More specifically, the convergence between computing and communication technologies, albeit slow and possibly misperceived, has prompted computer firms to successfully challenge telephony monopolies. Other technological innovations, independently or interdependently, similarly have led to severe challenges of the old structure of national monopolies. Digitization facilitates interconnectivity and thereby competition; computerized switching allows decentralized switching and network control by users; optical fibre transmission cost decreases and opens up possibilities for new entrants; radio and microwave communications allow bypassing; etc. In addition, the technical possibilities for a single telco to coordinate international operations are greater today as are the technical and managerial possibilities to run an MNC in general.

With a simple illustration one could say that if the PTTs were to absorb the major new technologies of the 20th century as well, they would have to extend their past evolutionary chain P (postal services) to PT (+ telegraphy) to PTT (+ telephony) by adding under their control at least R (radio), C (computing), and M (media), thereby becoming PTTRCMs or the like.<sup>1</sup> Simplicity apart, this suggests that total integration will become increasingly difficult and cease at some point. Reintegration, perhaps with different configurations, may then occur, of course. However, if disintegration has begun and there are elements of irreversibility, full reintegration will not occur. At some point this happens when technological options, irreversible by their very nature, become numerous and widely available to a large number of actors.

In sum, there is now an accumulation of technological options with vested interests that challenge the traditional organization of telecom service monopolies to an extent that apparently has no counterpart earlier in history. In this connection it is important to note that the different national interests vested in new technologies and their market opportunities have fragmented and thereby weakened the national interest attached to traditional telecom technologies and their protected markets. A major case in point is the divestiture of AT&T.

Fourth, there has been a swing in the recent decade or so in political economic ideology in many industrialized countries towards employing more market solutions and less administra-

<sup>1</sup> Early radio technology for telecom actually came to a considerable extent to be controlled by the PTTs (see Brock 1981).

tive approaches, notably state-oriented ones. This has led to deregulation (although with some reregulation) and liberalization of markets, subjecting them to competition, privatization of public companies, subjecting them to less public ownership and control. These new economic policies apply not only to telecom services but to many other service industries as well, many of which have been nationally regulated and focused by tradition (Dunning 1991). Although it is certainly possible that such a movement in economic policies could be reversed, the movement is significant for the internationalization of national telecom service markets for two reasons. First, the changes in the various national economic policies are much more similar and simultaneous than they used to be. Somewhat differently expressed, national economic policies have become more internationally interdependent and homogeneous. Thus, the contemporary simultaneity of the swing towards market solutions in various industrialized nations has allowed an emerging international reciprocity in competition in telecom services that could substitute for the traditional reciprocal monopolies with less national asymmetries hampering a transition. Second, once the new economic policies have triggered reinternationalization, the other factors (internationalized corporate powers, international economic integration, new internationalized demand, and technological options) come into play and mutually reinforce the process.

Fifth, there are many powerful corporate actors in the telecom and information industry at large, having wide-ranging expectations attached to internationalization. True, the volume of their FDI-based foreign business is usually still small in relative terms and there might still be attractive prospects for domestic growth (e.g. in building a national infrastructure for an information society—although it must be questioned whether this can also be confined nationally). However, domestic profit margins are generally shrinking and the long-term profit and growth prospects on world markets for the largest and most competitive companies are easily perceived to be far higher, given the large foreign markets, often lacking strong local competitors. In addition, internationalization might be perceived to offer prospects of decreased dependence upon domestic, public authorities. Asymmetric expectations and competitive advantages among telcos will then destabilize any international cartelization and reinforce internationalization, once it has come underway. This also adds an element of irreversibility to the process.

Thus, as a conclusion, there are reasons to believe that the internationalization process of telecom services is sustainable and will not be reversed this time as it was once before. The race is on and is not likely to become stopped and cancelled. This does not mean that internationalization, once started, will proceed fast or in a similar fashion throughout the world. As evidenced in several of the preceding chapters, there are deep tensions between national interests, there are severe jurisdictional problems to be solved, and there are significant heterogeneities among countries, markets and actors. Besides, the interests of the old regime have been powerful and long-lasting, nurturing a culture that is not easily swept away. In various ways the continued internationalization process will be influenced hereby. Even if a PTT accepts, maybe even welcomes, the pressures for liberalization and internationalization, it will most likely try to influence its pace and direction. National interests will use infant industry arguments as well as related strategic trade arguments in order to ensure suitable protection. Although natural monopoly arguments are being challenged, they are not irrelevant and will be considered and reused. Schedules will be delayed, decisions will be postponed, entries will be restricted and so on. Limits to internationalization as well as the possibility of a major, local reregulation in favor of nationalization must still be kept in mind, especially when internationalization has gone far enough for denationalization to set in and/or has resulted in

xenophobic perceptions to individual nations and actors. The forces at play are so strong, creative and complex that with certainty some actions and outcomes will occur that are presently inconceivable.

Nevertheless, the most probable future scenario is that of continued and reinforced internationalization of telecom service markets and actors. Some countries, markets and actors will be slow and lagging, others will be fast and lead the way, at least for some time until possibly overtaken by still others, and some will undeniably drop out. However, there might be a period of counterreactions and internationalization slow-down, at a point where national interests become severely threatened and/or the common over-expectations become unfulfilled and/or large, successful actors in e.g. the US, UK and Japan are pushing too strongly for a faster pace.

The impact of the internationalization process, fast or slow, can be manifold. It is likely to have strong and lasting effects upon market and industry structure, at least in the long run (see Section 3.4). The century-old traditional regulatory regime in telecommunications services has conserved its industry structure against the otherwise normally disruptive effects of technological changes as mentioned. The internationalization process is yet in its infancy, being dominated by a variety of trial-and-error moves among a variety of early and late movers on the international scene. The possibilities to economically evaluate these moves ex post are still slim while the expectations are high and often more optimistically biased than rational. Circumstances like these make the bed for overinvestments, disappointments, duplication, waste of resources and defensive reactions. The heavy hands of history and xenophobia will fight against far-reaching denationalization of the core network and core businesses in the major advanced countries.

However, even if major foreign inroads in basic services are fought off by local forces in general<sup>2</sup> at least four factors will still allow ample room for internationalization:

- a) The existence of large, growing segments (e.g. mobile services, corporate communications).
- b) The emerging markets in NICs and medium-developed countries (incl. Eastern Europe, Russia etc.) and LDCs.
- c) The emergence of *service merging* and *service integration* (e.g. "edutainment", i.e. merging of educational and entertainment services) and inter-sectorial competition (e.g. with financial services, media services).
- d) Cross-border alliances, joint ventures and acquisitions.

The interplay between internationalization in the telecom services and internationalization in the telecom equipment industries and possible future vertical integration or quasi-integration is yet unclear. However, it is far from unlikely that if a country has a sizeable domestic telecom service and equipment industry which is being severely threatened at both the service and equipment ends by foreign competition, then protectionism and procurement bias will recur, possibly aided by the new arguments in strategic trade theory (see Chapter 1).

<sup>2</sup> Note that several early foreign entries have in fact already been made in basic telephony services as mentioned.

Thus, if not one single race is on, a set of races is, although the not so invisible regulatory hand holding the starting pistol has been quite shaky, and these races are likely to go on. However, the race or races are not only towards European eminence. Although Europe is a major target market, some actors, mostly with Anglo-American origins, are more ambitious with more global aspirations. Still the eminence in Europe may be at stake, although as long as EC regulation is credibly pro-competitive, monopolistic dominance in Europe or a "Eurotel" constellation is not a likely outcome.

### 3.3 A paradigm shift in telecom services

A growing internationalization in telecom services could be viewed as part of a larger ongoing process of a paradigmatic shift in the whole telecommunication sector in various countries, essentially triggered by events in the US in the late 1970s and early 1980s. Internationalization of the telecom service markets and actors was perhaps not fully intended or anticipated in general at the outset of the paradigmatic shift, but nevertheless has become an integral part and reinforcing factor of it. (See also Chapter 1.) Table 3.1 summarizes some characteristics of this shift in paradigm and corresponding regime.

### 3.4 Some speculation about the future

As concluded above, internationalization of telecom service markets and actors is a recent but viable phenomenon which must be taken seriously as such by managers, policy-makers and analysts, as well as by customers and suppliers. It is then naturally important to try to speculate about the future and to the extent possible attempt to predict the developments that are likely, although still uncertain. A major contingency is then the regulatory and political development. As mentioned there are reasons to believe in continued, although delayed and distorted, liberalization favoring continued internationalization on an average. However, it is hazardous to attempt more detailed predictions about long-run regulatory changes. Moreover, there seems to be no real economic or political theory about regulatory dynamics in general that could be used, at least not to my knowledge.<sup>3</sup>

Given that the regulatory and political possibilities for continued internationalization are there, the next question is what courses it will take. This is obviously an important question, which will be elaborated upon to some extent here but mainly must be left for further research. The available empirical data, much of them presented in the preceding chapters, offer some indications, but by and large the empirical grounds are yet too weak for predictions.

<sup>3</sup> Of course, there are predictions, with or without foundations in fact or theory, about the evolution of politico-economic systems in general (e.g. by Marx and Schumpeter), but hardly specific enough for the purposes here. See, however, Cowhey 1990 on regime theory.

Table 3.1  
Shift in paradigm in the telecommunication services

Old national monopoly paradigm elements (NMP)	New international competition paradigm elements (ICP)
National regulation	Supra-national regulation
Natural monopoly	Liberalization
Nationalization	Internationalization and "Glocalization" <sup>1)</sup>
Public ownership	Privatization
Monopoly provision	Intra- and inter-sectorial competition
Strongly protected markets	Weakly protected markets
National strategic industry (civilian, military)	"Free trade"/strategic international trade
	Inward/outward FDI
Universal/public service	High margin market/segmentation (corporate customers, mobile services etc.)
Broad-based cooperation and international PTT cooperation (in ITU etc.) and harmonization regarding standards, revenue sharing etc.	Cross-border alliance cooperation
	Competition and cooperation mixing ("comperation" <sup>2)</sup> )
	Telecom arbitrage
Weakly protected technologies	Fragmented standard-setting (regional multilateral)
Technology sharing	Strongly protected technologies
	Proprietary technology

Notes: 1) Intertwined processes of globalization and local, regional agglomeration.  
2) Intertwined processes of competition and cooperation.

What can theory and experience in other industries then tell us? First of all, received theories about internationalization and MNCs mentioned in Chapter 1 are in general more explanatory than predictive. Second, there is the objection that they are mainly based on conditions in manufacturing industries, conditions which by and large do not apply in service industries. Third, still another objection is that even if received theory is applicable in principle to service industries, the idiosyncrasies of telecom services will make its usefulness very limited.

Without going into detail here, it can be argued that received theory is applicable to telecom, far from fully of course, but to a considerable extent, not least because of the high technology and capital intensity of telecom services (see Chapter 1). The differences between the telecom service industries, other technology-based service industries, and other technology-based industries easily become exaggerated. True, there are major idiosyncrasies in telecom. Of major importance here are, first, the initial conditions in the internationalization process with a particular regulatory-based industrial organization, dominated by local and national monopolies, often with domestic preferred suppliers. Second, there is the traditional common operation of a global, physical network consisting of interconnected national networks, with an overlay of inter-organizational cooperative networks. Third, the telecom sector has traditionally been perceived to be of strategic, national interest, civilian as well as military, and has as a consequence become politicized in the sense that economic and political decision-making has become strongly intertwined.

At the same time the telecom service industry is technology and capital intensive and serves mass markets, factors which make the industry similar to several other industries. Besides, the idiosyncrasies described above are becoming weakened. Liberalization and

internationalization are under way, the perception of strategic, national interest is changing,<sup>4</sup> and parallel international networks are being built.<sup>5</sup>

Thus, there are no strong reasons for rejecting received internationalization theory wholesale from the point of view of the telecom service industry. On more general grounds, Buckley et al. (1992) as well as Dunning (1992) reach the similar conclusion that there is no need for an entire new theory or paradigm for the internationalization of service industries compared to the internationalization of manufacturing industries. The actual mix of MNC advantages, pertaining to ownership, location and internationalization, in Dunning's OLI paradigm<sup>6</sup>, may differ between service and manufacturing industries but not the basic usefulness of the paradigm.<sup>7</sup>

Internationalization of telecom services (in terms of FDI) is far less developed than in many other industries, including some service industries. From an economic theory standpoint, this would in principle explain why the economic advantages accruing to an MNC in telecom services, e.g. the mix of OLI-advantages, are not very large. But as demonstrated by Cowhey (1990), the reasons behind the absence of telco MNCs are to be found in the political arena rather than in economics. This points to a general limitation of received economic theory when applied to a politicized industry such as telecom services. At the same time the past political conditions have created some economic conditions that in principle would favor internationalization once started, e.g. the profitable asymmetric tariffs in international traffic (see Antonelli 1993).

Accepting a seasoned view of the applicability of received theory, what can it tell us? A thorough review cannot be given here, we can only offer a few comments. (See Chapter 1 for an overview of received theory and models.) First, one can note that, in the short run, the notion of psychic distance (which increases transaction costs) has actually to some extent influenced the choice of countries in the internationalization process of telcos. For obvious technical and market reasons, geographic closeness has also influenced any network expansion process, however decreasingly so. The theory then predicts that, in the longer run, psychic distance will become less important, relative to other factors, such as size of market. As a slight extension of the theory one may also hypothesize that psychic distance influences somewhat the choice of partners in joint ventures and strategic alliances. Especially cultural similarity is important for a stable and efficient functioning of a strategic alliance.

The establishment chain model also seems to be applicable to some extent. After having established since long ago what has in fact been a mutual sales agent relationship between telcos in international traffic, an internationalizing telco is likely to establish its own foreign

<sup>4</sup> For example, some countries are becoming less aspiring in their protectionism. Military considerations behind protectionism in telecom also become weakened. The relations between civilian and military technology are also changing, with a weakening of the connection through reversal of technological leads (e.g. in cellular telephony) from military to civilian applications, which also often diverge and limit dual use of new technologies.

<sup>5</sup> Similarities with other industries may also change, of course. For example, there will be less mass-marketing of telephony as a bulk service through increasing service differentiation; the capital and technology intensity may become particularly high in telecom and so on. But these are changes of degree rather than of kind.

<sup>6</sup> Dunning claims, for example, that transaction costs are generally higher for services than for goods. Other things being equal, this would favor the emergence of service MNCs.

<sup>7</sup> Still more authors emphasize the similarities between service and manufacturing industries in their internationalization process; see e.g. Guile (1988).

sales and market support offices, partly as a consequence of a "client following"-strategy.<sup>8</sup> A next (or parallel) step is to establish partially or fully owned or controlled foreign networks, with various arrangements (build, own, operate, transfer—BOOT etc., see e.g. the chapter by Kiss on Hungary). In this stage a stronger integration of the networks and businesses of several telcos is also a likely possibility, thereby deepening their traditional mutual export/import-relations in international traffic by means of mutual-equity participation (e.g. by "network swapping"), holding companies and the like. If such a group of "integrated network integrators" moreover engage in low tariff country hubbing, a special variant of Vernon's international product life cycle model partially applies (see Chapter 1).

Still another step, yet not taken by telcos but predicted by an extension of the establishment chain model, is to proceed to internationalize R&D operations as well (apart from participating in international cooperative R&D programs), besides the marketing and production of telecom services. This step could be taken for both demand and supply side-oriented reasons, i.e. to support local marketing and production as well as to source technology and R&D inputs (see further Granstrand et al. 1992). Considering the massive investments in R&D made by leading telcos it is very likely that some of this R&D will be spread internationally as well for various reasons as the telcos internationalize. Alliances and joint ventures, some of them also aimed to share R&D costs and risks, will lead to internationalized R&D, as will as the so far less common acquisitions and mergers. Moreover, R&D-oriented FDI's tend to cluster to some extent to certain regions in the world (i.e. they "glocalize"). Several such regions are conceivably attractive to foreign telco R&D inside and outside Europe. As a result R&D will also globalize in the sense that it will be rationalized and managed on a global basis.

Many theories about internationalization stress the role of technology and innovations behind, at least in the longer run (see e.g. Cantwell 1989). Any company competence that combined with complementary assets brings benefits to many customers worldwide, benefits that are better appropriated by the company through internationalization than cross-border transactions, create a basis for becoming an MNC, especially since competences have significant economies of scale as well as scope. Technical competence, i.e. technology, offers particular possibilities for appropriation and economies of scale (through IPR, cumulation etc.) and thus becomes a key competence (together with management and marketing) for internationalization. This would mean that telcos with successful and appropriable R&D stand a better chance to be successful in internationalization, everything else being equal.

Disregarding differences in R&D productivity and innovativeness, which may be large indeed, this would mean that the largest R&D spenders among telcos would have the best chances in internationalization in the longer run, everything else being equal. Another prediction along these lines is that technology in telecom services will become privatized and protected, e.g. through more intensive commercial and strategic use of patents, as R&D becomes a major means for competition, domestically and abroad. The need for a telco to have complementary assets to be able to economize upon its technology assets will moreover make some degree of integration likely, not only in the form of owning or controlling critical parts of a network but also in the form of owning or controlling the supply of some critical equipment, which would mean at least a quasi-integration backwards. In the extension of this, also quasi-integrated R&D with equipment suppliers and other service providers, even outside

<sup>8</sup> A client following-strategy (a CF-strategy), that is "follow your customer abroad", is common in service industries in general, and has been common among telcos as well, at least initially. (The strategy has learning advantages but growth limitations.)

telecom, is likely to become an important consideration. However, this does not mean large-scale integration backwards into manufacturing. Neither does it mean full ownership of all parts of a network. The supply of know-how is generally more critical than the supply of bulk capacity.

Turning to more general theories, a Schumpeterian approach is of relevance for speculating about the future of telecom markets and actors.<sup>9</sup> In line with this approach, the most successful companies, in international competition in telecom services, will be the most innovative and entrepreneurial companies. The question is whether they will be old or new companies, telcos or originally non-telcos (e.g. computer firms, media firms). Without going into detail here, an argument could be made that organizational and managerial learning in conjunction with relative advantages in making technological transitions would favor incumbents in general (see Granstrand and Sjölander 1990). This would mean that old, experienced telcos with innovative R&D and entrepreneurial management stand the best chances to survive in the domestic and international Schumpeterian competition that is likely to follow upon liberalization.<sup>10</sup> Still this competitive process, if allowed to unfold, will give lots of room for new entrants, new as well as diversifying firms, in various service areas, room that is created by both new technologies and expanding markets. The latter is generally predicted for the telecom sector worldwide. However, the process of Schumpeterian competition will involve both innovation-based entries and exits, that is, with Schumpeter's well-acclaimed label "creative destruction". To the extent that there are cumulative incumbency advantages, this process will be dampened, at both the entry and exit sides. Regulatory protection can give similar effects. Certainly features in the telecom sector such as the high fixed and considerably sunk cost in the network, the systems nature, the traditional culture, the national interests, and so on will tend to counteract creative destruction, as will certain cases of market expansion. On the other hand new technologies (e.g. satellite and/or cellular), especially if in the hands of large, agile companies inside and especially outside traditional telecom, will stimulate creative destruction. Considering the huge R&D investments in telecom-related technologies, a great potential for creative destruction is there, even if there may be overinvestments or appropriability problems. However, more specific predictions on the type and degree of future creative destruction in telecom services are difficult to offer at present.<sup>11</sup>

Finally, one can ask what theories traditionally applied to telecom have to offer about internationalization. More specifically, could the theory of natural monopoly be applied on a global scale?<sup>12</sup> Perhaps so if its concepts and tools are basically changed, but hardly at present.

<sup>9</sup> Critics of Schumpeter claim he never presented a real theory. However, at the same time as one must admit that he was weak on theory, one has to acknowledge that he has spurred a number of scholars to develop his theoretical thoughts; see e.g. Phillips (1971).

<sup>10</sup> Schumpeterian competition in services would mean that the generation of new or enhanced services based on innovations and entrepreneurship, giving higher service performance-to-price ratios and customer value, is more important than plain price competition. That Schumpeterian competition will accrue in telecom services is a prediction that is especially important considering that there is a traditional focus in telecom on pricing matters, more or less assuming undifferentiated services ("plain old telephone services").

<sup>11</sup> Various positions on whether new, innovative firms or old, large firms will dominate in the longer run have also been taken in general by various scholars. Even Schumpeter shifted position from the former to the latter during his lifetime.

<sup>12</sup> Note that this theory is more normative than predictive, but since it has served and been served by powerful interest groups in the past it has appeared as predictive. For accounts of the theory, see Sharkey (1982), Berg and

One basic difficulty is that it is difficult to gather data on key concepts like cost sub-additivity (implying economies of scope), a difficulty which is aggravated on a global scale. An even more serious difficulty is how to accommodate technological changes enabling telecom service differentiation and service innovation, implying enhanced performance and new functionalities, e.g. customer mobility and/or new ways to economize on the frequency spectrum. In addition, technological substitution and Schumpeterian competition are always contesting a natural monopoly at some level, which is difficult to account for. A third difficulty is to design and implement supra-national regulatory bodies and measures for controlling a natural monopoly on an international scale regarding pricing, inefficiencies, principal agent problems etc. and stimulating its innovativeness.<sup>13</sup> Needless to say, the naturalness, if any, of past and current telecom monopolies has not extended beyond national borders so far. Nevertheless, it is conceivable that an argument of a natural monopoly type could be extended internationally in certain cases, supporting ideas e.g. about a mega-merger or a mega-consortium of telcos to create a PTT type of monopoly with a "network of networks" on a continental or a triad or a global basis (e.g. "Eurotel" in Europe or a "World-TT"); or supporting ideas e.g. about having a single consortium to supply satellite services linked to land mobile services in the local loop. However, apart from intellectual possibilities as well as difficulties to significantly extend the theory of natural monopoly to realistic international conditions, and apart from its prescriptions, the practical problems of implementing a more genuine global monopoly seem insurmountable for the foreseeable future, not least since such a notion would clash with the new paradigm in telecom services and deep-rooted political values in the industrialized world (e.g. freedom of speech). There is not currently a supra-national institution with sufficient powers to merge PTTs. The situation today is different from the historical situation when local telephony companies became nationally integrated, as described above. This does not mean that there will not be an ongoing concentration in the international telecom service industry, based on economies of scale, a concentration that very well could witness an emerging integration of e.g. European telcos.

What is less uncertain is that telecom service markets will be restructured and the telcos will become more service-specialized in order to reap economies of scale.<sup>14</sup> As a result international division of labor will increase, everything else equal, and there will be more differentiated competitive races, also as a result of a widening of total service diversity through newly developed services.

Tschirhart (1988), and Train (1991). The idea that natural monopolies should be nationalized goes back at least to J.S. Mill, before the advent of telephony.

<sup>13</sup> A natural monopoly could in principle be implemented without traditional regulation, but these possibilities seem even more remote to apply on a global scale.

<sup>14</sup> This does not preclude that telcos will provide a wider range of services in their own names, some of which are supplied by some kind of "original service producers", analogous to OEM firms. Service branding will also be of increasing relevance in general, and in that connection franchising arrangements may appear with proper control of service quality.

## 4. WHO ARE THE COMING TELE SERVICE MULTINATIONALS ?

### 4.1 Introduction

What will it take for an aspiring player to have a good chance in the race to European or international eminence? What strategies will be successful? These questions will be touched upon next. However, this is not the time and place for a detailed analysis with specific answers. The answers are not only worth multi-billion dollars if right; the possible answers are also multi-billion in number. The empirical basis for analysis is weak and the MNC literature is in fact scarce what constitutes successful strategies for internationalization. The notion of a single race with a single winner must also be questioned at the European as well as international level. In order to conclude this chapter, a brief outline showing strategic options and strategic requirements for competing telcos is given. These outlines will hopefully prove useful for continued analysis and trial and not-so-expensive errors.

### 4.2 Strategic options

The general strategic options for internationalizing a company in telecom services are numerous as shown in Table 4.1. The classic strategic dimensions, i.e. the product and market dimensions, need to be complemented, as well as the two additional dimensions, the competence and partner dimensions, which are of major importance to telecom service companies, see Figure 4.1. The general strategic options in Table 4.1 are based on MNC literature as well as on revealed behavior, much of it presented in this book. Detailed comments will not be given here. What is noteworthy in this context, however, is the need to consider a restructuring process of diversification in connection with internationalization. The principal strategic options for a telco of the traditional PTT type are then as in Figure 4.2. This is a simple illustration and one has further to distinguish between what is here called *outer diversification*, i.e. inter-sectorial diversification (e.g. into media and entertainment), and *inner diversification*, i.e. intra-sectorial diversification. Both the ongoing transition from the NMP-regime to the ICP-regime (cf. Table 3.1) and emerging new technologies fundamentally reshape the possibilities of reaping economies of scale and scope. This creates a need to redefine corporate identity, not only in terms of national identity but also in terms of scope of business activities with new boundaries replacing old ones within and between market and industry areas. Such conceptualizations and redefinitions play a fundamental role in shaping competition and competitive advantage. The multinational telcos of the future, and the industries they are operating in, will most likely be conceptually quite different from today.

Table 4.1  
Overview of general strategic options for an internationalizing telco

Motives/objectives	Geographic area	Country targets	Customer segment	Timing	Service area	Entry service area	Entry mode	FDI type
Growth Profits RoI Survival etc.	Globalization <sup>2)</sup> Triadization Continentalization Multidomestic expansion <sup>2)</sup> Regional expansion Scattered country expansion etc.	Europe Precursory test markets Advanced ICs Rich NICs Near-NICs LDCs etc. Follow your customer Follow your supplier <sup>1)</sup> etc.	Corporate customers Professionals Households Teenagers Urban life-style Infra-structure etc.	Pioneer Early mover Early majority Late majority Laggard	Wired/wireless voice, data, text, image Mobile com Corporate com International infrastructure etc.	Mobile services Satellite services Cable telephony CATV Loaded lines Telecom arbitrage/hubbing etc.	Alliances, joint ventures Acquisitions and mergers Greenfield Minority holdings etc.	Equity position (minor/major) Marketing/ /sales/liaison office Network (private/public/old/new) service production Other infra-structural investments R&D etc.

- 1) This strategy is unusual, but is nevertheless a realistic option, especially since many telecom equipment suppliers are highly internationalized. To the extent that a telco can cumulate experience with supplier specific equipment, it may develop competitive advantage concomitant to the supplier.
- 2) These strategies refer both to geographic scope and mode of organization and coordination (see Chapter 1).

Table 4.1 (cont.)  
Overview of general strategic options for an internationalizing telco

Alliance design	Competencies	Competitive means	Service/product focus	Outer diversification	Outer organization	Inner organization	Economies driving internationalization	Other strategic dimensions
Compatibility of objectives Geographically close Horizontal/ vertical upstream/ downstream Size similarity With/without dominant partner Triad coverage Service complementarities Overcome entry barriers/market access Risk/cost sharing Competence (resource) complementarities Network complementarities etc.	Managerial Entrepreneurial Technological Commercial Legal Political Financial etc.	Service performance Service price Service scope Ancillary offerings (e.g. technology transfer, credits, counter-trade)	Inner/outer diversification/ specialization Service/product conglomerate/ niche	Data services Financial services Education Entertainment Multi-media, Broadcasting etc.	Horizontal Vertical Forward/ backward integration/ disintegration, e.g. own network, own manufacturing, in-house R&D; Network organization <sup>2)</sup> etc.	Extended domestic organization International federation of subsidiaries International division Global/ continental service divisions Global service/ region matrix organization Multi-domestic/ global coordination	Economies of scale (static/ dynamic) Economies of scope (cost/ revenue based) Economies of speed <sup>1)</sup> Transactional economies Locational economies	Ownership Management Finance Supply Technology Personnel etc.

- 1) This concept is introduced here to capture the costs and benefits of shifting the pace of a process as well as the timing of an event. Such costs and benefits could stem from early or late mover advantages in making FDIs, introducing a new service on the market or increasing the pace of internationalization in general. Economies of speed are related to economies of scale and of scope but are not necessarily a cause or consequence of such economies. (Economies of scope, scale and speed may be popularly seen to favor the survival of the fittest, fattest and fastest respectively.)
- 2) A quasi-integrated organization of closely cooperating companies with some kind of coordinating center.



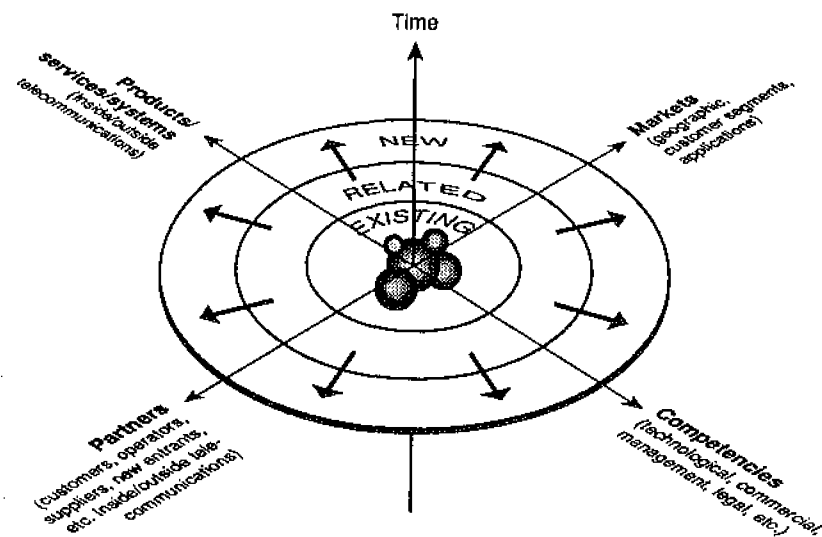


Figure 4.1  
Major dimensions of corporate strategy

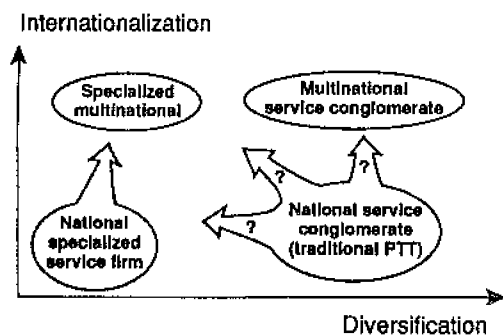


Figure 4.2  
Principal strategic options for a telco or telco alliance

Note: 1) Common route for an internationalizing manufacturing firm (with diversification possibly following later).

4.3 Strategic requirements

A number of principal requirements for the strategic performance of an internationalizing telco could now be formulated as in Table 4.2, based on the preceding chapters, literature and analysis.

The requirements are fairly natural, but a few comments are in place. The managerial requirements are important and would involve a major restructuring of management and organization of a traditional PTT, which takes time and effort. A strategic commitment by owners and management to internationalization, in contrast to lip-service, is not easily achieved, especially if there is domestic public pressure for domestic focus, or if the domestic market is large and/or profitable, or if owners and managers are internationally inexperienced.<sup>15</sup> Managerial resources and a common corporate culture for internationalization are not easily built up, either alone or in alliances. In fact, management is likely to become more of a crucial bottleneck than financial resources.

Table 4.2  
Strategic requirements for a candidate in the international telecommunications race<sup>1)</sup>

- Management**
  - Strong management base and learning ability in international business
  - Strategic commitment by corporate owners and management
  - Internationally business-oriented corporate culture
  - Managerial and commercial management skills
  - Skills in managing multi-cultural external relations (alliances etc.)
- Technology**
  - Innovativeness
  - Strong technology base with in-house R&D, technology acquisition and learning skills
  - Intellectual property rights
- Marketing/purchasing**
  - Good learning position in precursory markets
  - Key positions in expanding markets
  - Productive, long-term relations with internationalized and innovative customers
  - Productive, long-term relations with internationalized and innovative suppliers
- Financing**
  - Domestic financial strength
  - International financing ability
- Production**
  - Ownership and/or control of critical network parts
- Politics**
  - Culturally and politically well-positioned
  - Home market politically and regulatively conducive to and apt for learning and self-financing
  - Diplomatic skill in alliance formation
  - Lobbying effectiveness (domestic and foreign political skills)
- Miscellaneous**
  - Geographically well-positioned (e.g. close to NICs or medium and less developed countries)

Note: 1) These principal requirements apply to single telcos as well as to alliances.

<sup>15</sup> Future recruitments for the board and top management of PTTs will be an interesting indicator to watch.

Technological innovativeness is more or less necessary but not sufficient for successful and sustainable internationalization, as discussed earlier. This would require an overhaul of technology management in traditional PTTs, with increased attention paid to factors such as technology strategies, IPR matters, R&D productivity, technology acquisition, economies of scale, scope and speed in R&D, R&D coordination in alliances, coordination with innovative customers and suppliers etc. Early mover advantages put a premium on speed and positioning in key markets and segments, and on building long-term relations with customers.

The regulatory, nationalistic and oligopolistic nature of telecom puts requirements on political competences. Financial strength and/or financing skill is clearly needed. Fortunately, financial markets function in favor of telecom. Moreover, the rapid and turbulent development of the telecom sector gives a telco a premium on good learning ability and good learning positions in new technologies and new markets with trials and not-so-expensive-errors in various areas. It must be emphasized here that the requirements in Table 4.2 are not to be taken in a static, absolute sense but must be viewed as dynamically changing, relative to competitors. Strategic flexibility, avoiding being prematurely locked into a certain strategy mix but ensuring preparedness and speedy responses, together with ability to learn faster than competitors, then becomes important. To make rapid improvements from a low level is generally more important in the long run than starting from a high level with slow improvements.

Finally, applying (without further comment) what has been discussed to the headline question of this concluding section reveals that the typical multinational telecommunication carrier<sup>16</sup> in the future Europe is likely to be European, a telecommunication company or telco-dominated consortium, strong in R&D, innovative with comprehensive managerial abilities; etc.

Among the current players, who does best fulfill the requirements in Table 4.2? This question is left open here.

The answer may be—in the air.

<sup>16</sup> The term 'telecommunication carrier' is kept here as a reminiscence of the past. A better term for the future is 'telecommunication service company' (or 'tele service company') for which 'telco' has been used as a shorthand.

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