

Nokia Mobile Phones & the Chinese Market – Managing Culturally Based Strategic Nets

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Abstract

In the new global world economy the telecom sector has a central role to play. In the virtualised marketplace Mobile Phones have since the mid-1990s had a tremendous growth curve and spread across the global Triad. The emergence of technological innovations and growth started in Northern Europe, the U.S and Japan and has thereafter spread to many other parts of the world. Core technologies and R&D functions are spreading to new locations as the firms in the lead (Nokia, Motorola, Samsung, SonyEricsson and Siemens) have developed global sourcing and production systems. The markets for final products and services are global as well.

China is one of the new key markets for growth when the first-mover markets have reached a more saturated stage. Due to China's policy concerning FDI and the opening up of its' markets for foreign products China is now (together with its impressive growth figures) an interesting area for FDI for Mobile Phone producers. This paper looks at how Nokia Mobile Phones has penetrated the Chinese market and how it has developed its position in the growing market through FDI and other investments. The study focuses on which investments have been made so far and what are undergoing development at present through a strategic network perspective.

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Key words: Mobile phone markets, Nokia, China, Foreign direct investment, Globalization, Business networks

INTRODUCTION

Mobile phone business has come to a new developmental trend in today's global market. The market shows a sign of a first mature phase when the spectacular growth figures from the mid-1990s to 2000 has come to a halt since and the sales have decreased (see enclosed figures in table III below). New players have entered the scene and the global economic downturn is playing a role as well. Many possible future developments can therefore materialise.

In a situation like this the leading mobile phone producers are stepping into new and emerging markets. East Asia and notably China seem to play a leading role in this development. China has a vast market potential and its economy is growing. Millions of people are willing to become consumers of electronics, white goods and home appliances. Mobile phones are a moving target for willing consumers in China (Business Week June 17, 2002).

Nokia is the current global market leader of mobile phones. It has invested into China in many ventures and in production units. China is the next largest market for Nokia after the U.S. in the first Quarter of 2002. In moving into China and when developing its business strategy Nokia is forced to build up specific networks of relationships with locals. To build its strategic networks for the future – and for the production of current needs, especially in the Asian markets – Nokia has to take into consideration the culturally specific conditions that prevail in the Chinese market.

China is also what can be labelled as a “transition economy”, because the country is in a massive way transforming its Maoist past with heavy flows of FDI and new technology development with Western firms. One key technology is the Mobile telephony and its development (World Development Report 1996).

The future is hard to study in a market like this due to access problems and coming uncertainties. Some key questions posed in the paper are the following: What is the role of China in the current global mobile phone business? What investments to the Chinese market have been made so far from mobile phone firms, especially Nokia? How can the role of relationships and networks be used when developing strategic nets in the Chinese market? Will China be an important home base for Nokia when serving other markets and developing mobile products? How do culture and the role of Chinese networks affect this strategic process?

The paper starts with a general overview of global trends affecting mobile phone manufacturers especially. Thereafter the paper presents two theoretical sections considering Chinese business networks including the cultural aspect and notes the role of strategic nets in a changing global marketplace. In the next section of the paper the Chinese market for mobile phones and the role of Nokia is presented. In the final section perspectives on the development and outlines of building strategic nets in the Chinese business context with further implications for practice and research are formulated.

TRENDS IN THE GLOBAL ECONOMY AND THE ROLE OF THE ASIATIC TRIAD

What trends can we find in the international business environment of today? This is a vital question in the uncertain economic times we are experiencing in the early 2000s. Japan seems to have been in an economic downturn since at least a decade. The Asian crisis in 1998 still makes its mark in the East-Asian region as well as the economic downturn since 2001 in Western Europe and the U.S.A. Some fairly broad perspectives in the current situation are proposed to be the following.

First, a new regional division of labour between different parts of the world where the New Industrial Economies (NICs) and new transition economies (NTEs) of China and Asian tiger economies and the Central and Eastern Europe (CEEC) have become new players. Second, the role of ICT-technology and its impact on business behaviour and internationalisation is an important aspect changing the world. One central aspect deals with the role of new technological and systemic change in information exchange, marketing and distribution and production, for example. Third, in the intertwined world economy the role of culture still plays an important role in understanding how some international companies operate and explains, to a considerable degree, why some companies are successful and why others fail in different parts of the world. This concerns industrial markets as well where face-to-face interaction plays an important role. Cultural awareness and understanding is often decisive for success in international B2B markets (Parker, 1998; Törnroos, 2001; Usunier, 1997).

Fourth, the Role of MNCs and their reliance on small & medium sized firms through outsourcing and development of business networks exist in many parts of the world. Also an increasing amount of alliances are formed between large companies or between high-tech companies. These networks of interconnected relationships are embedded in various ways in different parts of the world and

have different logic's concerning network constellations (cp. e.g. Japan vs. Scandinavia or USA vs. China).

These are some of the trends, which are discernible now. One problematic but important question is to ask how these trends and event trajectories do affect our understanding of the internationalisation of the firm? How is contemporary theory taking these aspects into consideration? Which types of theories can best grasp these turbulent trends and mechanisms in what we call the global intertwined economy - or just simply the new economy?

This leads to another tricky question to answer: what change processes in business markets and marketing can be distinguished? One notable change process is undoubtedly that marketing is viewed as a relational task including both upstream suppliers as well as buyers on the downstream side of business (Anderson & Narus, 1999; Håkansson & Snehota, 1989, 1995). Another change is seen through increasing outsourcing of different functions in large MNCs to outside actors. 'Vertical disintegration' has been used as a term to denote this development as well. Large firms are in many cases forming business networks and develop markets instead of managing hierarchies and internalising operations. This does not imply that core competencies or core knowledge and R&D-functions are outsourced, but it seems that even critical resources are developed jointly to a larger extent than before. Examples from the mobile business include e.g. Nokia, Hewlett-Packard and SonyEricsson.

Due to advances in transport- and communication systems and in global sourcing possibilities MNC-firms are marketing as well as sourcing and producing the needed products and parts in many different locations/countries/continents. This relates again to changing macro- and supra-macro forces, i.e. deregulation of formerly closed markets (e.g. many Asian economies which have changed from import-subsidization policies to export orientation and the transformation of East Europe and China, to name a few examples. For a closer examination see e.g. Drakakis-Smith, 1994; Dicken, 1998). This evidently leads to address issues about culture and business in new ways in understanding the world and communicating in current business contexts. How to manage relationships in business networks in China in the case of Nokia forms an interesting research topic because Nokia is the global leader in mobile phone markets and has invested heavily into China since the mid-1980s.

NETWORKS IN CHINA

It is stated here that global trends and change processes in industrial markets can be analysed from a business network perspective. In this connection the following questions are proposed: What is the role of business networks and relationships, especially concerning China and investing and doing business with the Chinese? What is the role of China as a market and as an export and sourcing base for Nokia Mobile Phones in its' global strategy?

In cultural terms, China is seen as a strong collectivist society where group formation and belongingness plays an important role in all walks of life (Hall, 1976; Hofstede, 1980; Usunier, 1997). Concerning Chinese network studies the importance of 'guanxi wang' (relationship network) has long been acknowledged (cf. Ruan, 1993; Mayfair, 1994). Recently business research has also paid attention to the importance of guanxi in business markets (e.g. Björkman & Kock, 1995; Davis et al., 1995; Xin & Pearce, 1996; Ambler et al., 1999). Few studies, however, have been made in order to understand the cultural foundation of business networks in different parts of the world (see however e.g. Johanson et al., 1999).

Thus, guanxi and importance of relationships have their origins deep in the Chinese culture. Therefore Chinese relationships cannot be observed only through business markets but they need to be viewed and studied in the wider social context. The established word for Chinese relationships is guanxi. Even if the word literally can be translated as relationships it is crucial to define the concept of guanxi since it includes dimensions normally lacking in Western view of relationships. Leung et al. (1993) define the concept of guanxi in the business context as being developed through: *very personal interactions with other people and always involve a reciprocal obligation. Guanxi is developed with ingenuity, creativity, supplemented by flexibility. It is cultivated through a person's network of connections.*

In China business networks are not necessarily based on purely business-related issues. Other social issues, such as family and common former contacts strongly influence business networks. Therefore ways and motives to work in business networks are not only profit seeking but can also be perceived as irrational, unprofitable and inefficient (Johanson et al., 1999).

On the other hand, if the business relationships are based on expressive ties among family members or other common former contacts, also business relationships become strong and reliable, but not

necessarily more profitable. The role of guanxi wang is of crucial importance. Other important network players in China are the political decision makers at all levels and the Chinese State Enterprises (CSEs), which still have a core role in the Chinese economy (Min Chen, 1995; Lasserre & Schütte, 1995). Other network actors are since FDI was allowed formed of foreign firms who have entered the Chinese market. The overseas Chinese Conglomerates (OCCs) are also important to consider when developing business relationships in China. Management through Chinese family business is culturally still a distinct feature of the OCCs (see e.g. Lasserre & Schütte, 1995, pp. 100-108). Culture becomes a key issue in developing relationships in China and with the different Chinese actors. Guanxi-relationships and how to gain and maintain Guanxi is a tricky issue when competing with locals and the OCC business actors who can have stronger position to use guanxi relationships than foreign firms. Guanxi can be seen as having a boundary-spanning role and is needed to get access to business networks through relationships.

TAKE IN TABLE I

STRATEGIC NETS AND GLOBALISATION

Globalization and the development of the triad in the world economy dominate the landscape of business (Ohmae 1989, 1995). The business context has changed due to aspects initially put forth in the introduction of the paper: deregulation of international trade and markets, new emerging markets, new digital technologies removing former distance barriers etc. (cp. Dicken, 1998; Castells, 1996; Parker, 1998). These supra-macro trends constitute basic event-trajectories that makes business firms act in new ways in order to achieve competitive advantages. For high-tech firms, like mobile phone manufacturers, the puzzle of creating profitable relationships and keeping core competencies in house form important issues to handle.

The internal development of high-tech companies is important when developing new products but at the same time mastering and using the competencies of other firms is crucial. The business network approach notes the relationships between a firm and with other actors through connected exchange relationships (Ford, 1990; Håkansson & Snehota, 1995; Möller & Wilson, 1995). In strategic terms this means that the firm is dependent on other actors for its survival and growth. Interdependence between connected actors, the activities performed by them, and the resources they create form basic cornerstones.

Strategic nets are defined as those relationships that a firm *intentionally* strives to build over time in order to reach a specific position on the market (Möller, Rajala & Svahn, 2002). Table II presents some contextual change processes for firms from a classical market type of environment to a more networked reality. Managing business in a network environment needs the mastering of different activities and resources. One actor of the network should be aware of external developments and threats as well as matching the internal competencies and developments of the firm with outside network actors and considering the moves of competitors and institutional actors. In the telecom-sector e.g. national telecom-authorities and institutions and politicians are core institutional actors. The business actor also has to recognise relationships to suppliers and logistics across the global markets where they operate (see e.g. Shu-Chun Ho, 2001, pp. 5-6).

TAKE IN TABLE II

Cultural aspects become also a factor to be taken into consideration in managing multiple realities in different spaces and settings. China is now the largest single global market for mobile phones and has surpassed the U.S. during 2001 (Reuters, 31.5.2002). China is gradually opening up for FDI and investments and wants to have a share in knowledge sharing and developing the country through foreign firms. These aspects have to be considered, as well as the fact that the China is still a developing country with own regional differences and huge economic gaps emerging between different regions.

In managing intentional strategic nets there is a multitude of factors to consider. The first aspect deals with developing core competencies and skills within the firm in relation to other firms. This aspect relates to a position within the industry and between different competing forces (Porter, 1980, 1985). How should the position be towards suppliers is an increasingly important matter in a turbulent industry like the mobile phone sector? Reliable and adaptive suppliers are valuable in the industry that develops new models and features as well as standards. Time and timing is another key strategic aspect in mobile business. First movers like Ericsson, Motorola and Nokia have skimmed the cream of the market during the growth period between 1995-2000. The emerging stability and diversifying phase will probably need new strategic thinking and changing positions between an increasing numbers of new competitors.

CURRENT GLOBAL MOBILE PHONE MARKETS

The number of units sold in the global mobile phone markets in 2001 was 399,6 million according to Gartner Dataquest (11.3.2002). This was 3.2% less than the previous year. It was also the first year when this market experienced a setback. The setback also coincided with a general economic downturn in the core economies in the core world triad, the Americas, Europe and Japan. The same downturn was, however, not materialising in Japan and China and in some of the emerging markets in East and Southeast Asia. These figures also reflect the situation in mobile phone markets. Global market leaders at the end of 2001 are presented in Table III.

The South Korean firm Samsung has been rapidly developing its mobile phone business in recent years and is threatening Nokia. Samsung was despite the recent downward trend able to sell more mobile phones than previously and extended its market share. During the first quarter of 2002 Samsung sold 94 million units. The market share of Samsung has been growing from 6.2% to 9.6%. It has surpassed Siemens and has taken the third place in the global market.

The second largest mobile phone manufacturer Motorola has announced that Nokia and Motorola will lose market shares to smaller players during the forthcoming five years. Motorola has estimated that the market share of smaller manufacturers will grow to up to 30%. The Gartner research unit believes that smaller producers will come forth when they can be able to use low production costs and enter the low-end product (mass) markets and compete with price (1).

TAKE IN TABLE III

INTERNATIONAL MARKETS AND MARKETING BY NOKIA MOBILE PHONES

Nokia Mobile Phones (NMP) has in a couple of years during the growth phase of the mobile phone-boom from 1995 to 2001 taken a leading edge in the development, production and marketing of mobile phones worldwide. NMP has a global strategy to stay as a leading player even after the first wave of the market has become saturated. Nokia has invested heavily into R&D and regard this as its core competence. Nokia has a lead in the mobile phone markets by technologically advanced production and product design. Nokia has also a vast and efficiently running sourcing policy in order to get suppliers and 'suppliers suppliers' to function in a complex global logistical and supply

chain. The net sales to key markets of Nokia Mobile Phones during 1998-2001 (in million of Euros) are presented in the table below.

TAKE IN TABLE IV

TAKE IN TABLE V

TAKE IN TABLE VI

Nokia's most important markets are presented in table VII from 1999 to 2001. The figures strongly indicate that the major growth markets have shifted from the European base to the Americas and especially to Asia, where China now plays a dominating role. The fast growth has been diminishing as we move beyond 2001. The markets will probably become more fragmented with different types of producers. Also new constellations like the merger between Ericsson and Sony in 2001 can emerge. New types of players can also enter this still lucrative market.

TAKE IN TABLE VII

TAKE IN TABLE VIII

Employed personnel in Nokia has decreased in 2001. Figures in table VIII indicate that some new growth markets have increased their personnel whereas the more mature markets have had a decline. This shows, at least to some extent, that the markets have saturated in Europe.

NOKIA IN CHINA

Nokia opened its first office in Beijing in 1985 (China Daily, March 25, 1995 see also (2)). The reasons for NMP to enter the Chinese market for mobile phones as late as 1995 had to do with the size of the market. The main reason being that the mobile phone subscriber base was slow to develop. The number of users in 1992 was less than 50.000 (Collins et al., 1999, p. 10). According to the authors the start-off of subscriptions had a quick and rapid take off after the economy opened for FDI and trade in China since mid-1990s. Between 1992-1995 the number of subscriptions grew by 400%. The rapid growth of a new middle class is also a sign for mobile phone manufacturers. China's rate of telephone coverage was in the early 1990s the lowest in the world. This had also to do with the lack of proper and functioning mobile phone networks. The Ministry of Posts and telecommunication (MPT) announced instead of developing landlines to develop wireless solutions, which boosted the market for both networks and later on mobile phone sales (Collins et al., 1999, p. 10).

As indicated, China is currently the second largest market area for Nokia after the U.S.A. Some statistics even indicate that China has surpassed U.S.A. Nokia has currently two units in China producing mobile phones. One unit is located in Beijing and the other in Dongguan. In 1986 it sold the first NMT450 analogue cellphone system in China, which was a landmark for the beginning a long lasting success. Nokia began to sell GSM in China in 1991. By the end of 2001, Nokia has invested a total of 2.3 billion Euro (nearly \$2 billion) in China and established itself as a strong contender in the mobile phone market. The company has twenty-two local offices, eight joint ventures and a research centre, total employees amount to 5.500. Nokia is the second largest mobile phone supplier in China after Motorola, with a market share of 30% (situation at end of 2001).

Nokia itself expresses its strategy in China in the following manner.

“Like elsewhere, Nokia's winning strategy in China lies in unique product design, combined with functionality and ease of use. The company offers a broad range of mobile phones to accommodate different needs and tastes. In addition, the company has developed an extensive reseller network with 900 outlets throughout China. Nokia is also a pioneer in new generation mobile technologies including GPRS (General Packet Radio Service). In 2001 Nokia opened a "Xing Wang (StarNet) International Industrial Park" with a Chinese partner. The 10 billion Yuan (\$1.2 billion) park will be used to manufacture Nokia handsets and other products by attracting part suppliers and other companies in the world” (3).

Nokia makes mobile base stations, controllers, mobile switch, access equipment, digital switching and transmission equipment and various handsets in China. Sales in China reached 3.4 billion Euros (\$2.9 billion) in 2001 and export increased 47% to 2.5 billion Euros (\$2.2 billion). This means that Nokia is the largest foreign IT company operating in China (3).

Like other mobile phone providers, Nokia is faced with increasing competition in China; as a result, the company has suffered from image issues in several cases where customers accused the company of product quality and customer deceit. Different from other foreign companies, Nokia has limited product offerings beyond the GSM mobile phone family which can put the company in a vulnerable position should demand for mobile phones reach a plateau while new service (GPRS, WAP, 3G) may not take off in China as soon as anticipated (3).

Nokia has also seven joint ventures and two product development units in China. This situation prevailed at the end of 2001 (4). The Nokia networks division has 6 joint ventures in China (of which 3 production units). Nokia Ventures Organization has one joint venture in China for the production of multi-media terminals (5).

The personnel of Nokia in China amounted to 5202 (31st December 2001) (6, page 3).

Nokia's two production units in China and one located in South Korea primarily produce units for the Asian markets. In February 2002 there existed around 145 million mobile phone users in China. It has been estimated that the number of users will increase with up to 55 million new subscribers during 2002 (7). China is the largest market for mobile phones in the world. In the end of April 2002 the number of users had reached 167 million (8).

Nokia and Motorola dominate considering market shares the Chinese market currently. The market shares of other producers are considerably lower. There are, however, some signs that smaller and new local and regional producers who start to challenge the big mobile phone makers (Kauppalehti, 20.3.2002)

It is hard to predict the future developments of the Chinese market concerning mobile phones. Motorola and the research institute Gartner Dataquest are estimating that small producers will take over the mass marketing of low-end products concerning quality and performance (1).

China has become the key growth-market for mobile phone makers and telecom-network providers (HO 2001). The opening of the Chinese market and China's membership in the WTO in 2001 together with the economic growth have been boosting this development. Nokia announces that it expects over 20% growth in sold mobile phone units in China during 2002 compared to the previous year (Head of Nokia's Chinese Mobile Phone unit David Hartley/Reuters). If this is the case Nokia will expand much more than its competitors. The estimated growth of the Chinese mobile phone market is 10-15%. This is an impressive estimate especially if we consider the size of the market (9).

TAKE IN TABLE IX

Nokia has announced that it will develop its R&D activities in China in the coming years. Until now R&D investments of Nokia have been focused on Europe and North America. Mr. J. Vaario, director of the Nokia China R&D Centre has announced that Nokia will put more emphasis on co-operation with local Chinese R&D institutions and universities. This is done in order to provide China and the world with top-tier technological achievement. Nokia has already co-operated with local partners in numerous key R&D projects within third-generation cellular technology and next-generation Internet applications. According to Motorola the position of Nokia and Motorola will soon rapidly deteriorate in China. This could be the reason why Motorola has started to sell mobile-phone circuits to competitors. Motorola estimates that in 2003 it will be the largest supplier of circuits for mobile phones and will bypass Texas Instruments as the world leader (1).

TAKE IN FIGURE 1

The American CDMA-system has been introduced to the Chinese market as well. The introduction has, at least so far not been a success (Business Week 17th June 2002). New producers and new types of producers have entered the scene in Asia including China. Table IX shows the situation in China concerning producers on the market in early 2002. The figure notes only some of the main players on the Chinese market. The dotted lines present products that are offered for sale but are not considered as being "core products". The full lines show the core products of mobile phone manufacturers in the product range and positions in the product offerings of different companies. The current market in China is in this way segmented – but in a very complicated manner. Some large producers offer a wide range of models and features and new mobile phones to the markets

and to specific segments. Others seem to concentrate on mass-marketing and more straightforward models with simple features. Figure 1 is a tentative attempt to illuminate this.

From the foregoing it can be concluded that a major repositioning in the Chinese market is taking place. Figure 1 aims at showing relative positions between the different players now existing on the market. This needs further elaboration through deeper case studies of core companies acting on the market. To sum up, the following new developments are proposed:

- Nokia is increasingly targeting the high value added markets and keeping some basic models for larger segments and aims to keep its technological and market leadership.
- Motorola has a wider focus of the market and starts to supply components for other actors, including local producers.
- SonyEricsson is developing new products through a joint effort and seeks a leading position.
- Samsung is competing in the high value added segment and has increased its market share. The company possesses local cultural assets and networks as well.
- New Chinese players are entering mobile phone markets. Local producers have cultural and guanxi-ties and they have a direct or indirect support by the government (Ho, 2001).

CONCLUSIONS AND IMPLICATIONS

Mobile phone production and marketing is presently undergoing a repositioning phase globally. The first rapid growth of mobile phone markets in the core economies of the world has come to a halt. New growth possibilities can be found in emerging economies and in transition economies, notably so in China. Asia is currently the world's largest single market area for mobile phones. The East-Asian region has also become the largest single market area for FDI for mobile phone manufacturers. In this development there was a take-off stage in the mid-1990s, which increased during the latter part of the century. China opened up its telecommunication equipment market almost two decades ago (Ho, 2001). It has opened up even more since it has joined the WTO in 2001, which probably will boost investments and trade further. Many joint ventures have been established and the Chinese are keen to learn and develop their own industries, as well as their own position as a service provider as well. The telecom and mobile industry is one key industry in

developing the country. China has also jumped over the building phase of wired telecommunications to direct mobile communication.

When moving into and developing business in the Chinese market the collectivist cultural base is a challenging and necessary prerequisite for success in this process. The business network approach offers a theoretical base for understanding relation-based marketing and how firms develop their business through relationships. The network approach has also been used in explaining internationalisation (Johanson & Mattson, 1988; Johanson & Johanson, 1999). The business network approach can also aid in understanding how networks are based on different 'network logics' in different cultural surroundings (Johanson et al., 1999). Possibilities to deal with connected exchange relationships are also key aspects in the Chinese business culture, and in the telecom sector – but in a different manner than in Europe or the U.S.A. Guanxi-wang is to be used as a connection and bonding mechanism through creating, managing and keeping business relations alive through mutual obligations and acts. The network actors show many different players in the field of business. National firms, Family enterprises and the Overseas Chinese business conglomerates as well as the governmental/political actors and foreign firms are vital parts of the mobile phone business network. Building intentional strategic nets is based on these considerations. In the Chinese case the cultural imperative seem to be a core factor to take into consideration when developing business connections.

In the mobile phone markets Nokia was present in China already in 1985, but the FDI and rapid entry process took off in 1995. Nokia has eight joint ventures with local firms functioning at present and has two plants in China. Nokia has also two research centres and an additional one will start in Hangzhou in 2002. Nokia also has a significant export out from China. Nokia has strong market shares both in the infrastructure market (mobile networks) and in mobile phones.

China is a key market for Nokia and the company has announced that it will strive for a clear leading position in the Chinese market (N. Litchfield, Senior Vice President, APAC Nokia Mobile Phones, 17.6.2002) (10).

Implications and suggestions for research include at least the following aspects:

First, to develop network based theory concerning the three above areas (network management, internationalisation through networks and culturally based nets) through a joint effort. Business

network management in the Chinese market and developing an Asian/Chinese business network theory from the European/Western based theory of business marketing would be the ultimate target. Second, to analyse the business entry and development of leading firms and their position in the market in China in the coming years. This would be stimulating in a situation when fierce competition with new players in mobile phone markets has emerged. Third, to study how the cultural and familist/collectivist network building among the Chinese actors (State-led enterprises, Family business in China and the Overseas Chinese business enterprises) works in the market generally and the mobile phone markets especially. How this affect the foreign investors in Chinese mobile phone markets forms another key question. This is increasingly topical study area after China has joined the WTO and is opening up its markets for foreign competition.

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Culturally based business networks in China	<i>Core characteristics</i>
Actors	Family and clan (stronger in overseas Chinese societies), former classmates and course mates, common home region, former and current work units
Activities	All social activities but also financial, economic and technological activities, favouring in-group-members (in business activities)
Resources	Social, latent relationships, technological, “know-how”
Basis for trust and commitment	Common contacts, previous contacts, social bonds

Table I. Characteristics of networks in Chinese business contexts

(Source: Johanson et al., 1999)

Contextual Change – from firms & markets to business networks	
1970s – 1980s	Since 1990s
-National markets and national steering mechanisms, international rules of the game	- International & increasingly emerging global markets
- “Classical competition” models, mainly oligopolistic	- Both co-operation and competition between rivals (firms within the same industry)
- Exchange perspective, conquering new customers from rivals, to make a sale, marketing as exchange	- Relational perspective manifests itself. Networks of relationships develops between suppliers – focal firms – customers and other actors in the value chain
- Loose, but developing economic integration, especially in Europe	- More integrated markets inside the global triad countries and between them (EU, NAFTA, AFTA), further deregulation and China becomes a WTO member and a global player
- Pre-digital technology developing in business	- Digital technologies and Internet-based systems developing and put into place. ICT-convergence/Web-Internet technologies
- Vertical integration and internal control strategies pursued by large firms	- Strategic management of network relationships between firms and institutional actors and key-competence development
- Quite well-structured division of labour in the value chain inside and between firms	- New division of labour inside business organisations and between organisations and sourcing/marketing systems across the globe
- Predominantly hierarchical steering systems and management of firms. Mainly national based management structures.	- More “flat” organisations and flexible structures. Network organisations, “loosely coupled” organisational patterns. International and transnational management and managers, global hub-firms

Table II. Some fundamental changes in the business environment of firms from market type into networked business environments

Table III. World-wide Mobile Phone Sales Estimates for 2001, 2000 and 1999 and market shares for the first quarter (01-03) of 2002

Company	2002 Q1 Market share (%)	2001 Shipments	2001 Market share (%)	2000 Shipments	2000 Market share (%)	1999 Shipments	1999 Market share (%)
1. Nokia	34.7	139 672	35.0	126 369	30.6	76 335	26.9
2. Motorola	15.5	59 092	14.8	60 094	14.6	47 818	16.9
3. Samsung	9.6	28 234	7.1	20 639	5.0	17 687	6.2
4. Siemens	8.8	29 753	7.4	26 989	6.5	12 982	4.6
5. SonyEricsson (1)	6.4	26 956	6.7	41 467	10.0	29 785	10.5
Panasonic (2)	NA	NA	NA	21 511	5.2	15 581	5.5
Others	25.0	115 877	29.0	115 662	28.0	83 393	29.4
Total Market	100.0	399 583	100.0	412 731	100.0	283 581	100.0

SOURCES

All statistics are estimates by Gartner Dataquest (see list of references for web links).

(1) Sony and Ericsson merged their mobile-phone businesses on October 1st 2001. The stats for 1999, 2000 and 2001 are for Ericsson alone, the market share for Q1 2002 is for SonyEricsson. The combined shipments for Sony and Ericsson for year 2001 would have been approx. 34 million units and market share approx. 8.5%.

(2) The table lacks some statistics regarding Panasonic. The shipments and market shares of Panasonic for 2001 and Q1 2002 are included in the 'Others'-slot.

Table IV. Net sales to external customer by geographic

area

	2001	2000	1999	1998
<u>(In millions of Euros)</u>				
Finland	453	494	479	465
USA	5614	5312	3360	1996
China	3418	3065	2332	1753
Great Britain	2808	2828	1855	1205
Germany	2003	2579	1679	1135
Other	16895	16098	10067	6772
Total	31191	30376	19772	13326

Source: Nokia – Annual Accounts

Table V. Segment assets by geographic area
(In millions of Euros)

	2001	2000	1999
Finland	5087	4688	3144
USA	2279	2774	1894
China	1668	2030	1312
Great Britain	519	654	476
Germany	611	909	748
Other	3724	2727	6276
Total	13888	13782	13850

Source: Nokia – Annual Accounts 2001

Table VI. Capital expenditure by market area
(In millions of Euros)

	2001	2000	1999	1998
Finland	477	587	487	295
USA (1)	151	279	313	97
China	131	157	121	49
Great Britain	34	75	54	41
Germany	37	133	124	123
Other (1)	211	349	259	156
Total	1041	1580	1358	761

(1) Including goodwill and capitalized development costs, capital expenditures amount to EUR 2064 million in 2001 (EUR 2990 million in 2000). The goodwill and capitalized development costs consist of EUR 582 million in USA in 2001

(EUR 567 million in 2000) and EUR 441 million in other areas in 2001 (EUR 843 million in 2000).

Source: Nokia – Annual Accounts 2001

Table VII. NOKIA'S 10 major markets, net sales
(In millions of Euros)

	2001	2000	1999
USA	5614	5312	3360
China	3418	3065	2332
Great Britain	2808	2828	1855
Germany	2003	2579	1679
France	1260	1085	951
Italy	1168	1243	968
Philippines	925	780	203
Thailand	908	445	
Brazil	892	1056	600
Spain	644	678	420

Source: Nokia – National Accounts

Table VIII. Nokia's personnel in 10 major countries

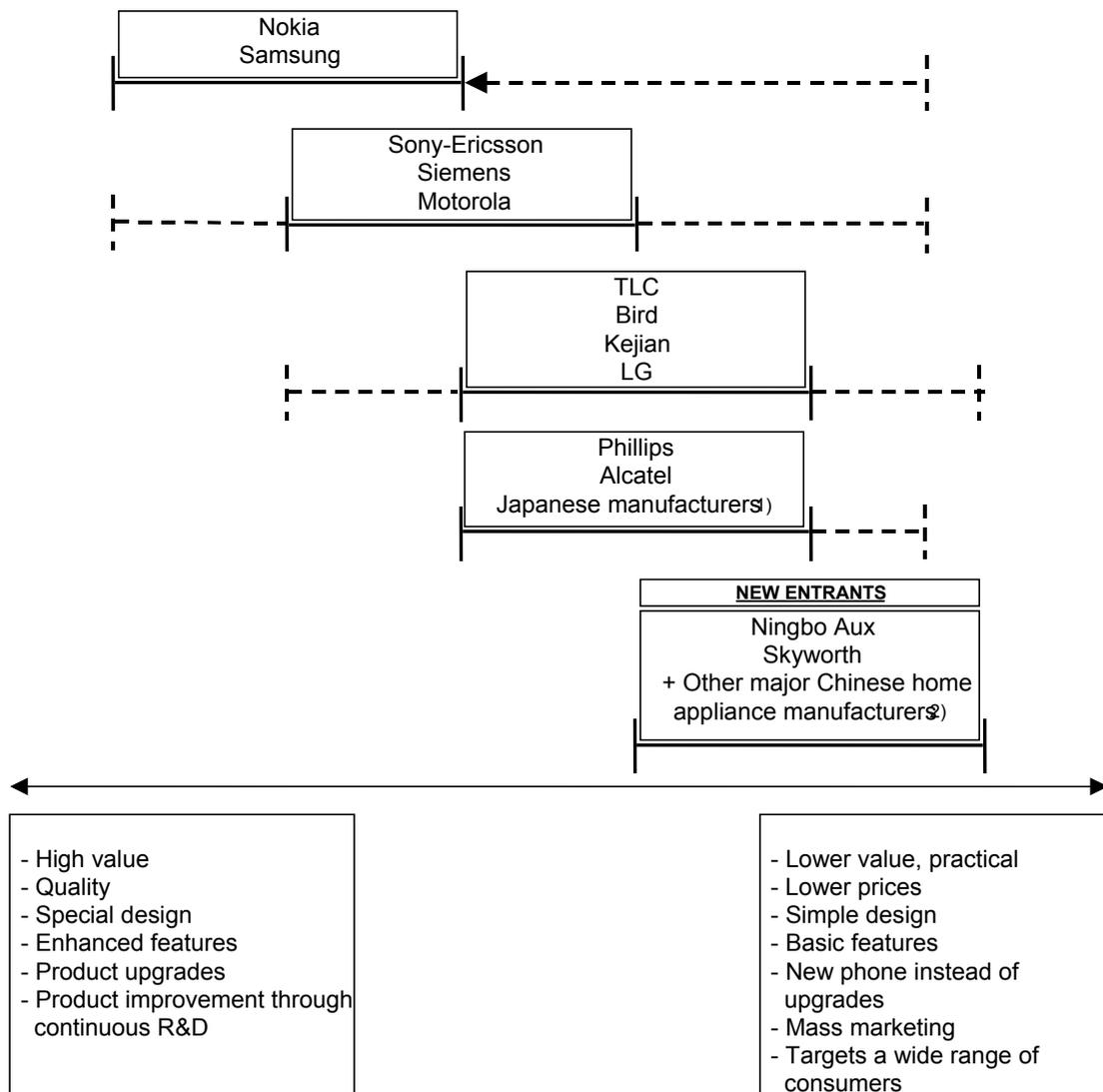
	2001	2000	1999
Finland	22246	24379	23267
USA	7298	8765	7441
China	5202	5675	4375
Germany	3892	4747	4660
Great Britain	2286	2777	2822
Hungary	1937	1972	2034
Brazil	1413	1260	1233
Mexico	1198	1122	1392
Denmark	1166	1266	1110
South Korea	864	937	694

Source: Nokia – National Accounts

Manufacturer	Country of Origin	Manufacturer	Country of Origin
Nokia	Finland	TLC	China
Motorola	United States	Bird	China
Samsung	South Korea	Kejian	China
LG Electronics	South Korea	Zhongxing	China
Siemens	Germany	Haier	China
Alcatel	France	Konka	China
Philips	Netherlands	Amoisonic	China
SonyEricsson	Japan-Sweden	Dongxin	China
Matsushita (Panasonic)	Japan	Xiahua	China
NEC	Japan	Panda	China
Mitsubishi	Japan	Capitel	China
Toshiba	Japan	Ningbo Aux	China
Kyocera	Japan	Skyworth	China
Sanyo	Japan		

Table IX. Mobile phone manufacturers in China in early 2002.

Sources: Reuters, Dataquest, and Nokia.



1) Sanyo, Matsushita (manufactures Panasonic's mobile phones) & NEC, Mitsubishi & Toshiba, Kyocera etc.

2) Zhongxing, Haier, Konka, Amoisonic, Dongxin, Xiahua, Panda, Capitel etc.

Fig. 1. A hypothetical strategic continuum concerning mobile phone producers and the Chinese market. Some main players on the Chinese market are included.