

JORMA SALO

**New Markets - A Critical Evaluation of Establishing Broadband
Services Abroad - A Case Study of Elisa**

MBA

University of Wales

Swansea Institute

2006

Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidacy for any degree.

Signed.....

Date.....

STATEMENT 1

This work is the result of my own investigations, except where otherwise stated. Where correction services has been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed.....

Date.....

STATEMENT 2

I hereby give consent for my work, if accepted, to be available for photocopying and for inter-library loans after the expiry of a bar on access approved by the University of Wales on the special recommendation of the Member Institution concerned.

Signed.....

Date.....

Acknowledgements

I would like to acknowledge and thank my family for their patience during the MBA-program and especially for their understanding when I was writing this dissertation.

I also want to express my gratitude to the staff of the Häme Polytechnic and the Swansea Institute, particularly Mrs. Karen Jones for supervising the research project.

In addition, I wish to express my gratitude to Miss Anne Aho for her precious help in proof-reading the English language in this research paper.

Special acknowledgements to my employer Elisa Corporation for enabling my participation in the MBA-program, and Mr. Ismo Heino who gave me the idea for this dissertation. Further acknowledgements go to Mr. Timo Heino for his mentoring and support for me.

Hämeenlinna, 12th of May 2006

.....

Jorma Salo

Table of Contents

DECLARATION.....	I
ACKNOWLEDGEMENTS.....	II
TABLE OF CONTENTS.....	III
LIST OF TABLES	V
LIST OF FIGURES	VI
ABSTRACT	VIII
1 INTRODUCTION.....	1
1.1 BACKGROUND OF ELISA.....	4
1.2 BROADBAND MARKETS	8
1.3 FINNISH BROADBAND MARKET	12
1.4 ESTONIAN TELECOM INDUSTRY AND THE BROADBAND MARKET	13
1.5 OBJECTIVES	19
2 REVIEW OF LITERATURE	21
2.1 INTERNATIONAL MARKETING	21
2.2 ANALYSIS TOOLS.....	28
2.3 MARKET ENTRY STRATEGIES.....	44
2.4 INTERNATIONAL MARKETING MIX.....	46
2.4.1 <i>Product</i>	48
2.4.2 <i>Price</i>	57
2.4.3 <i>Place</i>	59
2.4.4 <i>Promotion</i>	60
3 METHODOLOGY AND RESEARCH METHODS.....	66
3.1 RESEARCH DESIGN.....	67
3.2 DATA COLLECTION METHODS	72
3.3 RESEARCH PROCESS.....	75
3.4 DATA ANALYSIS	77
4 RESULTS AND ANALYSIS.....	79
4.1 CRITICAL EVALUATION OF ELISA'S EXPERIENCE OF SERVING THE FINNISH BROADBAND MARKET	79
4.1.1 <i>Politics and Legislation</i>	80
4.1.2 <i>Customers</i>	81
4.1.3 <i>Competition</i>	82
4.1.4 <i>Product</i>	85
4.1.5 <i>Price</i>	87
4.1.6 <i>Place</i>	89
4.1.7 <i>Promotion</i>	90
4.1.8 <i>Findings</i>	92
4.2 ANALYSIS OF THE ESTONIAN TELECOM INDUSTRY AND BROADBAND MARKET	93
4.2.1 <i>Politics and Legislation</i>	93
4.2.2 <i>Customers</i>	95
4.2.3 <i>Competition</i>	98
4.2.4 <i>Product</i>	99
4.2.5 <i>Price</i>	101
4.2.6 <i>Place</i>	102
4.2.7 <i>Promotion</i>	104

4.2.8	<i>Findings</i>	104
5	CONCLUSIONS AND RECOMMENDATIONS	106
5.1	CRITICAL EVALUATION OF ELISA’S EXPERIENCE OF SERVING THE FINNISH BROADBAND MARKET	106
5.2	ANALYSIS OF THE ESTONIAN TELECOM INDUSTRY AND THE BROADBAND MARKET	107
5.3	KEY ISSUES FOR ELISA’S ENTRY TO THE ESTONIAN BROADBAND MARKET	109
5.3.1	<i>Business Environment</i>	111
5.3.2	<i>Government and Regulatory Policy</i>	112
5.3.3	<i>Customers</i>	113
5.3.4	<i>Competitors</i>	113
5.3.5	<i>Product</i>	114
5.3.6	<i>Price</i>	115
5.3.7	<i>Place</i>	116
5.3.8	<i>Promotion</i>	117
5.4	PERTINENT STRATEGY SUGGESTION FOR THE ENTRY TO THE FOREIGN BROADBAND MARKET	117
5.5	RESEARCH LIMITATIONS	119
5.6	RECOMMENDATIONS FOR FURTHER RESEARCH	121
6	REFERENCES	122
	APPENDIX I: RECENT MERGERS AND ACQUISITIONS IN THE TELECOMMUNICATION INDUSTRY	144
	APPENDIX II: DEVELOPMENT OF THE ORGANISATIONAL STRUCTURE OF ELISA	145
	APPENDIX III: ELISA’S BUSINESS IDEA, VISION, STRATEGY AND THE KEY STAKEHOLDERS	146
	BUSINESS IDEA	146
	VISION	146
	OPERATIONAL SURROUNDINGS.....	146
	VALUE PROMISE	147
	ROADMAP OF THE IMPLEMENTING THE NEW STRATEGY	147
	KEY STAKEHOLDERS	148
	APPENDIX IV: ANALYSIS TOOLS	151
	APPENDIX V: APPLICABLE ENTRY STRATEGIES FOR THE SERVICE-ORIENTED FIRM	164
	APPENDIX VI: INTERNATIONAL PRODUCT LIFE CYCLE	166
	APPENDIX VII: BACKGROUND OF THE ADOPTION PROCESS	170
	APPENDIX VIII: INTERVIEWS	171
	APPENDIX IX: MAIN COMPETITORS AND COMPETITION IN THE FINNISH TELECOM INDUSTRY	198
	APPENDIX X: SWOT AND PESTLE ANALYSIS OF ELISA	203
	SWOT.....	203
	PESTLE in Finland.....	204
	PESTLE in Estonia.....	205
	APPENDIX XI: POTENTIALITY OF THE ESTONIAN BROADBAND MARKET FOR ELISA	207
	APPENDIX XII: ESTONIAN POPULATION BY THE ADMINISTRATIVE UNIT	208
	APPENDIX XIII: INTERNET PRICELIST OF STV	217

List of Tables

Table 1.1.1: The product portfolio of Elisa.....	7
Table 1.2.1: The total subscriber numbers and growth figures in some European countries....	10
Table 1.4.1: The development of the Estonian broadband subscriptions.....	16
Table 2.1.1: The marketing process as a conceptual framework.....	23
Table 2.1.2: The different stages of the marketing definitions.....	24
Table 2.1.3: The firm's major motivations and change agents to internationalise.....	25
Table 2.1.4: Elisa's major motivators and 'change agents' in the earlier internationalising experiences.....	26
Table 2.2.1: The adaptation of the market attractiveness factors.....	29
Table 2.3.1: The market entry strategies classified into three major entry modes by their nature.	45
Table 2.4.1.1: The five international product and promotion strategies.....	54
Table 2.4.1.2: The general benefits for standardising or adapting.....	57
Table 2.4.4.1: The characteristics of a world brand and their consistencies.....	64
Table 4.1.1.1: The abuses of the Finnish wholesale broadband market.....	80
Table 4.1.5.1: The retail prices in three Finnish locations in the week 15/06.....	88
Table 4.2.2.1: Comparisons between some of the Estonian and Finnish demographics.....	95
Table 4.2.2.2: The expenditures in Estonia.....	96
Table 4.2.4.1: The theoretical lengths of the local loop in the DSL technique.....	100
Table 4.2.5.1: The broadband prices of Elion and STV as per the 15 th of March 2006.....	102
Table 5.4: The current major motivators and change agents for Elisa to internationalise.....	110

List of Figures

Figure 1.1: The generalised product life cycle of the European telecommunication services....	3
Figure 1.2.1: The worldwide broadband markets.....	9
Figure 1.2.2: The European broadband penetration in Q2/05.....	11
Figure 1.4.1: The ADSL lines distributed in Estonia by county at the end of 2004.....	18
Figure 2.2.1: Porter's five-forces framework that determines the industry's profitability.....	30
Figure 2.2.2: The BCG box with the cash implications.....	33
Figure 2.2.3: Elisa's product line portfolio in Finland, illustrated in the BCG box.....	34
Figure 2.2.4: The product and process innovation model of Abernathy and Utterback.....	35
Figure 2.2.5: The different stages of the classical PLC.....	36
Figure 2.2.6: The life cycle extensions on the PLC.....	37
Figure 2.2.7: The PLC extension by the international marketing.....	38
Figure 2.2.8: The market shares over the PLC.....	39
Figure 2.2.9: Ansoff's Matrix is a product – market vector.....	40
Figure 2.4.1.1: The three levels of a product, a concept by Kotler.....	49
Figure 2.4.1.2: Roger's adoption process model put on the PLC model.....	50
Figure 2.4.1.3: Moore's technology adoption life cycle model based on the PLC and the adoption process models.....	52
Figure 2.4.1.4: The adapted product concept.....	53
Figure 2.4.2.1: The Japanese approach to setting the prices.....	58
Figure 2.4.3.1: The whole-channel for international marketing.....	60
Figure 2.4.4.1: The improved PLC illustration.....	63
Figure 3.1.1: The continuum of the core ontological assumptions.....	68
Figure 3.1.2: Matrix of the research designs.....	69
Figure 4.1.3.1: The Finnish broadband market shares and growth by the main competitors....	83
Figure 4.1.3.2: The shares of the broadband market growth in Finland.....	84
Figure 4.1.4.1: The selling of the broadband features.....	87
Figure 4.1.7.1: The development of the broadband buying preference.....	91
Figure 4.2.2.1: The population density in Estonia by county.....	97

List of Abbreviations

30R	30 Relationships	3G	Third Generation
4P	Marketing mix	6P	Extended Marketing Mix
7P	Extended Marketing Mix	AMA	American Marketing Association
ARPU	Average Revenue Per User	ATM	Asynchronised Transfer Mode
B2B	Business to Business	BCG	Boston Consulting Group
BVNO	Broadband Virtual Network Operator	CSF	Critical Success Factor
DOS	Denial Of Service	DSL	Digital Subscriber Line
DSL2+	Digital Subscriber Line's newer and faster technology generation	DSLAM	Digital Subscriber Line Access Multiplexer
EMT	Eesti Mobile Telekom	ESTAT	Estonian Statistics
ET	Eesti Telekom	EU	European Union
FICORA	Finnish Communication Regulatory Agency	FSTAT	Finnish Statistics
GLOB	sell the same thing GLOBally	HBS	Harvard Business School
H1/05	First half year of 2005	HTV	Helsinki Television
IP	Internet Protocol	IPLC	International Product Life Cycle
IPTV	Internet Protocol Television	ISP	Internet Service Provider
IT	Information Technology	kbit/s	kilobit per second
LAN	Local Area Network	M&A	Mergers and Acquisitions
Mbit/s	Mega bit per second	MINTC	Ministry of Trade and Communications
MVNO	Mobile Virtual Network Operator	NBS	National Broadband Strategy
NRA	National Regulatory Authority	PC	Personal Computer
PESTLE (PEST, STEEP)	Political, Economical, Social, Technological, Legal and Environmental	PLC	Product Life Cycle
PSTN	Public Switched Telephone Network	Q1/05	First quarter of 2005
SBU	Strategic Business Unit	SMP	Significant Market Power
SWAG	Sell What people Actually Buy	SWOT	Strengths, Weaknesses, Threats and Opportunities
SWYG	Sell What You have Got	ULL	Unbundled Local Loop
VAT	Value Added Tax	VoIP	Voice over Internet Protocol
VNO	Virtual Network Operator	Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access.	WLAN	Wireless Local Area Network

Abstract

The purpose of this research was to examine how to enter the foreign broadband market. The research used the Finnish Elisa and its entering the Estonian broadband market as a case study. Models of international marketing, market analysis, market entry strategies and international marketing mix were used as an academic framework. The chosen methodology for this research was phenomenology and in-depth interviews as the primary data collection method. There were 10 sample interviews and the respondents were chosen by their key informant status in Elisa's organisation. Additional secondary data was gathered from governmental and public organisations' databases, published company sources, books, newspapers and journals, and their counterparts on the Internet. The aim of using secondary data was to avoid bias and increase the reliability and validity of this research. The research was carried between September 2005 and April 2006, starting with the literature review, and ending with this dissertation. The interviews were held in February – March 2006. The results were analysed by matrix analysis and then by the researcher's interpretations of the gathered data and information. The conclusions and recommendations based on the analysis and further investigations are represented in this dissertation. The summary of this research is that the Finnish broadband market has turned to a saturation stage, and a new marketing mix needs to be developed. However, the additional growth and profit have to be found outside the Finnish boundaries. The emerging Baltic and Eastern Europe countries offer a tempting evolving telecommunication market, where broadband markets are in their introductory or early growth stages. With an appropriate growth market strategy, a new entrant could disrupt the current industry forces, and exploit the market for its favour. The next phase for the bare broadband access market is the introduction of new services and applications over the access. These emerging nations could offer a sound pilot environment for these augmented services.

NEW MARKETS - A CRITICAL EVALUATION OF ESTABLISHING BROADBAND SERVICES ABROAD - A CASE STUDY OF ELISA

1 Introduction

This research discusses international marketing in the telecommunication industry, and the reasons behind the decisions to go for international markets. The focus is on the market entry and the strategic choices which a firm could adopt to achieve its targets abroad. To evaluate the theories in practice, this research uses the Finnish telecommunication corporation Elisa Corporation Plc. (Elisa) and its broadband service as a case study.

The telecommunication industry offers wired and wireless solutions for both the data and speech communications purposes of the business and residential customers. In the European Union (EU), the telecommunication industry has been going through a major change from incumbent monopolies to a competitive business environment. This change has occurred due to liberalisation policies and de-regulation. This liberalisation has been for the benefit of the customers. Viviane Reding, the EU's commissioner for the information society and media, has told that broadband use rose to 53 million subscriptions in the EU in 2005 '*...as a result of lower prices and higher speeds, driven by increased competition*' (cited by Laitner, 2006).

The EU's regulatory framework for the electronic communications networks and services (Council Directive, 2002) was aimed towards increasing the competition and efficiency in the European telecommunication industry. The National Regulatory Authorities (NRAs) are liable

for the execution of this framework directive. The directive has been put into practice e.g. in the forms of an unbundled local loop (ULL), and ceiling prices. Local loop unbundling means that the Significant Market Power (SMP) operator is obligated to rent access via copper lines without a fixed phone subscription.

The emerging new technologies have introduced concepts such as ‘converging networks’ and ‘ubiquitous networks’. In these networks, the technologies merge into one, enabling people and devices to communicate without the restrictions of place or time. The driving forces for this evolution have been the Internet and Internet Protocol (IP). The Internet already reaches hundreds of millions of people globally. Together with the mobile revolution, the Internet has had a tremendous impact on social culture and behaviour. The adaptation process of these new technologies has also been relatively quick and widespread. The exploitation of the new applications like Voice over IP (VoIP) and IP-television (IPTV) through broadband access is in its introductory stage in the EU. It is said that the EU is beginning to promote broadband voice services (Roberts, 2005).

Technological development has created many new business possibilities and models also for the new entrants to the telecommunications industry. For the mobile phone market, many new augmented services have been introduced – e.g. ring tones, logos, and games by the new innovative companies.

The fixed-lines business is declining and the profits are eroding (Commission, 2006). The operators have tried to extend their product life cycle (PLC) e.g. by the broadband access service.

The mobile phone business is saturated, but the revenue is still growing. However, it suffers from the fierce price competition and diminishing margins. So, the European telecommunications' revenue growth is still slowing due to the fixed-line revenue's larger decrease compared to the increase in the mobile phone market (CreditSuisse, 2006).

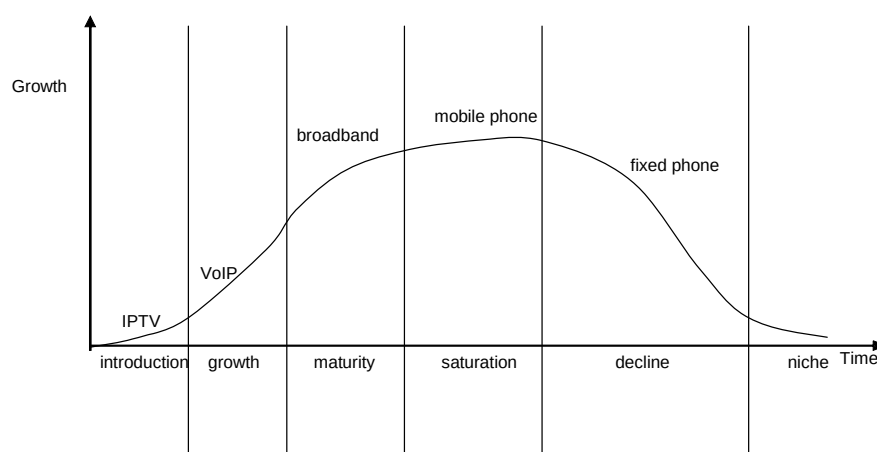


Figure 1.1: The generalised product life cycle (PLC) of the European telecommunication services. The actual PLC stages vary by country (Adapted from: Commission, 2006).

Therefore, the operators are seeking new markets and services in this alteration in order to create new growth stages for their businesses. This product and market development has introduced new services, e.g. a bundling of the broadband access with a fixed phone or VoIP services, as in the so-called double-play service. This phenomenon has evolved into the so-called triple-play, where the customers for instance are provided content (e.g. pay-TV) via their broadband access. A research by Booz Allen Hamilton predicts that in 2006, the triple-play services will boom in Europe (Telecompaper, 2006a). HSBC argues that a further development

will be the so-called quad-play, which will be brought about through the increased mobility achieved with a variety of IP compatible equipment (HSBC, 2006a).

The external pressure from a changing business environment is reflected also as an urge for efficiency. This appears in the form of organisational changes, collaboration, and mergers and acquisitions (M&As), and as daily news (Appendix I), when the operators are searching for the economies of scale. Analysts and researchers have argued that this M&A phenomenon would continue also in 2006 in as widespread a form as in the previous year (Online Reporter, 2005; Telecompaper, 2006b). On the other hand, some analysts (e.g. Citigroup) predict quite the opposite, claiming that in 2006 M&As would decrease from 2005. HSBC predicts that M&As are shifting from the cross-border to cross-sector (2006b). This means that operators seek content – e.g. from the media companies – into their networks, instead of other operators. This can also happen through the collaboration between the operators and content providers.

1.1 Background of Elisa

CEO Veli-Matti Mattila was asked about Elisa's possible plans on where to expand its geographic market presence, and the answer was: '*Somewhere in Europe*' (Cited by Vaalisto, 2005, p. 9).

Elisa is a Finnish provider of comprehensive telecommunication services and solutions. The history of Elisa (2004a) began in December 1877. This was when the first telephone line was built in Helsinki; just over 18 months later than the world's first telephone discussion took

place in Boston, USA (Bell, 1876). After decades, and during the different phases in its enterprise structures, Elisa (2004b) was listed on the Helsinki Exchanges in November 1997.

It could be argued that the initiation of the new Elisa (2004c) was in April 2003, when Veli-Matti Mattila was appointed to be the corporation's new President, and to take the command as a CEO later on that year. After that, decisions of major downsizing, and changes in the corporate structure during 2004 (Appendix II), were implemented resolutely. Elisa did have business operations in the German fixed-line business since the mid of 1990's, but the business did not enter the growth stage and was unprofitable due to how slow the German NRAs were to open up the competition, disagreements with the German partners, and a strategic change in 2004. Therefore, the business was sold (Elisa, 2004d).

From that point, the financial state of Elisa (2005c) has improved significantly. Dividends were payable for the first time in 2004 since 2000. The share price (Elisa, 2006a) has over doubled from 7.40 € (1.7.2003) to 16.68 € (13.4.2006).

Elisa's mission, strategy, and its key stakeholders are detailed in Appendix III. Elisa's product portfolio is in Table 1.1.1. Currently, Elisa's international operations are mainly limited to the Estonian mobile phone market.

The primary task in Elisa's strategy has been the integration program aimed towards forming one unified Elisa on the time period 2004 – 2006. These changes are still going on. Additional changes occurred due to the merger process with Saunalahti (Elisa, 2006b). The second task

has been to strengthen Elisa's market position in the main markets 2005 – 2008. The third task in Elisa's strategy is new markets. This could be interpreted as new products, customer segments, business lines, or geographic market areas. Elisa's loyalty program focuses on the cross selling of other Elisa services, and bringing the variety of benefits to the customers (e.g. discounts and special offers). A significant part of the program is also the incorporation of partners from which offers can be extended (e.g. holiday packets, dining and consumer goods). The monthly charges of the Elisa's services are also accumulated towards the S-Bonus, which is the loyalty program of a Finnish co-operational chain of e.g. groceries, restaurants, and hotels.

Product Concept	Residential Customers	Business Customers
Elisa Laajakaista (broadband)	Elisa ADSL Elisa ADSL Premium Elisa Kotiportti Elisa Kotiportti Premium	
Business broadband access		Elisa Yritysinetnet Elisa Yritysinetnet+
Business networks		Elisa Lähiverkkopalvelut (LAN) Elisa Yritysverkkopalvelut (WAN)
Internet services	Elisa Kotiposti Elisa Kotiweb	Elisa Yritysposti Elisa Yritysweb Elisa Domainpalvelut Elisa Yrityspaketti Elisa Viestinvälityspaketti Elisa SMTP-palvelut
Data security services	Elisa Tietoturvapalvelu	Elisa Yritysinetnet Elisa Yritysinetnet+ Palomuuripalvelut
Remote job access services		Elisa Etätyöpalvelu Elisa Secure
Mobile services	Liittymät Palvelut	
Telephone services		Elisa Puhelut, yritysasiakkaille Yritysnumerot Välittäjäpalvelut Palvelunumerot / 0100-Tietolinja Palvelunumerot / 01080-Asiakaslinja Palvelunumerot / 0600-numero Palvelunumerot / 0700-numero Palvelunumerot / 0800-etätyö Palvelunumerot / 0800-Ilmaislinja Palvelunumerot / Raportointi Palvelunumerot / Valikkopalvelu Palvelunumerot / Älysarja Contact Centerit Neuvottelut

Table 1.1.1: The product portfolio of Elisa. The Finnish main competitors TeliaSonera and Finnet Group have similar product portfolios.

1.2 Broadband Markets

British Telecom (2005a) has simplified the broadband's definition as '*...the common term for a high bandwidth internet connection one that can send or download information many times faster than with a standard telephone and modem*'. The Finnish National Broadband Strategy (NBS) group has defined the broadband as a dynamic concept: '*Broadband is a data transfer connection which enables a fluent usage of the content and services in the data networks*' (2005a).

According to the International Telecommunication Union, 256 kbit/s is the minimum speed for a broadband connection. Based on the Finnish service providers' announcements, the most common speed in Finland is 2 Mbit/s (NBS, 2005b).

Broadband access can be deployed via several technologies, though the most common is the digital subscribe line (DSL) technique (DSL Forum, 2005a). In the digital technique, a connection is always open to the Internet, and the line can be used simultaneously for voice calls. In the analogue technique, the modem needs to be dialled up every time the connection (max. 56 kbit/s) is opened, and calls cannot coincide with it.

According to Point Topic (2005a), in the first half of 2005 (H1/05), a global total of 24.5 million subscribers moved to broadband. By the end of H1/05, there were 176 million broadband subscribers. Nearly 115 million connections are implemented globally through DSL, which is accounting almost 75% of the total broadband growth in the same period. That is ca. 2.5 times more than the other broadband technologies.

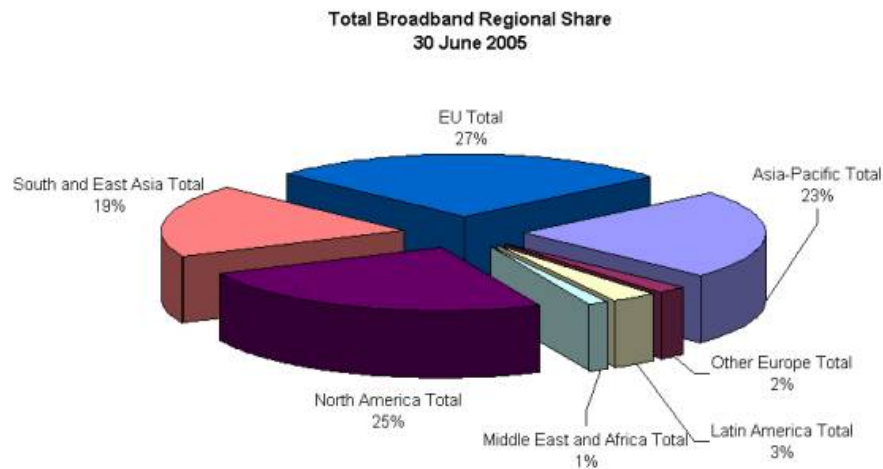


Figure 1.2.1: The worldwide broadband markets. The number of global broadband subscribers grew to 176 million by the end of June 2005. Of those subscribers 65% (115 mill.) were implemented through DSL technique. The growth was 24.5 million new subscribers in H1/05. In the EU, which is the world's largest total broadband region with 47.5 million subscribers, DSL dominates with a 81% (ca. 38.5 mill.) market share. (Source: DSL Forum (2005a), data provided by Point Topic)

In the EU, the operators gained ca. 19 million new broadband subscribers in 2005 (Commission, 2006). The EU is the world's leading DSL region, accounting for almost 35% of all DSL subscribers (DSL Forum, 2006).

Country	Thousands of Subscribers at End of H1/05			Growth [%]		
	DSL	Others	Total	DSL	Others	Total
Austria	568	392	960	28.5	3.1	16.8
Belgium	1149	675	1824	11.4	7.1	9.7
Denmark	714	445	1159	10.6	12.9	11.5
Finland	689	234	923	25.2	12.8	21.8
France	7803	520	8323	24.0	12.9	23.2
Germany	7800	78	7878	16.4	-6.1	16.1
Italy	5135	326	5461	15.0	7.1	14.5
Netherlands	2147	1420	3567	16.5	18.6	-
Norway	694	137	831	23.5	14.2	21.9
Poland	937	276	1213	41.3	36.1	40.1
Portugal	550	464	1014	28.5	8.2	18.3
Russia	315	924	1239	62.4	32.8	39.2
Spain	3272	822	4094	26.7	23.7	26.1
Sweden	969	502	1471	10.1	7.8	9.3
Switzerland	948	525	1473	20.8	20.7	20.7
Turkey	815	30	845	78.4	0	73.6
UK	5691	2271	7962	37.2	16.3	30.5

Table 1.2.1: The total subscriber numbers and growth figures in some European countries. The subscriptions and growth have been divided according to technology into DSL and other techniques (e.g. cable modems, wireless). Source: Point Topic (2005a).

The Western European countries were starting to gain the leading countries (South Korea 26% and Hong Kong 23%) in broadband penetration in the second quarter of 2005 (Q2/05).

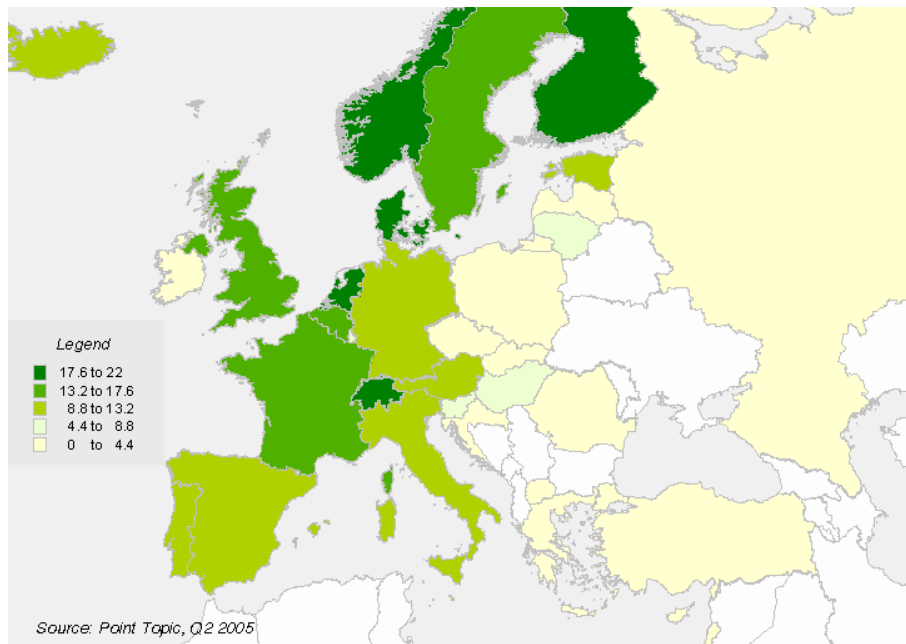


Figure 1.2.2: The European broadband penetration in Q2/05. The numbers shown in the figure are per 100 people. The penetration in the Netherlands is ca. 23%, in Denmark ca. 22%, and in Switzerland ca. 20%. Finland came in fifth place with ca. 17% penetration, after Norway's 18%, and before Belgium's ca. 16%. Source: Point Topic (2005b).

In the EU, by the per household penetration rate, the order of the three leading countries is the Netherlands (50.4%), Switzerland (49%), and Denmark (48%). However, some of these lines might be for business use, so the actual penetration of households could be about 10 - 15% lower than the presented (Point Topic, 2005a). In its research, the investment bank JP Morgan estimated that the broadband penetration in the EU will rise to 46.6% or 74 million households by the end of 2006 (Telecompaper, 2006c). One study told that the number of the customers changing their service provider is also increasing (McCormick, 2005). Every fifth broadband user in the EU did the switch, which was nearly 5% more than in the previous survey period.

1.3 Finnish Broadband Market

The Finnish Government launched its national broadband strategy in January 2004 (NBS, 2005c). The strategy includes a 50-point action plan. For supervising and executing the strategy, a NBS team of 14 persons was nominated (NBS, 2005d). The strategy constitutes the following elements:

- *‘Promotion of competition in and between all communications networks,*
- *Promotion of service and content provision in networks,*
- *Promotion of broadband demand, and*
- *Continuation and improvement of the special measures in fields with no adequate demand for commercial broadband supply.’*

(NBS, 2005e)

In order to achieve these aims, the focus of the different Finnish NRAs (e.g. the Ministry of Transport and Communications, Ministry of Trade and Industry, Finnish Communications Regulatory Authority (FICORA), Finnish Consumer Agency, and Office of Free Competition) will be on the growth of the content and service production, removal of the restrictions to competition, and development of the mobile broadband. Additionally, the Finnish telecommunication firms have obligations and liabilities for participating in the strategy.

The main operators in the Finnish Telecom industry are TeliaSonera, Elisa, and the 37 local incumbents, which form the Finnet Group. More information on the competitors and the background figures of the Finnish Telecom industry can be found in Appendix VIII.

Elisa achieved its market leader position in the Finnish broadband market during the summer of 2005, when the number of Elisa's broadband subscribers increased to 308,183 (Elisa, 2005d). Elisa continued to strengthen its position as the market leader in the Q3/05. The number of the broadband subscriptions increased by ca. 38,000 in the Q3 amounting to ca. 346,000 (Elisa, 2005e).

The most common technique for the implementing of broadband connections has been the DSL technique. However, DSL2+ upgrades already began in 2005. Furthermore, it is a cheaper technology for the operators. The first to switch were the Finnet companies (e.g. Finnet 2005a-b), and recently Ainatel (Aina Group, 2006b). TeliaSonera has not announced its timetable yet. Some operators (e.g. MPY, SPY and Telepohja) from the Finnet Group have also implemented WiMAX networks to the rural locations in their and TeliaSonera's SMP areas (Current Analysis, 2005a; Karvonen, 2005a).

1.4 Estonian Telecom Industry and the Broadband Market

After its independence in 1991, Estonia has evolved promptly into one of the world's leading nations in exploiting the e-services for its citizens (Commission, 2006; Point Topic, 2006). As a part of this, the Estonian government's broadband strategy includes a requirement to make Internet access available throughout the country. The target is to provide all citizens with the option of creating and consuming e-services. A further target is to promote the creation of new jobs and flexible employment possibilities. The government has allocated ca. 640,000 euros to support the development of broadband and WiMAX in rural areas in 2006 (Kalamees, 2005). Tele2 has accused the Estonian NRAs of a slowness and unwillingness to intervene in the in-

cumbent's wholesale prices, and other forms of monopolistic conduct. According to Tele2, this caused its withdrawal from the Estonian fixed-line Telecom market (Heinsalu, 2005; Karlberg, 2005b; Tele2, 2005b). Furthermore, '*...the broad opinion of operators is that the procedures brought before the authorities are in general cumbersome and lengthy.*' (Commission, 2006, p. 112). There are no SMP obligations for incumbent's wholesale products. Moreover, the EU '*...has already launched infringement proceedings for the failure of Estonia to transpose the Directives correctly...*' (Commission, 2006, p. 125).

The incumbent Eesti Telekom (ET) and its subsidiaries Elion Ettevõtte (Elion) and Eesti Mobile Telekom (EMT) are the rulers of the Estonian telecom industry. The fixed network service provider Elion is the market leader in fixed network calls, Internet services and data communication solutions, as well as in broadband services. Furthermore, Elion has the most extensive hosting services with over 915,000 customers (Pardla, 2006), and is said to be launching a cable broadband offering (Commission, 2006). In February 2006, TeliaSonera (2006) raised its ownership of the ET to 51.55%. Other owners are the Estonian government with a 27.1% share, and the remaining 21.35% of private investors.

According to the ESTAT (2006a), there were 462,000 fixed phone lines and 203,000 cable-TV users in Estonia in 12/04. Elion had 85% of the fixed-line phone market in 12/05 with 409,000 subscribers. Starman has announced that it has 20,000 subscribers to its fixed-line phone service. It has been estimated that the fixed-line phone market will also decline ca. 10% in this year (Äripäev, 2006). A study (10/05) showed that 53% of the households were using a fixed-line phone connection, while 88% of the households were using a mobile phone (Karlberg,

2005a). One research states that 33% of the Estonian households had a PC in 12/04 (Tervola, 2006).

There are 66 broadband operators in Estonia, of which only ten operators have over 1,000 subscriptions, and the market leader is the incumbent Elion (Commission, 2006). Starman is the market's number two service provider, targeting to transform from a cable-TV operator to an alternative Telecom company. In 2005, 51% (ca. 6 M€) of Starman's total revenue (ca. 12 M€) came from its cable-TV business, while 40% (ca. 4.8 M€) came from the Internet services, and 6% from the telephone services. Starman has announced that it has 31,000 Internet customers at the end of 2005, admitting that the ARPU has decreased due to harsh competition (2006).

The Russian-origin STV (2006) also offers both wireline and wireless broadband services. However, STV has not published numbers about its customers. Tele2 is currently actively offering mobile phone services. It continues to serve its existing fixed-phone customers but has stopped marketing any new services (Current Analysis, 2005b). The Danish TDC is said to be interested in the Estonian mobile phone market, which it has recognised as a growing market. TDC might invest in Estonia in the near future (Jyllands-Posten, 2005). TeliaSonera might launch WiFi services in Estonia for connections between mobile telephones and broadband (Ny Teknik, 2005).

	31.12.2004	30.6.2005	31.12.2005
ADSL subscriptions totally	78,765	88,800	
- Elion		88,000	108,000
Cable modems	52,000	41,324	
- Starman		26,000	31,000
Other broadband subscriptions		20,122	
Totally		150,246	

Table 1.4.1: The development of the Estonian broadband subscriptions. Elion has announced that it has 108,000 broadband subscriptions at the end of 2005. This meant a 40% growth during the year. According to Starman, it has succeeded in increasing its revenue by 15% in the Internet service business. Other broadband techniques are e.g. premises LAN, WiFi and WiMAX. (Adapted from: Statistical Office of Estonia (ESTAT, 2006a), Finnish Ministry of Transport and Communications (MINTC, 2006), Starman (2006) and Elion (2006a)).

According to a Finnish report (MINTC, 2006), the broadband penetration per household in Estonia was 26% in June 2005. On the other hand, the EU report argues that the penetration per the whole population is 12%, referring to 10/05 (Commission, 2006). Elion's market share was ca. 59% in 6/05, while Starman had a ca. 17% share of the Estonian broadband services (MINTC, 2006). Furthermore, Elion has 98% market share of the DSL-deployed subscriptions (Commission, 2006). Based on these penetration rates and figures in the Table 1.4.1, it seems that there are further growth possibilities in the Estonian broadband market.

During 2005, Elion expanded its broadband coverage over 20% through the DSL2+ technology, and as a result all Estonian towns and more than 1,000 villages now have the capability to access broadband Internet. Additionally, Elion has built a WiMAX network around two towns in Harju County with further plans to extend it to cover the entire county (Elion, 2006a). In

2004, Starman acquired Tele2's cable network enterprises in Estonia. After last year's upgrades and enhancements, Starman (2006) states that it covers 247,000 households, of which 80% have the capability for data communications. This figure is supported by the Commission's working paper (2006), which tells that Starman's cable network covers 45% of Estonia. Based on the STV's pricelist (Appendix XIII), it offers broadband services in Tallin, Maardu, Rakvere, Paldiski, Narva, Pärnu, and Tartu. These services are implemented not only through the cable modem technique, but also through the DSL, Ethernet, satellite and fixed-data-line techniques. In Figure 1.4.1 it is shown how the DSL lines were distributed over Estonia by county on 12/04 (ESTAT, 2006f).

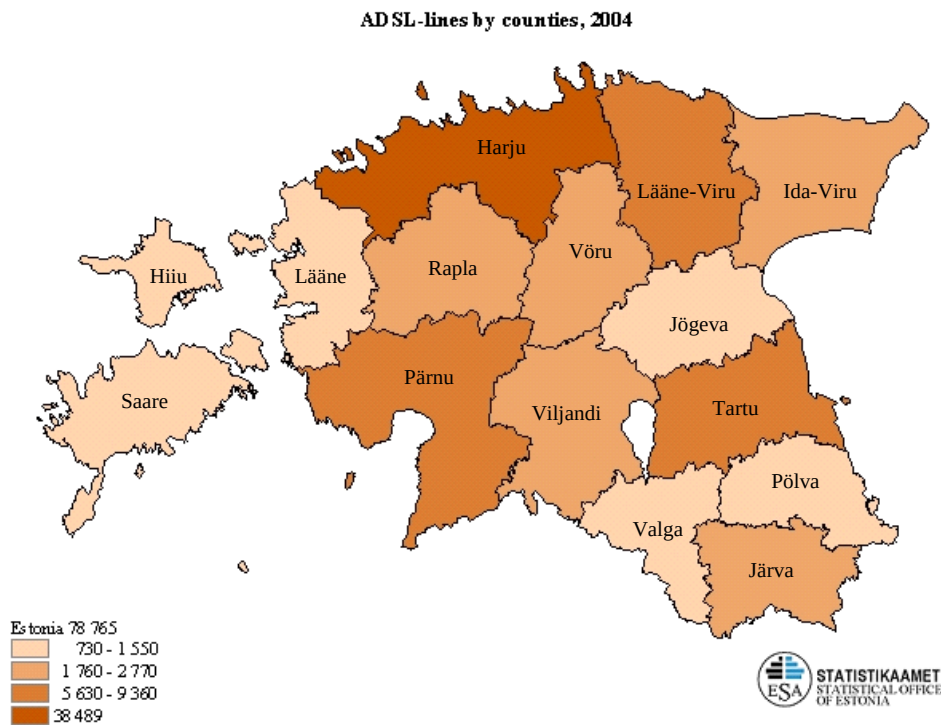


Figure 1.4.1: The ADSL lines distributed in Estonia by county at the end of 2004. Harju County (the number of lines 38,489), Tartu (9,354), Lääne-Viru (6,916), Pärnu (5,631), Ida-Viru (2,762), Viljandi (2,468), Rapla (2,188), Järva (1,846), Võru (1,768), Jõgeva (1,522), Valga (1,514), Saare (1,209), Põlva (1,200), Lääne (1,168), and Hiiu (730). The whole country 78,765 (Source: ES-TAT, 2006f).

A part of the Estonian information society is the idea of widely spread free open WiFi networks. Levira, Estonia's broadcasting transmission centre began to offer WiMAX services for the ISPs in the spring of 2006. Levira's network will cover over 60% of Estonia on 12/06. There are further plans to extend the WiMAX network to all 23 Estonian TV towers (Paimets, 2006). Moreover, there are approximately 730 WiFi base stations all over Estonia, of which nearly 70% are free of charge. WiFi networks link rural areas to broadband backbones, and they are also used in the hospitals, libraries and schools. The city of Tallinn is planning to open

at least one WiFi base station in each of its eight suburbs in 2006. Some other cities (e.g. Rakvere, R  pina, Valga, V  ru, and Tartu) also support and have built WiFi networks for the citizens to offer them access to municipal e-services (Tervola, 2006).

1.5 Objectives

The purpose of this research is to critically evaluate the new international market areas for Elisa's broadband service. Since Finnish companies have been establishing businesses in Estonia after its independence 1991, and Elisa has operated in the Estonian mobile phone markets from 1995, Estonia has been chosen for this research as an example target country. Furthermore, only the ca. 80-kilometre-wide Finnish Gulf separates the countries, making Estonia a natural bridgehead to other Baltic and Eastern Europe countries from the Finnish viewpoint. The relations between Finland and Estonia were close between the World Wars, partly due to close languages and their status as newly liberated nations at that time.

The following objectives have been set for this research:

1. To critically evaluate Elisa's experience of serving the Finnish broadband market,
2. To analyse the environment of the Estonian Telecom industry and broadband market,
3. To identify for Elisa the key issues involved in entering the Estonian broadband market, and
4. To suggest a pertinent strategy for entry to the foreign broadband market.

In order to conduct this study, the research will focus on the following themes:

- Studying the ideas of international marketing ,
- Considering market analysis concepts,
- Looking at market entry strategies, and
- Examining the international marketing mix.

Under these themes, different viewpoints will be introduced, as well as appropriate methods and models for business environment analysis, the Boston Consult Group's matrix, product life cycle (PLC), adaptation process, and Ansoff's matrix.

This chapter has introduced the framework and the backgrounds for this research, together with its objectives. The next chapter will present the relating literature and theoretical models, which can be applied as the bases of this research.

2 Review of Literature

This chapter will consider the definitions and different theoretical concepts of market analysis methods and marketing mix for the objectives of this research. Furthermore, international marketing and market entry strategies are discussed for objectives three and four of the research. Each theme is arranged under its own subheading, with a short discussion about the findings. The sources for the literature review include books, but also industrial and governmental sources, journals, newspapers, and their electronic counterparts on the Internet.

2.1 International Marketing

This section will define international marketing and its different phases. Additionally, the reasons and motivations for a firm to internationalise will be considered.

The American Marketing Association (AMA) has defined the international marketing as ‘...*the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organisational objectives*’ (1985 cited in Czinkota and Ronkainen, 1995, p. 18), while the Chartered Institute of Marketing describes it as: ‘*The conduct and co-ordination of marketing activities in more than one country*’ (2005).

Czinkota and Ronkainen (1995) have emphasised that international marketing is an activity which needs to be pursued aggressively in order to find the new possibilities and adjust opera-

tions for the constantly changing international business environment. Phillips *et al.* (1995) also consider international marketing an activity, but also an expansion of the marketing process or just a continuum of marketing itself.

Some schools of thought part international marketing from multinational marketing. Their argument is the word ‘inter-’, i.e. ‘between’, meaning that a firm operates based in its home country. These authors prefer the term ‘multinational marketing’, because true global firms do not have home countries. However, Onkvisit and Shaw (1995) have seen the divergence between these terms as merely a distinction without the difference. On the other hand, it appears that the globalisation trend has caused an alteration from the international market definitions to the global. The AMA (2005) defines global marketing as ‘...*a marketing strategy that consciously addresses global customers, markets, and competition in formulating a business strategy.*’

In their conceptual framework (Table 2.1.1) Phillips *et al.* stress that the marketing process consists of controllable and uncontrollable factors. The four controllable factors form the so-called 4Ps, i.e. the marketing mix (see 2.4). The uncontrollable factors (which are analogues to the factors in the different analysis tools, see 2.2) form the marketing environment in which a firm operates. A firm manipulates the controllable factors in order to achieve a competitive advantage in the marketing environment, which is assumed to be widely uncontrollable (1995).

Controllable Factors	Uncontrollable Factors
Product	Political
Price	Economic
Place	Social
Promotion	Technical
	Legal
	Competitive

Table 2.1.1: The marketing process as a conceptual framework. A firm manipulates controllable factors to achieve a competitive advantage in the marketing environment which is assumed to be widely uncontrollable. (Source: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK. p. 13)

Furthermore, Phillips *et al.* (1995) have argued that international markets differ from the domestic only in their more complex uncontrollable factors. In conclusion, they have classified international marketing into three definite groups (Table 2.1.2) based on the firm's involvement level in the international market. Keegan (1995), on the other hand, has determined the marketing levels through the organisational features, emphasising the firm's evolution process from the domestic to global markets. To Keegan, international marketing is just an extension of domestic marketing because, in his definition, the same marketing communications are still used abroad. Multinational marketing means more country-specific operations in his model. According to these models, Elisa's presence in the Estonian mobile phone market could be seen as multinational marketing, whereas Vodafone could be classified as a global marketer.

Marketing Stage	Phillips <i>et al.</i>	Keegan
Domestic	Products are marketed in the home country.	Products are marketed in the home country.
Export	Products are marketed across national boundaries.	Products are marketed across national boundaries.
International	n/a	More involvement with the foreign markets. The marketing communications are the same as in domestic marketing.
Multinational	A firm has activities, interests or operations in more than one country. Additionally, the management or other influence on the marketing activities comes from outside the country where the products are sold.	The marketing communications and operations are specific to the target country.
Global	The focus of a firm is on the exploitation of global marketing opportunities. Furthermore, a firm seeks a competitive advantage by moving resources around the globe.	Keegan uses also the term ' <i>transnational marketing</i> '.

Table 2.1.2: The different stages of the marketing definitions. Based on: Phillips *et al.* (1995), and Keegan (1995).

The weak side of the model of Phillips *et al.* is their opinion that firms are more or less unable to influence the marketing environment. Many authors, like Porter and Moore (see 2.2), repre-

sent the opposite viewpoint, highlighting that a firm actually can exploit the changes in the marketing environment, or even disrupt the industry for their benefit.

Czinkota and Ronkainen (1995) have classified a firm's major motivations for internationalising into the proactive and reactive reasons (Table 2.1.3). The proactive motivators are the stimuli to attempt the strategic change. The reactive motivators are the influencers rising from a changing business environment.

Major Motivations to Internationalise		
Proactive	- Profit advantage - Unique products - Technological advantage - Exclusive information	- Managerial urge - Tax benefit - Economies of scale
Reactive	- Competitive pressures - Overproduction - Declining domestic sales	- Excess capacity - Saturated domestic markets - Proximity to customers and ports
Change Agents in the Internationalisation Process		
Firm Internal	- Enlightened management - New management - Significant internal event	
Firm External	- Demand - Other firms - Distributors - Banks	- Chambers of commerce - Export agents - Governmental activities

Table 2.1.3: The firm's major motivations and change agents for internationalising. The firm's major motivations are in the upper part of the table. Czinkota and Ronkainen have defined two motivator categories: the proactive and the reactive. They have also seen that the 'change agents' lead the internationalisation process. These internal and external 'change agents' are illustrated in the lower part of the table. (Source: Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*. 4th ed. Harcourt Brace & Company. Orlando, USA. p. 215 and 220)

Furthermore, they have argued that someone or something in a firm needs to initiate and guide the internationalisation process. This factor they call a 'change agent', which can be an internal or external (Table 2.1.3). Johnson and Scholes (2002) have used the term 'structural drivers'

for referring to the reasons behind the change. These drivers can affect the structure of a market, or even an industry. Johnson and Scholes have stressed that the influence is based on the combined effect of the structural change drivers, rather than the separate drivers. This seems to be the case with the telecommunication industry, where the parallel drivers are the liberalisation policies, guiding regulations, evolving technology, and new applications. Elisa's entry to the German fixed network market, and the Estonian mobile phone market in the 1990's, was influenced by many motivators and change agents which are illustrated in Table 2.1.4.

Elisa's Major Previous Motivators for Internationalising		
	German Fixed-line Business	Estonian Mobile Phone Business
Proactive	- Exclusive information of the nationwide backbone network's set-up through the collaboration of many local operators, as it was done in Finland when the competition opened in the early 1990s - Managerial urge rising from the success in the Finnish fixed network market	- Exclusive information of the nationwide mobile phone network's set-up, as it was done in Finland when the competition opened in the early 1990s - Managerial urge rising from the success in the Finnish mobile phone business
Reactive	- Competitive pressures - Saturated domestic markets - Proximity to the business customers	- Saturated domestic markets - Proximity to the business customers
Change Agents in the Internationalisation Process		
Firm Internal	- Enlightened management	- Enlightened management
Firm External	- German business customer's demand for cheaper services - The re-building of the East-German telecommunication infrastructure - De-regulation in the unified Germany	- Estonian customer's demand for mobile phone services - The building of the Estonian mobile phone infrastructure - De-regulation in Estonia

Table 2.1.4: Elisa's major motivators and 'change agents' in the earlier internationalising experiences. The major motivators are in the upper part of the table, and the 'change agents' are illustrated in the lower part of the table. (Adapted from: Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*, 4th ed. Harcourt Brace & Company. Orlando, USA. p. 215 and 220)

Czinkota and Ronkainen (1995) have argued that the service oriented firms are more likely to be proactive in their internationalisation process. Furthermore, these proactive firms are more

market and strategy oriented. Respectively, the firms focusing on operations are reactive in their internationalisation process. However, they have admitted that this classification can be made clearly only in retrospect. In Elisa's case, with the past German and current Estonian operations, this assumption is not clear even when examined afterwards.

For the broadband services, the international marketing choices are fewer than for a manufactured product (see 2.4.1). This is due to the fact that the services are consumed simultaneously when they are produced (Grönroos, 2000); therefore it is not possible to export services. This aspect implies that in the international marketing framework, the internationalising process of the broadband services belongs to multinational marketing, according to the models of Keegan (1995) and Phillips *et al.* (1995). It could be argued that this can be generalised to concern the internationalisation of the entire telecommunication industry, since they produce mainly services. Furthermore, there are telecommunication firms (e.g. Vodafone) that could be classified as global marketers, based on arguments like those of Kotler *et al.* (2001), which are discussed in section 2.4. It could be argued that currently Elisa has a mixture of the proactive and reactive reasons, and that both the internal and external change agents (Czinkota and Ronkainen, 1995), together with the telecommunication industry's structural drivers (Johnson and Scholes, 2002), are influencing its internationalisation process. One internal change agent is Thor Björgólfsson, the Icelandic investor and chairman of Elisa's largest owner, the Novator Group. In Elisa's extraordinary general meeting in December 2005 he said: *'I am not saying that Elisa should conquer the Eastern Europe, but the firm should widen up its thinking.'* (Cited by Alkio, 2005, p. B5).

This section defined international marketing, presenting its levels. Furthermore, the major motivators and drivers for the initiation of the internationalising were discussed. The next section will focus on the different market analysis methods, and the tools which a firm can adopt in order to find out its options in the international markets.

2.2 Analysis Tools

In this section, some analysing tools and methods will be presented. These enable a firm to study itself and its position in the market. Moreover, the analysing tools assist in illustrating the business environment and competition abroad.

Peters (1987) has underlined the importance of the business environment and its changes. If a firm ignores these, it will lose out to its rivals, which have adjusted their strategies to meet these changes. Moreover, it is essential to prepare for the changes in advance. Peters has seen the SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) as an appropriate tool for analysing a firm itself versus the business environment. Furthermore, the PESTLE analysis (Political, Economical, Sociological, Technological, Legal, and Environmental) is meant for analysing the business environment. There are different applications of the PESTLE analysis, some times called SLEPT, or STEEP, depending on the approach and the need for the analysis, but the basic idea is the same. A more in-depth discussion of these models can be found in Appendix IV. Many authors have made lists and suggestions about which issues should be taken into consideration when applying these tools. E.g. Walker *et al.* (1992) have a list (adapted from Abell and Hammond, 1979, and Day 1984) of the factors a firm should include in its market analysis. They refer to the list as (Table 2.2.1) '*market attractiveness factors*'. Further-

more, Onkvisit and Shaw (1995) have advised the use of some economical variables to analyse the marketing opportunities, e.g. the incomes spent by the objectives.

	Market Attractiveness Factors	Estonia
Market	- Size - Growth including stage in product life cycle - Market gaps - Differentiation possibilities - Bargaining power of customers - Cyclicity and seasonality - Distribution	- Population 1,347 million - Ca. 540, 000 households - Broadband market ca. 163,000 and growth ca. 64% - Broadband penetration per population 12%
Economic and technological	- Investment intensity - Industry capacity - Technology - Barriers to entry and exit - Access to supplies - Gross national product (GNP) - GNP/capita - Personal income - Spent incomes by the objectives	- DSL, cable modem, WiFi, WiMAX - Average monthly wage 466 € (2004) - GDP 9 M€ (2004) - Disposable income per household member in a year 2,323 €
Competitive	- Competitive structure - Competitive groupings - Substitute products - Price - Individual competitor analysis	- Monopolistic telecommunication industry - Fragmented competition - incumbent leads the market, Starman the cable networks - Broadband solutions DSL 48%, cable modem and others (wireless) 52% - Wireless broadband and cable networks - Higher market price than in Finland
Environmental	- Population density	- 31 inhabitants per km²

Table 2.2.1: The adaptation of the market attractiveness factors. A company studying the attractiveness of the market can add or remove factors according to market and industry. (Adapted from: Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India, New Delhi, India.; Sources: Commission; 2006, MINTC, 2006a; DSL Forum, 2006; ESTAT, 2006a-g)

Porter (1998) has introduced a more structural analysis of the industries in order to determine the profitability of the industry. This model (Figure 2.2.1) is known as ‘the five competitive forces’ or as ‘the five-forces framework’.

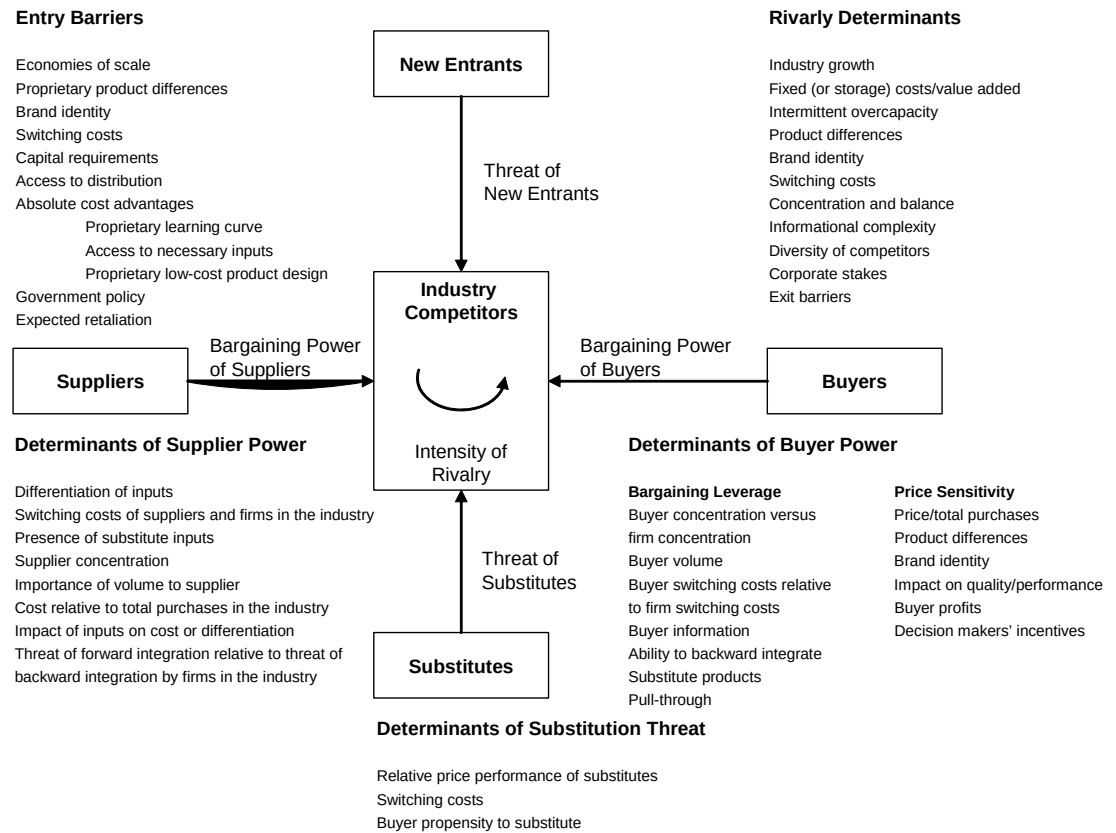


Figure 2.2.1: Porter's five-forces framework that determines the industry's profitability. Some of the elements in the industry structure are shown in the figure under the competitive force which they are related to. Every industry is unique, so the strength of the five forces varies between the industries. (Source: Porter (1998) *Competitive Advantage. Creating and Sustaining Superior Performance*. The Free Press, a Division of Simon & Schuster Inc. New York, USA. p. 6)

These five forces are the entry of new competitors, the threat of substituting products, the bargaining power of the buyers, the bargaining power of the suppliers, and rivalry between the existing competitors. The forces influence the prices, costs, and required investments for a firm, which are the elements of the return on investment.

Porter (1998) has stressed that the framework is a dynamic model. When the industry matures, its structure changes. The change shifts the forces and their relative strengths forming the industry trends. These trends can have positive or negative influences on the industry's profitability. Additionally, the forces change as the industry evolves. The framework's idea is to identify the most influential forces, and to prepare for them proactively. Porter has emphasised that a firm can change these forces, e.g. the rules of the competition, by an appropriate strategy, which differs from the viewpoint of Phillips *et al.* (see 2.1). According to Hautamäki *et al.* (2005), Elisa was able to change the competition's rules in the Finnish broadband market by its pertinent strategy during the 2004 – 2005. This strategy disrupted the market rivalry, enabling Elisa to become the market leader.

Although Porter's framework provides a sound tool for analysis, it does not consider the issues that affect the chances to reposition for a strategic advantage. Due to its simplified relationships with the complex reality, the structure of Porter's model is linear, whereas the majority of rivalry is more networked and clustered. Furthermore, the model entirely lacks the money factor. Johnson and Scholes (2002) have listed some caveats which need to be taken in the consideration when using the five-force framework:

- It is useful at the strategic business unit (SBU) level, as in this research studying Elisa's broadband business,
- The changes in the forces need to be seen in the future perspective, as in the changing business environment of the Estonian broadband market,

- Discontinuities between the changes in the forces are essential, while these can offer possibilities for a competitive advantage in the Estonian broadband market,
- The interdependency between the forces must be understood, as how the telecommunication regulation affects the competition, and
- The actions of rivals may disrupt the forces, as Elisa did in the Finnish broadband market.

They have also brought into the framework the idea of collaboration. A firm could gain a competitive advantage by collaborating with the other players in the framework. The collaboration can also take place between rivals in another market, or even in the same market (2002). E.g. in Finland, Elisa is collaborating with TeliaSonera to improve the quality and cost-efficiency of the broadband delivery process. Furthermore, Elisa has collaboration and co-branding with Vodafone. This guarantees global roaming for Elisa's mobile phone customers. Additionally, Elisa is collaborating with Baltic Optic Networks to better serve business customers in Baltic. However, there are restrictions both in the EU and in national legislations about the deepness of the collaboration. The risk is that it might be against competition regulations.

Boston Consulting Group (BCG) has developed the growth/share matrix, also known as the BCG box (Appendix IV). The matrix measures the market growth and share for all of a firm's SBUs. The BCG box's assumption is that firms with a higher market growth and share are more profitable. Moore (2003) has proved this assumption in his technology adoption model (see 2.4.1). The purpose of the BCG box is to study, whether a firm has a balanced product

portfolio or not. BCG has further developed the matrix so that it includes the implications of the cash flow (Figure 2.2.2). Koch (1995) has explained, based on the remodelled BCG box that the most efficient use of the cash is to protect the cash cows. The stars will need cash in order to gain or sustain their relative market share. Thirdly, the cash earned by the cash cows can be invested in the developing and promoting of new products, i.e. the question marks. According to Koch, the dogs should be left without new investments, or new investments in them should be minimised.

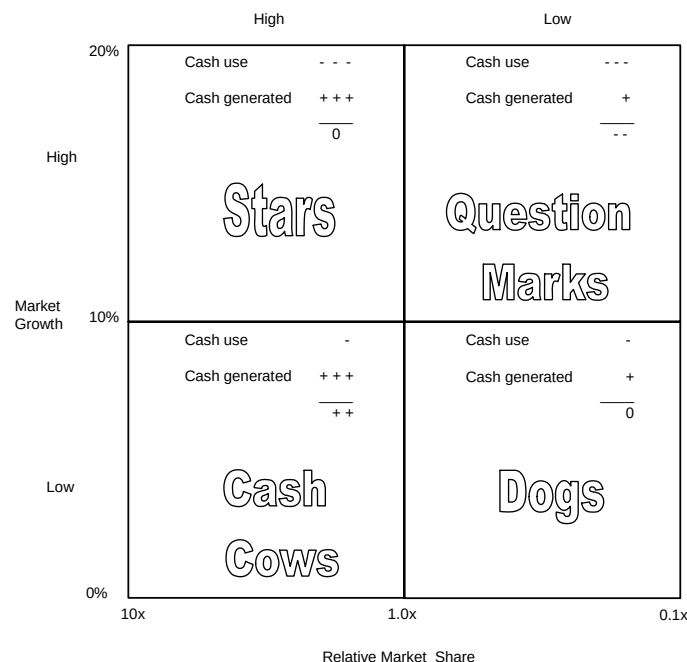


Figure 2.2.2: The BCG box with the cash implications. The cash can be thought to flow between the quadrants of the BCG box so that when the market share is high and the growth rate low, it generates a surplus of cash. The cash cows rarely use cash, but in the case of new investment in a production, it should be executed without hesitation.

However, Johnson and Scholes (2002) claim that firms could have more critical resources than cash, such as the innovation capacity of the employees. For these resources the ‘question marks’ and the ‘stars’ could be so time-and-energy-consuming that the aggregate might be

jeopardised. Figure 2.2.3 shows Elisa's simplified Finnish product line portfolio, illustrated in the BCG box. The fixed-line business is divided into the public switched telephone network (PSTN), broadband, data networks, and cable-TV businesses. Elisa is the market leader in the PSTN, cable-TV and broadband markets. The old PSTN is still the cash generating business, although it has a negative growth. It could be argued that the PSTN products will diminish into the position of a niche business at the PLC. In the mobile phone market, Elisa is somewhat smaller than TeliaSonera. The cash created by the broadband business is used in its investments and promotion. The cable-TV business has nearly stagnated, but its overall meaning is small. The data networks business position is estimated, because the rivals' published information is not available.

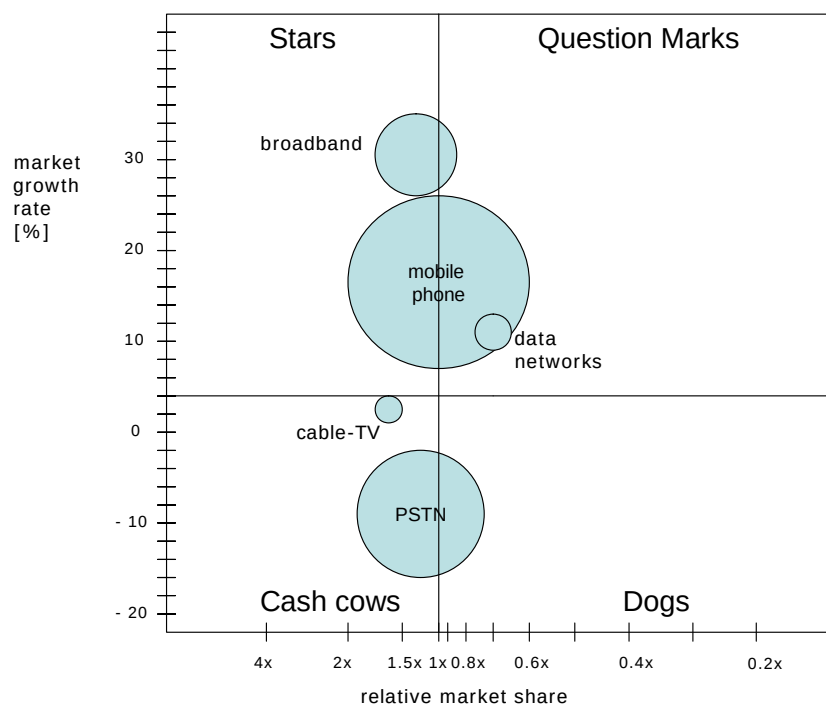


Figure 2.2.3: Elisa's product line portfolio in Finland, illustrated in the BCG box. The fixed-line business is divided into the PSTN, broadband, data networks, and cable-TV businesses. The old PSTN is still the cash generating business. The data networks' business position is estimated, because the rivals' published information is not available (Sources: Elisa, 2006d and estimations).

The basis of the Product Life Cycle (PLC) model (Figure 2.2.4) lies in the works of Abernathy and Utterback (1978) and their other articles published in the 1970's. The PLC is a generalised model of a product's sales history over a certain time period, i.e. its lifetime. It also illustrates the entire market for that certain product.

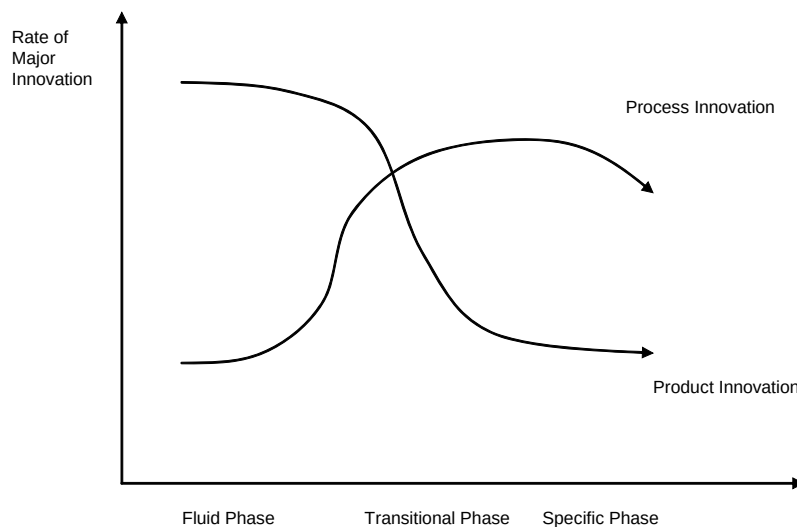


Figure 2.2.4: The product and process innovation model of Abernathy and Utterback. They implemented this idea, and with the experience from many different industries, they argued that there are different stages in the technology life cycle (Source: Utterback, J. (1994) *Mastering the Dynamics of Innovation*. Harvard Business School Press. Boston, USA. p. 256).

The PLC consists of four stages: the introduction, growth, maturity, and decline. Some theorists like to add more stages into the model (Figure 2.2.5). Additionally, not just the classical model varies, but the PLC as a whole. A study by Swan and Rink in the 1980's could identify 12 different types of PLCs (Walker *et al.*, 1992). Put into the PLC model, Finland's and the EU's respective fixed-line telephone businesses are at the decline stage of the PLC. Correspondingly, the mobile phone markets are at their saturation stage. The broadband market is either at the growth or early maturity stage depending on the EU country.

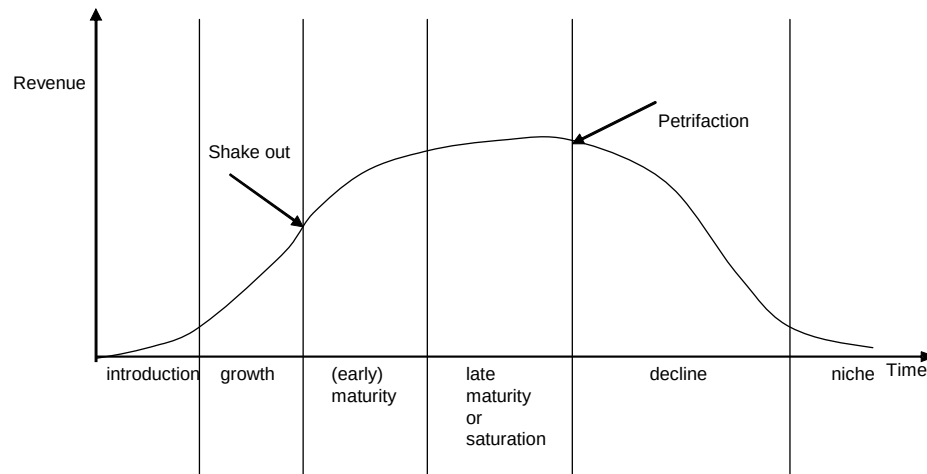


Figure 2.2.5: The different stages of the classical PLC. (Adapted from: Kotler, P. (1999) *Kotler on Marketing: How to Create, Win, and Dominate Markets*. 1st ed. The Free Press, a Division of Simon & Schuster Inc. New York, USA. p. 518; and Walker *et al.* (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. pp. 147 - 148.)

To extend the PLC at the maturity stage, a firm can try to introduce new features or modifications on the product (Figure 2.2.6). This product development (Kotler *et al.* 2001) is also used in the telecommunication industry. E.g. Elisa and other mobile phone operators have introduced new augmented services for their core mobile services. This method is analogous with the product development in Ansoff's (1984) Matrix, and the pertinent methods in it (Figure 2.2.9).

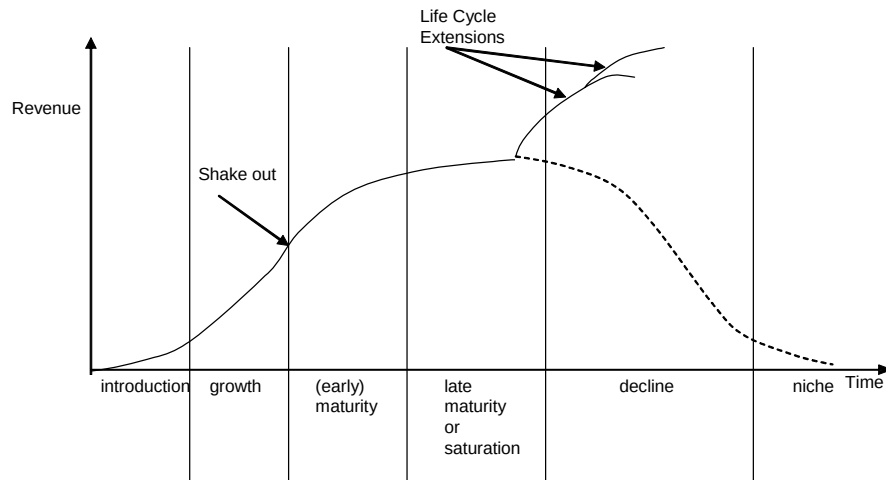


Figure 2.2.6: The life cycle extensions on the PLC. In order to extend a product's PLC, a firm can introduce new features or modifications on the product before the petrification-point i.e. before the decline begins. Through this, a new burst of the demand could be created, i.e. a new growth stage. This is widely used method e.g. in the TV-set and automobile industries, and also in the telecommunication industry, e.g. with the mobile phone services.

Market development is another way to extend the PLC (Ansoff, 1984; Kotler *et al.*, 2001).

There are various methods for executing the development, e.g. targeting new customer segments, repositioning the brand, or introducing the sub-brands. For instance, Elisa introduced the Kolumbus and TeliaSonera Tele-Finland sub-brands for the Finnish mobile phone market in the spring of 2004 when the rivalry was at its harshest due to the initiation of mobile number portability. These sub-brands were positioned as no-frills subscriptions, targeted at the customers who mostly appreciate the price. The third method is marketing innovation, in which a firm can amend its marketing mix e.g. by lowering the prices, finding new sales channels, or launching new advertisement campaigns as Elisa did in the Finnish broadband market (Hautamäki *et al.*, 2005). These two methods – market development and innovation – are combined in Ansoff's (1984) model.

Phillips *et al.* (1995) have suggested that the international PLC (IPLC) is one of the PLC extensions (Appendix VI). When the domestic market is beginning to saturate, internationalising will start a new introduction and growth stage. This operation can be done all over again, if the product has a multinational appeal. Furthermore, when this market development (Ansoff, 1984; Kotler *et al.*, 2001) is implemented with skill, a firm will have many markets at the different phases of the PLC, guaranteeing a steady profit flow. This approach modifies the PLC as an illustration of the market life cycle (Figure 2.2.7), and in telecommunication Vodafone is using this strategy for its global mobile phone service.

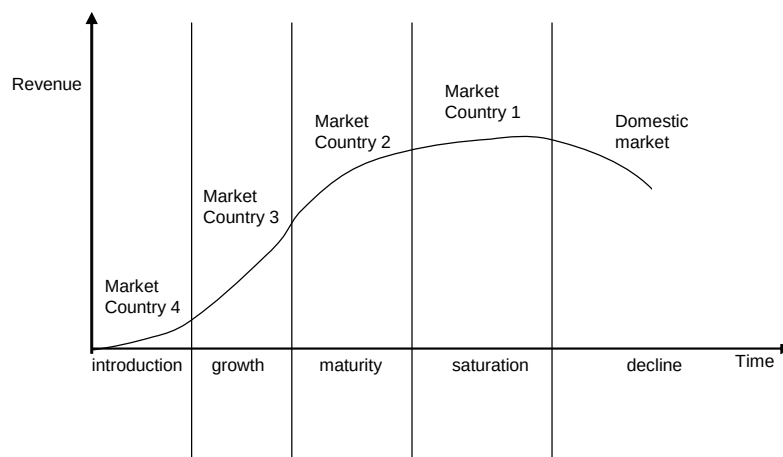


Figure 2.2.7: The PLC extension by the international marketing. In order to extend the product's PLC, a firm can penetrate abroad. (Adapted from: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK. p. 296.)

Yet another interesting application of the PLC is to illustrate how the market shares are divided (Figure 2.2.8). This model implies that the first firm on a particular market will achieve and keep the leader position. The other firms will then share the market by the order in which they

entered the market. However, this model is ignoring the new entrants' possibility to influence the markets in their favour. Therefore, it is in contradiction with other ideas (e.g. Porter, 1998; Moore, 2003; Appendix IV), which have highlighted the chances and advantages in the manipulation of the market structure and industry rules. Hamel and Prahalad (1994) have also encouraged the rethinking of business practises and new strategies in order to become different from the rivals and change the competition rules.

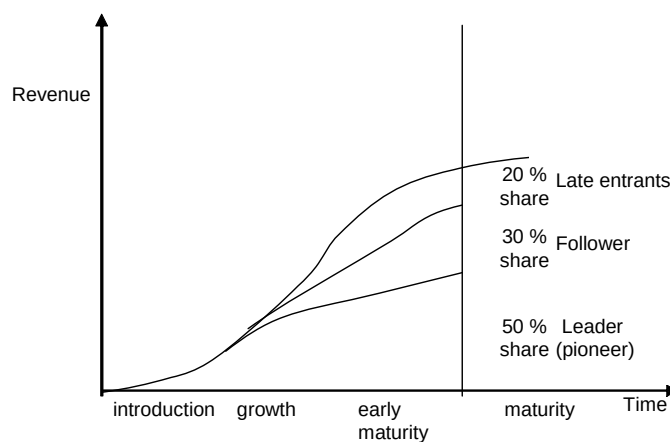


Figure 2.2.8: The market shares over the PLC. Additionally, the entering stages of the rivalry can be demonstrated (Source: Day, G. S. (1986) *Analysis for Strategic Market Decisions*. West Publishing Company. St. Paul, USA. p. 100. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. p. 265).

Ansoff (1984) has created many analysing tools and methods, such as the Gap analysis and the Synergy idea (Jewell, 1998). The so-called Ansoff's Matrix is represented here (Figure 2.2.9).

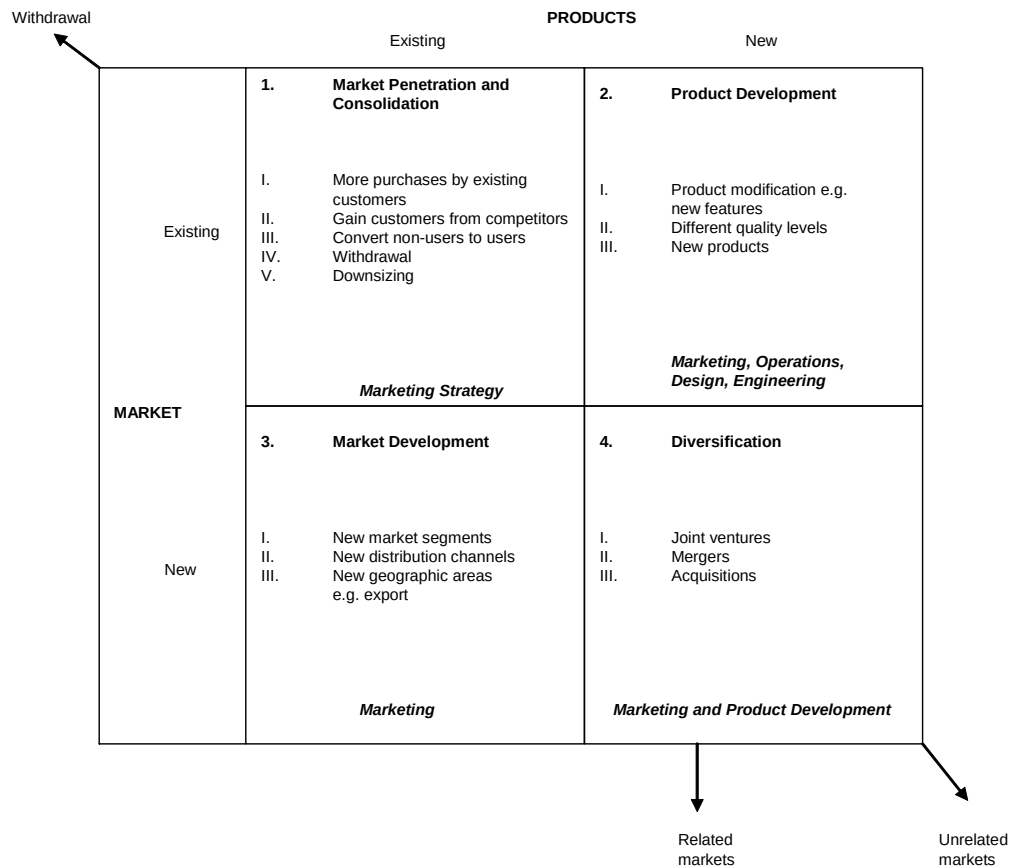


Figure 2.2.9: Ansoff's Matrix is a product – market vector. Each quadrant has its own suggestion for the strategic direction adequate to that market and product stage. The numbering of the quadrants (1 – 4) follows the easiness of implementation and the level of the risk (Sources: Ansoff, I. H. (1984) *Implanting Strategic Management*. 1st ed. Prentice Hall Inc. Englewood Cliffs, USA; Jewell, B. (1998) Igor Ansoff & Corporate Strategy. *Business Review*. September, pp. 2 – 3; Johnson, G. and Scholes, K. (2002) *Exploring Corporate Strategy*. 6th ed. Pearson Education Limited. Harlow, England. p. 362.)

Ansoff's Matrix is a simplified product-market vector (Appendix VI), which gives an analysis of the directions that a firm should take in its competitive environment. Market penetration and consolidation (cell #1) is the most obvious and easiest way to start. Shortly, it means selling more of the same to the same customer segments. Jewell (1998) has argued that the market

penetration strategy should be exhausted before moving to use any other strategy. Elisa has used the market penetration strategy in the Finnish broadband market for the last two years. The tactic has included e.g. cross-selling to the mobile and fixed phone customers, persuading customers to change over from rivals, alluring non-users, and withdrawing from some of the rural areas outside of Elisa's SMP area.

In the product development cell (#2), what is involved is selling the new products to existing customers. Johnson and Scholes have emphasised the importance of the critical success factors (CSFs) and their modifications in order to keep ahead of rivals in this context. The CSFs are features which '*...are particularly valued by the customers and used to distinguish between the potential providers*' (2002, p.151). In the Finnish telecommunication market, product portfolios are so similar to each other that the differentiation could be done by the CSFs, like the reputation of the brand, after-sales services, delivery reliability, technical quality, and innovation. Elisa has proven to be successful with its brand in the Finnish broadband market (Figure 4.1.7.1), and the product development strategies have been used e.g. in the Finnish mobile phone market by introducing new augmented services like pop-hits to replace a phone's usual waiting tone.

At the market development quadrant (#3), the strategy is to sell current products to new customers. Elisa has additionally used this strategy in the Finnish broadband market by finding new outside sales channels. Furthermore, the decision to become nationwide broadband provider in the early 2004 meant that the new geographic market areas were outside Elisa's own SMP area.

In the last cell (#4, the '*suicide-cell*'), the strategy is to sell new products to new customers by using the so-called 'diversification strategy'. Johnson and Scholes (2002) have pointed out the relevance of powerful stakeholders' expectations, which might lead to the diversification strategy. Elisa used both acquisitions and joint ventures when it was operating in the German fixed network business. Last year, M&A phenomena in the telecommunications were common. The Nordic operators TeliaSonera (2006a) and Telenor (Oslo Børs, 2006) acquired foreign operators (Appendix I), and are facing severe problems with these holdings. It seems that these Nordic operators, and Elisa in German, did not analyse the market environment closely enough, and tended to ignore the cultural and behavioural factors, which resulted in failures in these operations.

The diversification strategy is commonly considered the riskiest strategy of these four, due to how the suicide-cell demands simultaneously both product and market development. The situation is even more risky when a firm does not have such competencies in-house, and it has to rely on outside knowledge in the form of joint or sole ventures (see 2.3). However, diversification might be the only alternative in the case of a saturated and/or declining market (Ansoff, 1984). Furthermore, it might be a sensible alternative if a high return is achieved, or to gain a foothold in an attractive market (Czinkota and Ronkainen, 1995). One advantage could also be a balancing effect in the market life cycle (Figure 2.2.7), if the markets differ by their phases (Keegan, 1995).

The PLC is a practical tool for studying the phases of a product or market. However, the PLC does not tell anything about the changes in the business environment or market shares. It also ignores the firm's entire portfolio, as well as those of its competitors. The BGC box is a visual analysis tool for studying a firm's product portfolio. However, its renewed version, which also illustrates the cash flow implications, should be used. Further criticisms towards the PLC framework have been presented by Lambkin and Day (1989, cited in Walker *et al.*, 1992). They have criticised the PLC for having conceptual gap, such as the different positions and resources that competing firms have, and the strategic options on the supply factor. Porter's (1998) five-forces framework gives a picture of the changing business environment, and the drivers behind the change. When the collaboration idea of Johnson and Scholes (2002) is applied into this framework, it becomes a sound tool for analysing the business environment and predicting its trends, and also for internationalising the telecommunication services. The Ansoff's Matrix (1984) still seems to be a valid tool for today's telecommunication businesses when analysing the pertinent strategies in different market situations.

This section introduced the following analysing tools and methods: SWOT, PESTLE, market attractiveness factors, five-forces framework, BCG Box, PLC and Ansoff's Matrix. These models help a firm to study and analyse the business environment, the market and its own position in these frameworks. Furthermore, these theories help in and give suggestions for choosing the pertinent strategy. The next section will cover the different alternatives for a market entry strategy.

2.3 Market Entry Strategies

This section will consider the different alternative strategies which a firm can apply when entering to the new market area.

‘Strategy is the direction and scope of an organisation over the long term, which achieves competitive advantage for the organisation through its configuration of [all] resources within a changing environment [to meet the needs of the markets] and fulfil stakeholder expectation.’ (Johnson and Scholes, 2002, p. 10)

A market entry strategy could be defined as a selection of the appropriate structural, organisational, legal and financial means for becoming a supplier of some product in a particular market area.

Root (1987 cited in Walker *et al.*, 1992) has classified the market entry strategies into three major modes: the export, contractual, and investment mode. Under these modes, Root has recognised the different approaches, as shown in Table 2.3.1. The export entry mode relate to the moving of goods from a country of origin into another country. As it was mentioned earlier (see 2.1), the nature of the telecommunication service makes the export entry mode inapplicable. Also Walker *et al.* emphasise further: *‘Since services cannot be produced independently of consumption, a service company must use the second or third way [i.e. contractual or investment mode] to enter a foreign country.’* (1992, p. 352).

Entry Mode	Market Entry Strategy	
Export	Indirect Direct agent/distributor	
Contractual	Licensing Technical agreement Management contracts Service contracts	Franchising Turnkey construction contracts Contract manufacture Co-production agreements
Investment	Sole venture: new establishment Sole venture: acquisition Joint venture: new establishment/acquisition	

Table 2.3.1: The market entry strategies classified into three major entry modes by their nature.

Each entry mode has the relating strategy approaches. The export entry mode relates to the moving of goods from a country of origin into another country. The contractual entry mode means transferring the technology and needed skills into the target country in order to produce and market products or services through different kinds of contractual agreements. The investment entry mode means establishing production and marketing resources in the target country. (Source: Root (1987) *Entry Strategy for International Markets*. D.C. Heath and Company. Lexington, USA. p. 6. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA.)

The contractual entry mode means transferring the technology and needed skills to the target country in order to produce and market products as one kind of a collaboration. Besides, Onkvisit and Shaw (1995) have supported the same optional entry strategies. Therefore, it might be argued that the suitable entry strategies for broadband are licensing, franchising, management contract, turnkey operations, sole ventures and joint venture (Appendix V).

Producing services abroad always requires local operations (Walker *et al.*, 1992; Onkvisit and Shaw, 1995). In the telecommunications, this has recently meant either a network owned by the

sole venture or M&A. However, previously the collaboration among partner(s) has been commonly used e.g. for global data networks in terms of alliances and partnerships, like Elisa with Telenor and Sprint. The third way is the virtual network operator (VNO) model, renting the capacity from the local network operators. This option is best applied in the mobile phone market, and known as the mobile virtual network operator (MVNO) model. Saunalahti used this market entry strategy. However, this requires functioning competitive wholesale markets, which are not yet available in the European telecommunication markets (Commission, 2006). Elisa used a mixed market entry strategy in Germany. Elisa started with the management contracts. But, when the evolvement seemed too slow, Elisa acquired some German city carriers, merged them with each other, and ended up with a joint venture with the Germans. However, this business did not enter to the growth stage and was unprofitable due to the slowness of German NRAs to open up the competition, disagreements with the German partners, and strategic change, and the business was sold (Elisa, 2004d).

This section defined the market entry strategy and went through its different options. In the next section, the international marketing mix and its elements will be examined.

2.4 International Marketing Mix

In this section, the marketing mix and its international extension will be defined. Furthermore, the elements of the marketing mix will be looked at more closely, as well as the methods for manipulating these elements according to the changing business environment.

In the 1960's, McCarthy brought up an idea (in Kotler 1999, p. 129) of the marketing mix, defining it as a blend of four factors; product, place, price and promotion. By using these four tools, a firm attracts the target customers in a certain product market. These tools are commonly called the 4Ps.

The British Marketing Research Association defines the marketing mix as: *'The set of choices made by an organization in respect of those marketing factors which it can control. Important categories in the marketing mix are the so-called four P's, namely product, price, place, and promotion.'* (2003).

There are other applications of the 4Ps, like the 6Ps (Kotler, 1999), and the 7Ps (Grönroos, 2000). In the 6Ps, the additional Ps were the politics and public opinion. The extra Ps, in the 7Ps model mean the people, processes and physical evidence. One school of thought believes that the 7Ps model is more suitable for services. E.g. in the broadband service 'the people' can be interpreted as the employees in sales, installation, and help-desk services. The process comprises the processes in which these people are involved. Elisa's three main processes are named as: the customer buying, using, and paying. The physical evidence of the broadband service is the DSL-modem.

The marketing mix has been further developed by Lautenborn (cited in Kotler 1999, p. 131), who has turned the focus from the sales to the customer, and Gummesson (1998) who has argued that the continuum from the 4Ps to the 30Rs (R as relationship) is the key marketing success factor in the new networked world.

A company planning to internationalise needs to carefully plan the appropriate marketing programme for the destination country. This international marketing mix can be done either with the standardised marketing or the adapted marketing mix (Kotler *et al.*, 2001). In the first alternative, a firm does not change any of the factors in the marketing mix. In an adapted marketing mix, a firm changes, modifies or innovates aspects for the 4Ps in order to gain better competitive advantage in the new geographical market area. Some international marketers see that the best element of the standardised marketing mix is the economy of scale in costs of production and marketing. These marketers emphasise the same basic needs and appeals all over the globe, which in the particular extensions of the Internet and entertainment businesses have created a change in society and a uniform demand for broadband access. The proponents claim that all customers want products of a sufficient quality at low prices. On the other hand, even some of the world wide brands use adaptation to some extent, e.g. McDonald's.

2.4.1 Product

Kotler *et al.* (2001) have defined a product as a three level concept (Figure 2.4.1.1). The core of a product is the problem solving services or core benefits that a customer needs or wants when buying a product. Such a want in a broadband service is the need for interactive communication over the Internet as a new way of life in this networked era. The actual product consists of five attributes, through the combination of which the core product is best introduced to the customers. E.g. in broadband's case 'secure 2 Mbit/s speed powered by Elisa' consists of two attributes: the quality features and the brand. The augmented product is the level where the additional services and benefits are offered. Such additional services and benefits in broad-

band's case include installation services and the setting of a customer's PC, as well as help-desk services.

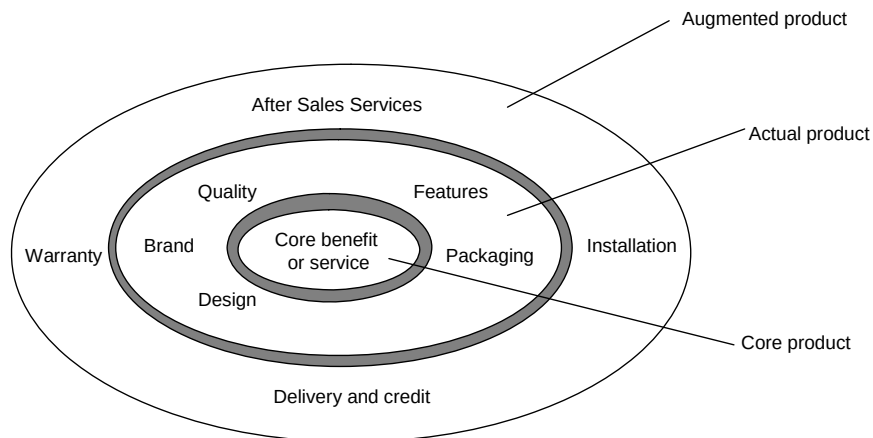


Figure 2.4.1.1: The three levels of a product, a concept by Kotler (Source: Kotler *et al.* 2001. *Principles of Marketing*. 3rd European ed. Pearson Education Limited. Harlow, UK. p. 460).

In Estonia, Elion is supplementing its broadband service with laptop computers. Estimations argue that Elion has a ca. 17% market share in the laptop retail market and is probably the market leader (Elion, 2006b). Elion also has plans to offer high quality DigiTV television programmes to its Home Solution customers through their broadband connections (2006a).

Furthermore, Kotler *et al.* (2001) have differentiated between a physical product and a service. They have underlined that service is a product with intangible activities, benefits or satisfactions. Service is 'inseparable', meaning that it is produced and consumed at the same time, and the provider is not distinguishable from a service. Another characteristic for a service is its variable nature which appears as quality deviations (Grönroos, 2000). One cannot store a service for later use, which defines a service as perishable. Additionally, the user of a service may

not receive anything to own. Therefore, based on these viewpoints, it could be argued that a broadband connection is a service by nature.

Roger (1995, cited in Kotler *et al.*, 2001) laid a foundation for the product adoption process model in the early 1960s (Appendix VII). The interesting part of this model is that it fits into the PLC (Figure 2.4.1.2).

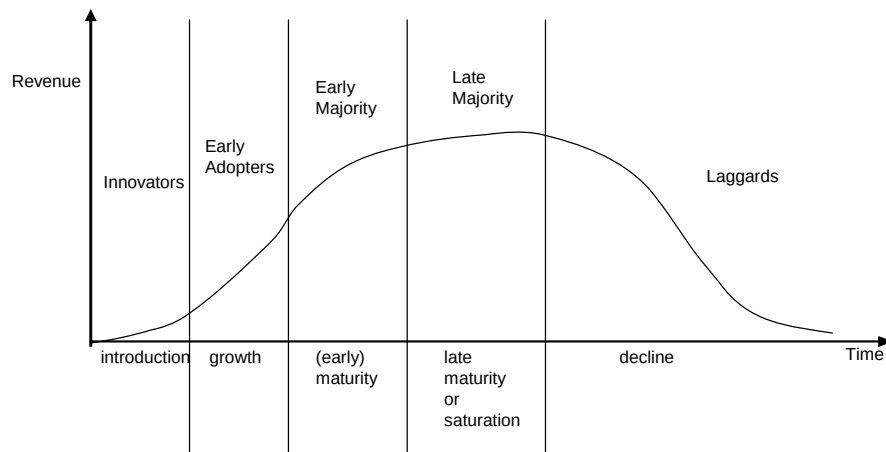


Figure 2.4.1.2: Roger's adoption process model put on the PLC model. While the PLC model's shape is like that of the standard deviation, Roger has managed to classify the individuals into sections which represents certain percentages of the population (adapted from: Kotler (1999) *Kotler on Marketing: How to Create, Win, and Dominate Markets*. 1st ed. The Free Press, a Division of Simon & Schuster Inc. New York, USA. p. 223).

Based on his studies, Roger has argued that the innovators represent 2.5% of the population. These innovators adopt new things quickly, and they could be described as adventurous people. The early adopters represent 13.5% of the population, and they often tend to be the opinion leaders amongst their nearest. Although they adopt new things quite quick, the early adopters are argued to be selective and careful. People belonging in the early majority are characterised

as deliberate, and yet they adopt new things before the average population. The early majority advocates 34% of the population, as does the late majority. People in the late majority are sceptical, and adopt things after others have accepted them first. The remaining 16% of the population are the so-called laggards, who are suspicious towards everything new and resist change.

In international marketing, the role of product adoption is even more important. Onkvisit and Shaw (1995) have highlighted such factors as relative advantage, compatibility, trialability/divisibility, observability, complexity, and price. By 'relative advantage' it is meant that a new product should have better features, i.e. the actual product, than the current ones on that particular market. Compatibility is seen as the way in which a new product will set in a local cultural atmosphere, i.e. adaptation. Trialability/divisibility describes a product's suitability for small trial quantities in order to find out its benefits for the new customers. It is known that the opinion leaders influence the other users, and a product's observability refers to this phenomenon. The better a product is perceived by the public, the better it will be adopted and sold. These four factors can be considered the positive influences on the adoption process. However, the complexity and price factors are negative by nature. The complexity of a product slows down the adoption process. This complexity may depend on e.g. the product's features or usability. The complexity could be an entry barrier on the broadband markets which are at their late maturity stage due to the already sceptical late majority of the customers. The price is discussed in section 2.4.2.

Moore (2003) has combined the adoption process with the PLC in order to create a framework for the high technology and business to business (B2B) markets (Figure 2.4.1.3).

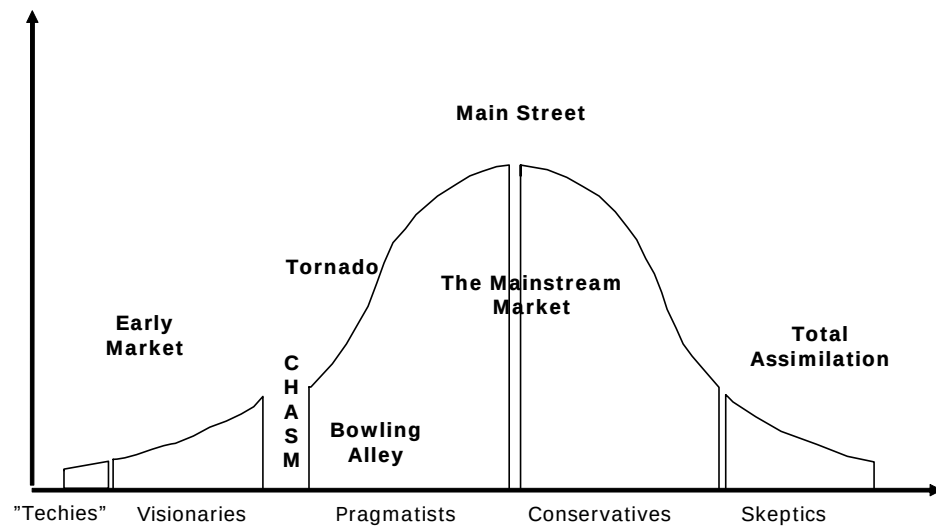


Figure 2.4.1.3: Moore's technology adoption life cycle model based on the PLC and the adoption process models (Adapted from: Moore, G. A. (2003) *Inside the Tornado: Strategies for Developing, Leveraging, and Surviving Hypergrowth Markets*. Reissue ed. Harper Collin Publishers Inc. New York, USA; Hautamäki, S., 10, A. and Suomalainen V. (2005) *Kilpailustrategia Suomen Laajakaistamarkkinassa Geoffrey Mooren Uuden Teknologian Elinkaariteorian Valossa*. Dissertation, Elisa Master Class.).

Moore's (2003) hypothesis is like the domino theory. In his model one adopter group acts as a reference to the next adopter group, i.e. the observability in Onkvisit and Shaw's (1995) terms. A chasm separates the early and mainstream markets. Crossing the chasm requires a comprehensive product, i.e. a total customer solution, Moore has stressed. After this, the pragmatists see the potential advances for them. The product's break-through is measured in the so-called bowling alley stage. If the marketing strategy is successfully transformed from the technological into a customer-oriented viewpoint for the mass market, the fast growing tornado stage begins. When the market saturates, the main street stage begins. After a 50% penetration, the customer orientation should be increased. This can be done by the product's mass-tailoring, which

Phillips *et al.* (1995) have described as an adaptation process for the core product (Figure 2.4.1.4). Moore has also emphasised the +1 extension for the actual or augmented product at the late maturity stage, i.e. for the conservatives. Furthermore, he has argued that price reductions could be compensated by these +1 extensions. Although Moore's model was created for the high technology and B2B markets, Hautamäki *et al.* (2005) have shown its appropriateness for the mass market, and more precisely for the Finnish broadband market.

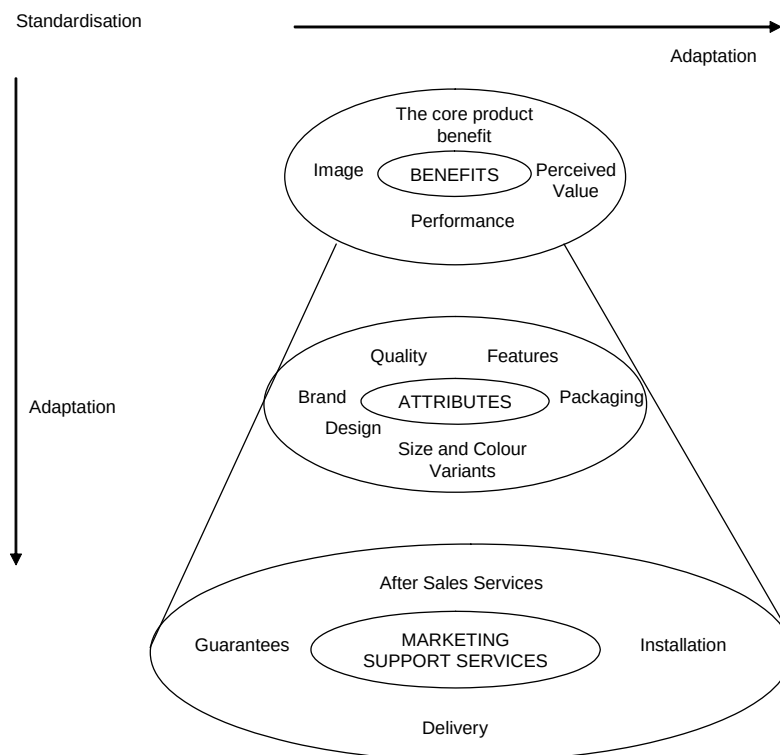


Figure 2.4.1.4: The adapted product concept. Phillips *et al.* have further adapted Kotler's product concept (see Figure 2.4.1.1) by adding the standardisation and adaptation vectors in it. Before carrying out the adaptation is possible, a firm should carefully think through the product's basic benefits for the customers, and the adaptation benefits for the different customer segments. Moore (2003) has used the term 'mass-tailoring' to describe of this phenomenon. (Source: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK. p. 285).

An international product strategy is basically a question of whether to adapt or not. Many authors (e.g. Van Mesdag, 1985 cited in Phillips *et al.*, 1995; Walker *et al.*, 1992; Czinkota and Ronkainen, 1995; Phillips *et al.*, 1995) have seen three optional strategies. On the other hand, some authors (e.g. Keegan, 1989 cited in Phillips *et al.*, 1995; Kotler *et al.*, 2001) have considered the entire international marketing mix and its adaptation (Table 2.4.1.1).

Product				
P r o m o t i o n		Unchanged Product	Adapted Product	Developed New Product
	Unchanged Promotion	1. Straight extension	3. Product adaptation	5. Product invention
	Adapted Promotion	2. Communication adap- tation	4. Dual adaptation	

Table 2.4.1.1: The five international product and promotion strategies. Three of these strategies are based on the product itself, and the remaining two are based on the promotion. There are also analogues to the Ansoff's Matrix (see Figure 2.2.1) (Source: Kotler, P., Armstrong, G., Saunders, J. and Wong, V. (2001) *Principles of Marketing*. 3rd European ed. Pearson Education Limited, Harlow, UK. p. 175).

Van Mesdag (1985 cited in Phillips *et al.*, 1995) has used the following terms:

- 1 Sell What You have Got: SWYG,
- 2 Sell What people Actually Buy: SWAB
- 3 sell the same thing GLOBally: GLOB.

The SWYG strategy means the same product for all the market areas. The assumption is that customers' needs are the same everywhere. This strategy is the easiest to choose, because it offers the economy of scale in the production, namely in the case of the physical product. Moreover, when a product can satisfy a global need it is possible to use a world-wide brand for the promotion, e.g. Vodafone. For the international marketing mix some authors have defined five optional strategies. The straight product extension strategy (Figure 2.4.1.4) is basically the same strategy (Kotler *et al.*, 2001). On the other hand, the SWYG strategy is the most common reason for failure. The pitfall is poor market analysis, appearing as the customers who do not adopt the product as it was assumed (Kotler *et al.*, 2001).

The SWAB strategy is the product adaptation strategy. On the other hand, it can be seen as a differentiation strategy and a competitive advantage (Porter, 1998). The product will undergo some modifications to better accommodate the local needs and appeals, e.g. the differences in the cultural factors (Ansoff, 1984). E.g. McDonald's has adapted its offerings according to the target country. This adaptation is allowed to be just a few per cent of the total costs. Van Mesdag (1985 cited in Phillips *et al.*, 1995) has argued that implementing this strategy is very demanding, because it stresses the firm's resources. Furthermore, he has emphasised that this resource-consuming strategy would limit a company's market entry to one country at the time. Another possible pitfall is the rivalry with the local firms, if the entrant cannot break the rules of the local industry (Czinkota and Ronkainen, 1995).

In the case of product invention, a new product is created for the new geographic market areas (Walker *et al.*, 1992; Kotler *et al.*, 2001). The negative side of this strategy is that the modifica-

tions affect a significant part of the total costs. This is due to the implementation of the entire marketing mix from scratch, which is very resource-consuming, as seen in product development cell of Ansoff's Matrix (1984). Another way to execute this strategy is to reintroduce earlier product forms which are already adapted and adopted in a particular country (Kotler *et al.*, 2001). With the promotion adaptation strategy, a firm can use two approach variations. A firm can adjust its marketing communication to the local markets. This can be done by adapting either the messages or the techniques. The other approach is the so-called 'dual adaptation' which basically is a combined product and promotion accommodation. Czinkota and Ronkainen (1995) have approached the GLOB strategy from a different viewpoint. They suggest that a firm could alternatively unite the regional product differences into a new global product.

The international marketers have to know what the customers really want in each geographic market area. Some schools of thought have translated this into a slogan '*think globally, act locally*'. These marketers see that standardising some of the core basic marketing (Figure 2.4.1.4) elements and localising the rest of the elements will bring the best results. Therefore, it could be argued that the answer to the question of whether to use the standardised or adapted (Table 2.4.1.2) marketing mix lies somewhere in the standardisation–adaptation continuum depending on the product and the targeted market area.

Factors Encouraging Standardisation	Factors Encouraging Adaptation
- Economies of scale in production - Economies in product R&D - Economies in marketing - “Shrinking” of the world marketplace/economic integration - Global competition - Time savings - Resource savings	- Differing conditions of use - Government and regulatory influences - Differing consumer behaviour patterns - Local competition - True to the marketing concept

Table 2.4.1.2: The general benefits for standardising or adapting (Sources: Czinkota and Ronkainen (1995) *International Marketing*. 4th ed. Harcourt Brace & Company. Orlando, USA. p. 264; Kotler, P., Armstrong, G., Saunders, J. and Wong, V. (2001) *Principles of Marketing*. 3rd European ed. Pearson Education Limited, Harlow, UK.)

Broadband services need to be adapted to the local environment. Although the core benefit is the same, the actual and augmented products need adaptation. This adaptation concerns attributes like packaging, design and quality, which all are dependent on the local factors. Furthermore, the support services for marketing are largely processes and depend on the target country's conditions.

2.4.2 Price

The price is an essential part of the marketing mix. Too high a price may stop the selling totally. On the other hand, too low a price can be understood e.g. as a sign of a poor quality. Setting the price on a new market is related to many market-bound factors. Many authors (e.g. Czinkota and Ronkainen, 1995; Keegan, 1995) have argued that pricing policies are the same whether it is a question of market entry, price change after an attack or being attacked, or price changes in substitute products. The pricing alternatives are skimming, market pricing, and penetration pricing. Keegan (1995) adds also the cost-plus pricing and the price escalation

methods. Furthermore, Robert (1993, cited in Keegan 1995) has studied the Japanese approach of how prices are set based on the target cost (Figure 2.4.2.1).

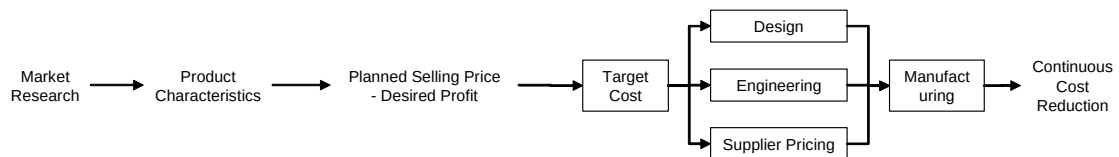


Figure 2.4.2.1: The Japanese approach to setting the prices. In a traditional western world method, the pricing process is done successively compared to this parallel Japanese approach (Adapted from: Robert (1993) *Strategy Pure and Simple: How Winning CEOs Outthink Their Competition*. McGraw-Hill, Inc. New York, USA. pp. 114 -115. In: Keegan (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc. Englewood Cliffs, USA. p. 511).

‘Skimming’ means that a firm tries to exploit the markets by setting its prices as high as possible. Skimming is usually a short-term pricing policy in the introduction stage of the PLC, because competition usually alters the prices. This occurred in the Finnish broadband market when the SMP operators were in the monopolistic position in the introduction stage of the market’s PLC.

The market pricing strategy is compelled in the cases where existing products are in the same markets. A firm needs to adjust its production and marketing to follow this market price. This stresses the market’s preliminary analysis, when a firm needs to be aware of the true costs of a product, and in what stage of the PLC the market is. E.g. when entering the Estonian broadband market.

Penetration pricing approaches the current market pricing and the competitive situation with lower prices in order to achieve volume sales and a market share quickly. This strategy is based

on mass marketing, price sensitive customers, and diminishing costs of both production and marketing due to increasing sales volume (Czinkota and Ronkainen, 1995). Penetration pricing might end up being accused of predatory pricing if the price gap to the rivals' prices grows too large, and particularly if it is based on selling at a loss. Moore (2003) have emphasised natural price-points, i.e. price changes, as a part of penetration pricing. These price-points allow larger market share wins than what the firm's current market position presumes. Broadband prices declined some 45% during 2004 (MINTC, 2006a), and 13.6% in 2005 (MINTC, 2006b) with signs of hypercompetition. Hypercompetition is a phenomenon where rivalling actions and marketing programmes are implemented very densely and intensively so that any equilibrium cannot form (Johnson and Scholes, 2002).

The cost-plus method can use the historical view based on accounting, or it can be the estimated future costs. The first approach rarely produces prices which are accurate due to lack of facts on demand and competitive conditions from the target market (Keegan, 1995). The price escalation method pays attention also to the transport and channel costs. Target cost pricing urges the finding out of solutions and adaptations to keep the product costs in given limitations (Robert, 1993, cited in Keegan, 1995). This approach is transferred also to the subcontractor negotiations as e.g. Nokia is doing globally.

2.4.3 Place

An internationalising firm should carefully study the local sales channels in the destination countries. Depending on a firm's entry strategy, it builds up an appropriate sales channel, but generally the whole-channel concept (Figure 2.4.3.1) for international marketing gives a basic

model (Kotler *et al.*, 2001). However, this model is more applicable for tangible products than services. There are many variations of the sales channels which can depend on e.g. the local cultural and regulative factors.

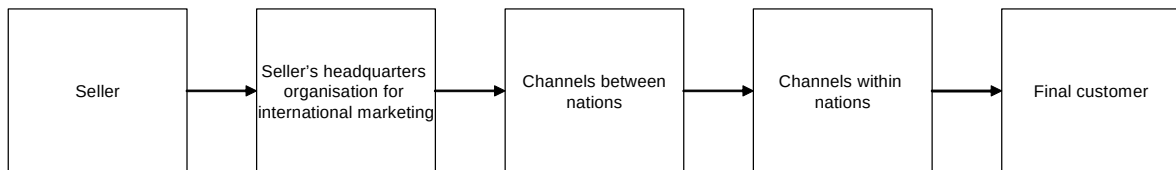


Figure 2.4.3.1: The whole-channel for international marketing. The first link is for the management of the channels. The next link's contribution in the channel concept is the transportation of the products from an origin country to the destination countries. The last link arranges the products to the final customers in each destination country (Source: Kotler, P., Armstrong, G., Saunders, J. and Wong, V. (2001) *Principles of Marketing*. 3rd European ed. Pearson Education Limited, Harlow, UK. p. 179).

2.4.4 Promotion

Levitt (1980, cited in Czinkota and Ronkainen, 1995) has argued that all goods and services are differentiable. Porter has defined three competitive strategies for a firm to position its products in the market: product differentiation, cost leadership, and focusing (1998). Furthermore, Treacy and Wiersema (1995, cited in Hope and Hope, 1997) have come to a slightly different conclusion for three competitive disciplines: product leadership, operative excellence, and customer intimacy. They have argued that a firm cannot be excellent in all the three disciplines. When a choice of the discipline is made to favour one of the three possibilities, it is enough to be fair or at the average performance level of the business on the other two disciplines. Respectively, Porter has argued that it would not be enough to be good in all these disciplines, because some rival will be excellent in one of the three areas (1998).

Porter has emphasised that for successful strategic competition, a firm needs to find out new strategic positions which could help it to persuade the existing customers from their usual convenient positions or new customers to enter the markets (1996, cited in Hope and Hope, 1997). The latter is the same as the Ansoff's Matrix's market penetration and consolidation cell (1984). Additionally, this is the same issue than allures the conservatives to the mainstream market in Moore's model (2003).

Moreover, Porter has pointed out that the competitive advantage is based on the industry's situation, which enacts the competition's rules. Another factor is a firm's own relative position in its industry. The strategy of a firm has to give an answer to both of these factors. Operative excellence which is based on the best practises is not enough for success. A firm needs to create a unique and maintained competition position (2001).

Treacy and Wiersema (1995, cited in Hope and Hope, 1997) have claimed that these competitive disciplines match directly with the expectations of the three different customer behaviours. The customers who always want the latest innovations or follow the latest trends choose the products of a firm which has a product leadership strategy. 'Product leadership' means factors like state-of-the-art products and a quick ability to bring new products to the markets. Elisa's Saunalahti brand is targeted towards this customer segment. Moore (2003) has used the terms 'techies' and 'visionaries' of this customer group, while Roger (1995, cited in Kotler *et al.*, 2001) has originally named them as the innovators and early adopters. These approaches are pertinent in the introduction stage of the PLC (Moore, 2003).

Respectively, the customers who are more interested in lower prices or ease of purchase and yet value the quality, choose the products of a firm which has an operative excellence marketing mix strategy (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997). In Roger's model these customers are the early majority (1995, cited in Kotler *et al.*, 2001). Operative excellence deals with issues like cost effectiveness, quality and excellent service. Moore (2003) calls these customers 'pragmatists' and the growth stage at the PLC, the 'tornado stage'.

Furthermore, the third discipline is to implement the customer intimacy strategy, which interests the customers who know what they want, even if they have to pay some extra (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997). These customers also expect that a firm can customise standard products for them. Moore (2003) has seen this as mass-tailoring for the conservative customers, which are named the 'late majority' in the Roger's adoption model (1995, cited in Kotler *et al.*, 2001). Moore has emphasised this approach in the PLC's main street stage, i.e. saturation, (2003). Customer intimacy consists of issues like long, deep relationships and customising for the customers' needs. Reichheld (1996, cited in Hope and Hope, 1997) has argued that there is a link between customer loyalty and the profitability of the firm. When the marketing strategy of a firm is based on creating customer loyalty, it will succeed in increasing its profit better than the firms with other marketing strategies. Elisa was the first Finnish operator to introduce a loyalty programme (see 1.1). Referring to Treacy and Wiersema's and Reichheld's arguments, it could be further argued that Elisa's loyalty program most attracts the late majority, i.e. the conservatives.

Harvard Business School (HBS) has improved the traditional PLC model by introducing a model (Figure 2.4.4.1) where the PLC and marketing mix (4Ps) are put together. This approach facilitates the considering of new actions during the PLC, i.e. market development, product development, or marketing innovations, in order to extend the PLC and maximise the revenue.

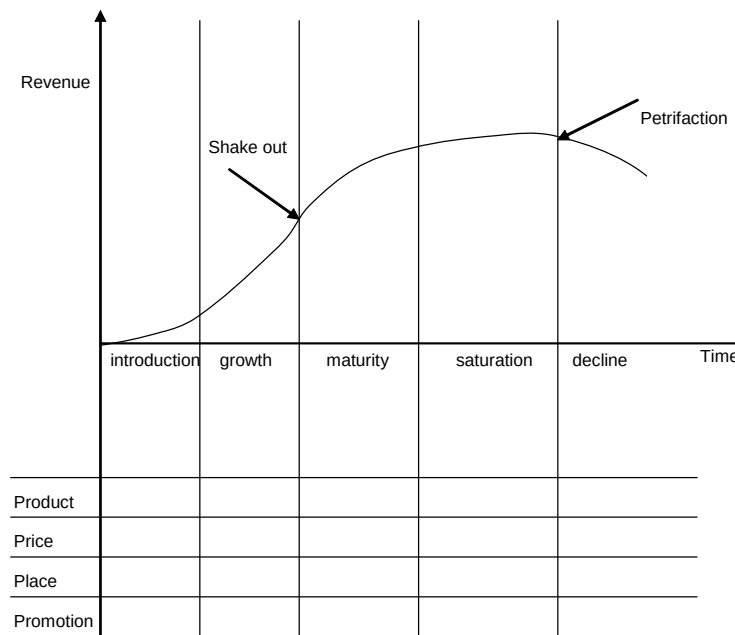


Figure 2.4.4.1: The improved PLC illustration. Harvard Business School has improved the traditional five stages of PLC by adding the 4Ps marketing mix into it. It is argued that by this improvement the firms and SBUs are better able to identify what kind of marketing strategy would best suite each stage of the PLC.

This improved PLC model suggests the same ideas which Moore (2003) has suggested in his technology adoption life cycle model. A firm needs to change its marketing mix during the different stages of the PLC and the market situation. It could be argued that for the telecommunication services, e.g. broadband, it would be more applicable to add the 7Ps marketing mix (Grönroos, 2000) with the extra Ps: people, processes and physical evidence. Additionally, Moore has introduced closer practical and tactical tools for the different PLC stages. At the

tornado stage, he has seen that it is typical that the demand can boom overnight, creating bottlenecks in the operations (e.g. production, ordering, delivering). These can be reflecting as customer dissatisfactions. However, Moore has stressed that at the tornado stage all the effort should be put into these processes. Basically, this is the ‘ignore the customer’ attitude, concentrating merely on the delivery to increase the market share.

In their work 1987, Domzal and Unger (cited in Phillips *et al.*, 1995) have identified a world brand’s three characteristics: consistent brand name, standardised product image, and similar product features. They further stress that only when the consistencies (Table 2.4.4.1) of these distinctive marks are maximised, the economies of scale may be fully exploited.

Characteristics of a World Brand	Consistency
Consistent brand name	Using the same brand all over the world will reduce the marketing costs and increases brand awareness
Standardised product image	A global strategy with local execution maintains the consistent brand name, yet the message can be localised for the target country’s culture and appeals.
Similar product features	Consistent product features are the most challenging part for the world brand to reach. This is due to the variable factors that influence the product features.

Table 2.4.4.1: The characteristics of a world brand and their consistencies. The maximised consistencies enable the maximal exploitation of the economies of scale. (Based on: Domzal, T. and Unger, L. (1987) Emerging Positioning Strategies in Global Marketing. *Journal of Consumer Marketing*, 4 (4), Fall. In: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK.)

In the telecommunication industry, the best example of a world brand is Vodafone with its mobile phone subscriptions.

This chapter reviewed the definitions and concepts of international marketing together with the motivators for internationalisation. Additionally, the chapter studied the different approaches for carrying out market analysis. However, the markets and firms vary so much that a firm still needs to consider its situation and the pertinent analysing tool on a specific case-by-case basis. This research uses the SWOT, PESTLE, five-forces framework, PLC and Ansoff's Matrix to study the research's objectives. Market entry strategies and their suitability in different cases were also discussed. A conclusion is that the best results are achieved by mixing the different strategies, i.e. changing the strategy during the evolvement of the international business. A major influence on the market entry strategy is the firm's marketing, which was also reviewed in the last section of this chapter. The conclusion was that an adapted marketing mix will gain better results. However, what the adapted factors of the marketing mix – or the levels of a product adaptation – actually lies somewhere within the standardisation–adaptation continuum, depending on the product and the target market area. Furthermore, an appropriately conducted market analysis should indicate the needs for adaptation. This research will use the reviewed market entry strategies and the adaptation theories for its objectives three and four. The next chapter will discuss the methodology and research methods of this case study.

3 Methodology and Research Methods

This chapter describes and justifies the research methodology used for this study, i.e. the research design and data collection methods. In addition, the research process is introduced together with the data analysis techniques in order to meet the set objectives for this research:

1. To critically evaluate Elisa's experience of serving the Finnish broadband market,
2. To analyse the environment of the Estonian Telecom industry and the broadband market,
3. To identify for Elisa the key issues in entering to the Estonian broadband market, and
4. To suggest a pertinent strategy for entering a foreign broadband market.

Collis and Hussey (2003, p. 1) emphasise that there is no sound consensus on the definition of 'research', because its meaning varies from person to person. Yet, Collis and Hussey have synthesised the characteristics of research as:

- A process of enquiry and investigation,
- Systematic and methodical, and
- Increasing knowledge.

McGivern (2003) defines research as a knowledge-producing process, which is based on scientific methods. Kaplan (1973, cited by Cohen and Manion, 1997, p. 39) has suggested that the

aim of methodology is to widen the understanding of the research process by using the broadest terms, instead of the plain results of the research.

According to Hussey and Hussey (2003), the research methodology is the all-inclusive approach to the research process. As a larger framework, the methodology: *'... refers to a design whereby the researcher selects data collection and analysis procedures to investigate a specific research problem.'* McMillan and Schumacher (2001, p. 10).

Some authors (e.g. Järvinen, 2004) prefer the term 'research methods' instead of 'research methodology', but in this research the term method signifies the techniques of data collection and analysis.

3.1 Research Design

This research will focus on a phenomenological paradigm. Cohen and Manion (1997, p. 29) consider phenomenology a theoretical viewpoint advocating *'...the study of direct experience...'* as the *'...phenomenology is the science of a phenomena'*. (Hussey and Hussey, 1997, p. 52).

In Figure 3.1.1, a phenomenological paradigm is illustrated as an extreme opposite approach to a positivistic paradigm in the continuum of core ontological assumptions. The phenomenological paradigm is more concerned with generalising the theories, rather than testing the hypothesis like the positivist paradigm. Järvinen (2004) uses the term *'theory-creating approach'* in the

same meaning as the phenomenological paradigm. Other terms are the ‘qualitative research’ (e.g. McGivern, 2003) or ‘qualitative approach’ (e.g. Jankowicz, 1997).

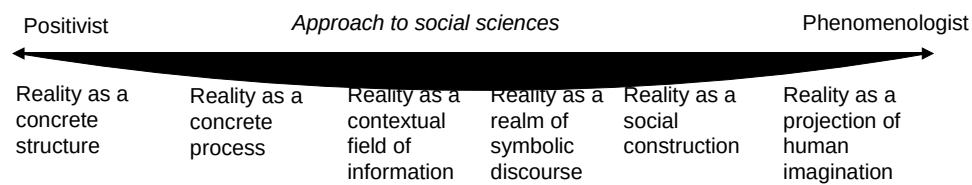


Figure 3.1.1: The continuum of the core ontological assumptions. (Source: Morgan and Smircich (1980, p. 492) In: Collis, J. and Hussey, R. (2003) *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*. 2nd ed. Palgrave Macmillan, New York, USA. p. 51.)

McGivern (2003, p. 35) states that qualitative research, i.e. the phenomenological paradigm, ‘...is used to evaluate policies and strategies, and their implementation’. As an expected outcome, the research objectives should produce an answer to the question of whether or not Elisa should enter the international markets with its broadband service. The primary raw data of this research was mainly voice recordings from the in-depth interviews, which were transcribed into the form of the PESTLE analysis. Furthermore, the research interest was in the interpretation of this data. As Tesch (1990, cited in Järvinen 2004, pp. 66 – 68) argues, these are characteristics to a phenomenological paradigm.

Furthermore, as the research question is specific to Elisa, and as the phenomenological methodology is appropriate for generalising matters from a specific framework to a universal framework, the phenomenological paradigm was suitable for this research. Additionally, the phenomenological paradigm stresses the data’s quality and its depth (Collis and Hussey, 2003). The research approach is illustrative, when it attempts to elaborate ‘...new and possibly innova-

tive practices' (Collis and Hussey, 2003, p. 68). This approach can also be called an interpretative approach, which can be '*...less rigorous and more provocative in providing... examples of new ideas*' (Järvinen, 2004, p. 79).

Easterby-Smith *et al.* (2002) have composed a matrix of the different research designs. In Figure 3.1.2, 'social constructionist' is a synonym to 'phenomenology'. At the vertical axis the researcher's level of participation in the research is described. This research used a Yin's case study strategy. Gall *et al.* (1996) define a case as a specific instance of a phenomenon.

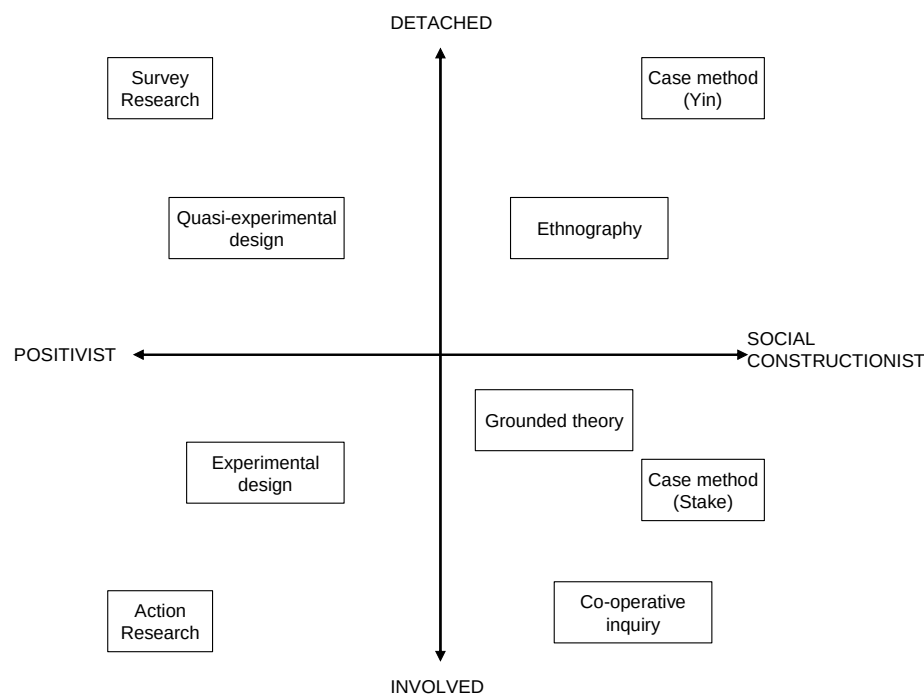


Figure 3.1.2: Matrix of the research designs. (Source: Easterby-Smith *et al.* (2002) *Management Research*. Sage Publications Ltd., London, UK. p. 57)

Yin (2003, p. 13) has arrived at a two-part definition of the case study. The first part sets the focus of the case study:

1 A case study is an empirical inquiry that:

- *Investigates a contemporary phenomenon within its real-life context, especially when*
- *The boundaries between phenomenon and context are not clearly evident.*

By this, Yin means that the researcher intentionally wants to take into consideration the contextual conditions due to their influence on the studied phenomenon. In this research, the interviewees were asked about their experiences during Elisa's broadband expansion in Finland.

However, in real life, it is rarely possible to differentiate between the context and the phenomenon. Therefore, other technical features form the rest of the definition:

2 The case study inquiry:

- *Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result*
- *Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result*
- *Benefits from the prior development of theoretical propositions to guide data collection and analysis.*

With this second part of the definition, Yin points out that the selection of a strategy for a case study will affect the entire research process comprehensively. In this case study, both verbal and numeric secondary data was used to increase the reliability. In the interviews, a theoretical framework was also used for guidance, and to supplement the validity of the study.

One of the limitations of using the phenomenological paradigm and a case study strategy are their time-consuming data collection methods. E.g. personal interviews, which can even last several hours depending on the subject and the level of interaction between the parties. This is often reflected in the small number of samples, i.e. interviewees, which could also be seen as a weakness of the chosen paradigm and method. In addition, though the data is relevant in its subjective mean; the validity of this data can be called into question on a general level.

Furthermore, mistakes in the interpretation of the data are possible, and bias in the interviewees is rather difficult to avoid. In this research, the bias showed as longer interviews and more open discussions when the researcher and the interviewee knew each other closely. However, Holstein and Gubrium (1995) have pointed out that this bias is distinguishable part of the interaction between participants in a interview situation, and therefore interview responses are practical productions, and produce meanings. Furthermore, Yin (2003) argues that case studies are still underestimated due to these characteristics reasons. He emphasises that with an elaborate research design and implementation, the criticism towards the case study method can be overcome.

3.2 Data Collection Methods

The primary data for this research was gathered from the in-depth interviews. This data is rich, but due to it is subjective of the interviewees, the reliability of the data is low. These are characteristics to the phenomenological paradigm. On the other hand, the validity of the data is high (Hussey and Hussey, 1997, p. 54). Like in this case study, the in-depth interviews produced much rich data. The reliability was increased by analysing the answers crosswise. Moreover, the validity was verified when the discussions were accomplished on the basis of a theoretical model, i.e. the five-forces framework, and the topics were telecommunication industry specific. This makes the results feasible and possible to generalise.

The best characteristics of the personal interviews are in their interactivity. When the interview is carried out on face to face, the interviewer can lead the conversation more in-depth in the particular interesting matters. Furthermore, the interviewee will have an opportunity to explain more closely his opinions and the point of views. These will guarantee the appropriate data. Additionally, the interview occasion is flexible and the interviewer can have a control all the time.

On the other hand, the personal interview survey technique has its disadvantages, such as that it is time consuming, the possible personal chemistry clashes, and the bias of an interviewee towards the subject or the interviewer. Furthermore, Yin (2003) underlines the weaknesses which can be due to inadequate questions, inaccurate notes and recall, and the reflexivity between the interviewer and the interviewee. By the latter, Yin means that the interviewee tells what he is expecting the interviewer to want to hear.

‘A phenomenological approach suggests unstructured questions...or semi-structured interviews...Questions are likely to be open-ended...’

(Collis and Hussey, 2003, p. 168)

Jankowicz (1997, p. 195) defines the semi-structured interview as *‘...asking questions whose content and sequence are not fully specified in advance’*. He points out that the interviewer should be exceedingly sure of his ground, in order to conduct the interview with a pertinent question sequence and content, when using this interview technique. For all the research objectives in this research the semi-structured interviewing technique was used with open ended questions. Porter’s five-force model was used as a framework for the interviews.

The sample consisted of so-called key informant interviewees. These are persons who have been chosen for the interview *‘...on the basis of their idiosyncratic, specialised knowledge...’* (Jankowicz, 1997, p. 212). The benefits of this approach are that the key informants already identify the general framework and definitions used in the interview through their experience and being acquainted with the subject (Gall *et al.*, 1996; Tremblay 1982, cited by Jankowicz, 1997). Yin (2003) advises to use additional sources in order to avoid excessive interdependency with the key informants, and to explore contradictory evidence.

Therefore, for all the research objectives in this research, secondary data was used. This data was collected from books, but also journals, newspapers, industrial and governmental sources, and their electronic counterparts on the Internet.

The use of the secondary data, which was both precise numeric data and verbal information, makes the approach of this research ‘data triangulation’. *‘Triangulation is the process using multiple data-collection methods, data sources, analysts, or theories to check the validity of case study findings.’* (Gall *et al.*, 1996, p. 574). Many authors emphasise that triangulation will enhance the overall credibility and accuracy of a research (e.g. Cohen and Manion, 1997; Collis and Hussey, 2003; Jankowicz, 1997; McMillan and Schumacher, 2001; Yin, 2003). Furthermore, Yin (2003) argues that the case study is the research method where the triangulation is best applicable.

The principal ethical code of this research towards the interviewees is based on a common code of conduct. McGivern (2003) lists this as:

- Voluntary participation,
- No harm to the interviewees,
- Informed consent,
- Privacy in terms of anonymity and confidentiality
- Transparency, and
- No deceiving subjects.

3.3 Research Process

The personal interviews were carried out in February and March 2006 in Finland and Estonia.

The 10 key informants were either directors or operational level managers by their organisational status, and were selected based on their:

- Earlier experience in Finland either extending broadband services over Elisa's SMP area or starting the broadband service as a VNO,
- Current jobs being a part of Elisa's broadband sales channel, or product management, or working in the operations either planning and building broadband capacity or the customer delivery process, and
- Earlier experience in the international telecommunication markets.

Being a semi-structured interview, there were no exact questions prepared in advance, only pre-defined topics. However, some questions were asked from all the interviewees to stress their earlier experiences in order to avoid making the same mistakes in the future, or to apply them better in Estonia. The following questions were asked from all the interviewees:

- What do you find to be Elisa's strengths in the Finnish broadband market?
- What could have been done in another way or better during Elisa's expansion?
- According to your experience with the Finnish NRAs, what do you recommend for how the relations with the Estonian NRAs should be handled?

Porter's five-force model was used as a framework in the interviews for the topics. These topics were tested and discussed beforehand with the researcher's mentor in Elisa. There was also a pilot interview with a colleague, so as '*...to ensure that... [the interview]... will yield reasonably unbiased data.*' (Gall *et al.*, 1996, p. 316). This rehearsal gave an indication of how to keep the discussed topics within the bounds of the framework being used, and how to avoid in-depth technological issues. Furthermore, the rehearsal gave the researcher an opportunity to gain interviewing skills and look for ways to better conduct the in-depth interviews.

The chosen topics (the entry barriers, new entrants, the threat of substituting products, the bargaining power of the buyers and suppliers, and the rivalry environment) were linked to the research objectives, and were then discussed with the interviewees. This gave opportunities to explore some topics in more depth. Typically, the interviews lasted about one and a half hours. All interviews, except two, were tape-recorded for easier afterwards transcription and analysing, and to ensure the accurateness of the gathered data. One exception was made, and the key informant gave his opinions by the e-mail. Another deviation was an interview from which the notes were done in handwriting due the unavailability of a tape-recorder. These were also included in the results. It was also agreed with the all interviewees, that the researcher could ask more detailed questions afterwards over the phone or via e-mail. This data collection method was also used.

The schedule for arranging and realising the interviews was challenging. During the chosen time period (February – March), there is also a national vacation one week school holiday, which means that the parents usually are also absent from work. Another reason was the flu,

which caused delays. In addition, the actual interviewing time seemed in some interviews to be too short due to the interviewee's job urgencies.

The secondary data adequate for this research was gathered between September 2005 and April 2006. The sources used included journals, newspapers, industrial and governmental sources, and their electronic counterparts on the Internet. This data was both precise numeric data and verbal information. The reliability of this numeric data was high, but its validity for this study could be low in some cases. The same concerns the verbal information.

3.4 Data Analysis

'Qualitative data analysis involves looking for patterns, themes and relationships in the data.'
(McGivern, 2003, p. 285).

Due to the nature of the qualitative paradigm and the chosen research technique – in-depth interviews – the primary data was in verbal mode. Some authors (e.g. Fetterman, 1998; Jankowicz, 1997) prefer the content analysis approach for analysing the data produced by semi-structured interviews. However, many authors argue that the matrix analysis proposed by Miles and Huberman (1994, e.g. cited in Collis and Hussey, 2003; Gall *et al.*, 1996; Yin, 2003) is the most pertinent technique. Although Yin stresses that researchers should first decide the adequate strategy which he suggests to be *'...relying on theoretical propositions, rival explanations, and developing a case description'* (2003, p. 109), this research ignored such a definition as unnecessary.

Therefore, the matrix analysis was used in this research to analyse the results of the interviews. The matrix was grouped in the form of the PESTLE analysis (Appendix X). The discussed topics were placed under the appropriate factors in the PESTLE analysis. McMillan and Schumacher (2001) use the term ‘coding’ of this apportion. Furthermore, the constant comparison technique (Glaser and Strauss, 1967 cited in McMillan and Schumacher, 2001) was used to compare and contrast topics in order to compose a summary of critical and most common points, i.e. the patterns, out of the data. Each summary was linked to themes and theories, if such existed, in the literature review. In addition to this, other tools were also used, such as the SWOT analysis (Appendix X). Based on these tools and methods, the data synthesis is conceivable.

This chapter described the chosen research methodology and the research design and process relating to it. The next chapter – The Results and Analysis – will go through the primary and secondary data by expounding and analysing them.

4 Results and Analysis

This chapter will introduce the gathered data and information from the interviews (Appendix VIII), statistical databases, journals, magazines and other published sources. These results will be presented under the appropriate subheadings, which are the same as the objectives of this research.

4.1 Critical Evaluation of Elisa's Experience of Serving the Finnish Broadband Market

This section will introduce the primary data from the interviews and the secondary data concerning the Finnish Telecom industry and its broadband market, stressing Elisa's experiences. Seven of the ten key informants have earlier experience from the Finnish broadband market and extending Elisa's broadband services. One interviewee has been involved in starting a broadband service through a VNO model. These interviewees have knowledge of sales channels and product management, or of working in operations. The secondary data was gathered from various sources including statistical databases, published company information, newspapers, and their counterparts on the Internet.

The interviewees agreed commonly that the fastest growth stage in the Finnish broadband market is over. It was estimated that the growth rate for 2006 could be 13 – 15%, and 10% for 2007. Furthermore, Interviewee #2 predicted that in 2008, the PLC's petrification point would be reached at an approximated 70% rate. These viewpoints are supported by the recent penetra-

tion figure, according to which 51% of households have a broadband connection (FSTAT, 2006).

4.1.1 Politics and Legislation

The amendments to the Finnish Communications Market Act came into force in the spring of 2005 (Finlex, 2005). However, the biggest challenges outside Elisa's SMP area, which the interviewees brought up, are represented in Table 4.1.1.1.

The Abuses of Finnish Wholesale Broadband Market	
- Access and interconnections of the teleoperator premises and facilities, - ULL and shared access offerings, - Installation charges,	- Other wholesale pricing and price squeeze, - Delivery times - Electronic ordering and fault repair interfaces

Table 4.1.1.1: The abuses of the Finnish wholesale broadband market (source: the interviews).

The interviewees emphasised that the NRAs' impact on these entry barriers was relatively slow at the introduction and growth stages of the broadband market until 2005. Respectively, all the interviewees had experienced that the NRAs' actions were essential for tearing down the entry barriers. This began to help Elisa's expansion into a nationwide broadband provider during 2005. Furthermore, the effect of the NRAs on the profitability of the broadband business was seen as important due to the lowering wholesale prices and the fluent processes. However, the price ceiling decisions by the FICORA (2005c) were not seen in just a positive light. There is a risk that these prices are interpreted as everlasting price levels by the local incumbents.

The long lasting appeals (Finnet, 2005) were seen as examples of the local incumbents' delay tactic, but also as bad examples of unfinished legislation, and the NRAs' powerlessness. Al-

though the NBS' and the government's policies have been to allocate more resources for the NRAs, this bottleneck still exists. The Commission has sent a letter of formal notice, because the Finnish legislation provides insufficient power for the FICORA (Telecompaper, 2005).

The interviewed saw that while executing the tornado strategy, Elisa learned to better exploit its co-operation with the NRAs, e.g. by requesting settlements for discriminating operators. However, these have had negative effects on Elisa's own wholesale pricing. The Gummesson's (1998) 30Rs model could give a more structured and managed way to keep the NRAs and other key stakeholders more balanced.

4.1.2 Customers

In an interview (#2), it was estimated that in the Q1/06, there would be ca. one million residential broadband users in Finland. Four interviewees (#2, #4, #7 and # 10) stressed that the target customers are changing due to the evolvement in the PLC. The potential new customers were seen (#2) amongst those one million users either lacking a PC altogether, or an appropriate one for broadband use. Another potential customer group is the dial-up users, which were estimated to be approximately 250,000 users. These customers are the main street market stage's conservatives (Moore, 2003), or other terms the late majority (Roger, 1995). In the classification of Treacy and Wiersema (1995, cited in Hope and Hope, 1997), these customers could be placed in the third category: the customers who know what they want, even if they have to pay some extra. Furthermore, these customers expect products customised for them. In Porter's (1998) framework these new customers affect the bargaining leverage and price sensitivity factors.

It also came up in four interviews (#2, #3, #4 and #7) that the switching of broadband service providers is expected to increase in 2006, and in larger volumes in 2007. This is backed by an EU broadband user research (McCormick, 2005). In Finland, FICORA is leading a workgroup that has tried to negotiate a mutual understanding between the operators on how to implement an efficient and customer oriented approach for handling these swingers. Five interviewees (#1, #3, #4, #7 and #9) saw that Elisa's participation and collaboration in the workgroups generally is essential to ensure that Elisa's viewpoints and interests are upheld.

4.1.3 Competition

The market penetration competition was seen as analogous to the Finnish mobile phone markets, with signs of hypercompetition (Johnson and Scholes, 2002). However, Elisa manipulated this hypercompetition in the broadband market by its tornado strategy and Moore's (2003) tactical price-point management. On the other hand, the hypercompetition shows as diminishing profits as it was mentioned in two interviews (#7 and #10).

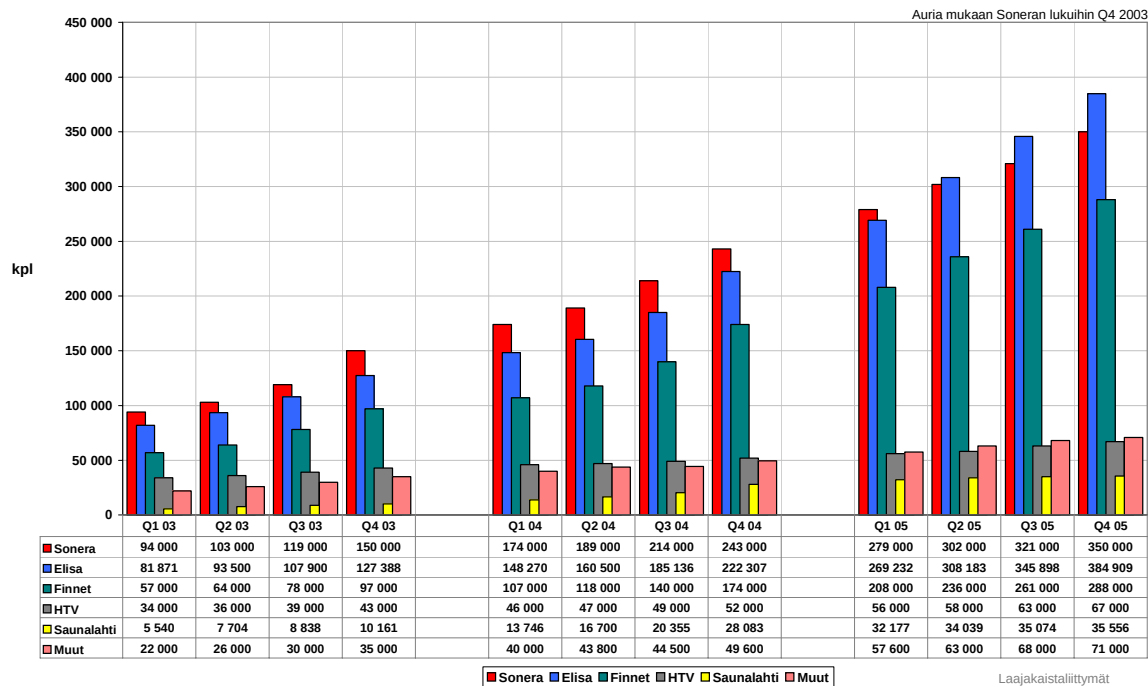


Figure 4.1.3.1: The Finnish broadband market shares and its growth by the main competitors. In the figure, the amount of the subscribers of the Saunalahti broadband service is depicted in its own row and pillar. After the Saunalahti merger Q4/05, Elisa had over 420,000 broadband subscribers (35% market share), which is some 70,000 more than the nearest rival TeliaSonera (29%) has. The third position is held by the Finnet Group (24%) with ca. 288,000 broadband subscribers. ‘Muut’ means ‘the other rivals’. (Source: Elisa).

The market situation in 12/05 is illustrated in Figure 4.1.3.1. In three interviews (#3, #7 and #8), it was told that the Elisa/Saunalahti merger increased the broadband customer base (+35,556). This also meant a 3% addition to the market share. In total, Elisa had 420,000 broadband subscribers with a 35% market share, while TeliaSonera had ca. 350,000 (29%) and the Finnet Group ca. 288,000 (24%) subscribers. In the fourth place was the cable-TV company HTV, which only operates in the capital area. According to the interviews, the chosen strategy for Elisa was the CSF (Johnson and Scholes, 2002).

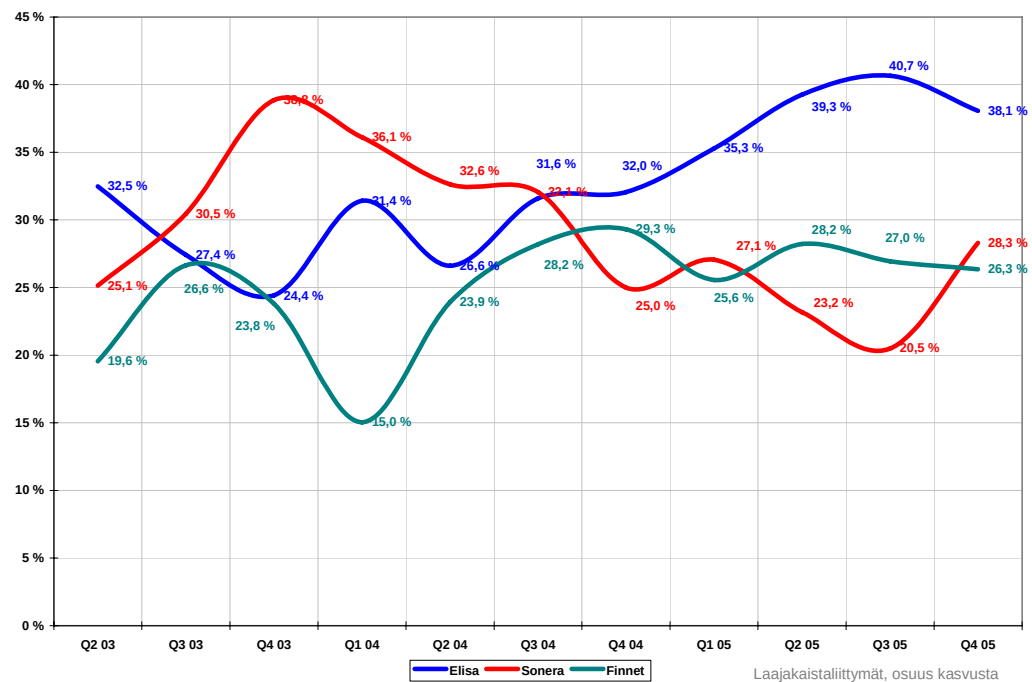


Figure 4.1.3.2: The shares of the broadband market growth in Finland. The comparison is between Elisa, TeliaSonera and the Finnet Group. The tornado strategy's effect can be seen from Elisa's blue curve at the Q2/04, when it was applied. After this, Elisa gained a larger proportion of the market growth than the rivals. A factor that has continued. (Source: Elisa)

The implementation of Elisa's tornado strategy meant a market share growth from 15% behind (01/04) to 20% ahead of TeliaSonera (01/06). This strategy was applied in Q2/04, and its effect could be seen best from the Figure 4.1.3.2. The interviewees agreed commonly that the merger of Telia and Sonera has stiffened Elisa's main competitor's actions. Furthermore, the reorganising of TeliaSonera was seen as an opportunity to widen the gap more.

The Saunalahti merger removed one rival from the market, although the Saunalahti brand was kept alive. Two interviewees (#3 and #4) mentioned that the targeting of the Saunalahti brand for the innovators and early adopters (Roger, 1995, cited in Kotler *et al.*, 2001) was seen more

as complementing Elisa's customer base than overlapping. The Finnet Group's competitive position was seen (#1, #7 and #9) as weakened, when the biggest Finnet companies resigned from the TDC Song co-operation (Kankare, 2006). Nevertheless, the Finnet companies currently have significant market shares in their SMP areas (Figure 4.1.3.1). However, this was predicted in the interviews to be stagnating or even diminishing rather than increasing. On the other hand, one interviewee (#1) stressed the importance of observing the actions of the bigger local Finnet incumbents due to their intentions (e.g. PHP, 2006a) to broaden their domestic market areas. As a rising rival, TDC Song and its collaboration with the Finnet Group's small and medium size companies was named (Finnet, 2006). Furthermore, Ainatel, which acquired FinnetCom's business in the capital area from the Finnet Group (Aina Group, 2006a), was considered a question mark rival. As a potential new entrant to the Finnish broadband market one interviewee (#3) nominated the Norwegian Telenor due to its strategy for becoming the Nordic broadband market leader (Dagens Næringsliv, 2006).

4.1.4 Product

The interviewees told that Elisa is now upgrading its broadband network to the DSL2+ technique. This provides a speed of up to 24 Mbit/s, which is a significant product feature attribute (Kotler *et al.*, 2001) compared to max. 8 Mbit/s in the DSL technique. However, it was mentioned that it would not be a differentiation mean (Porter, 1998), since some operators have already done this upgrade (e.g. Aina Group, 2006b; Finnet 2005a-b). On the other hand, the main competitor TeliaSonera has not announced its timetable yet. In the interviews it came up, that nearly all operators have some kind of WiFi-hot-spots in their offerings. Some Finnet op-

erators have also implemented WiMAX networks in their and TeliaSonera's SMP rural areas (Current Analysis, 2005a; Karvonen, 2005a).

In two interviews (#2 and #10) it was mentioned, that Elisa was the leading reseller of Hewlett-Packard's lap-tops in the Q3/05 by market share. Elisa has bundled its broadband with a very affordable lap-top. This bundle increased the sales, and simultaneously was a differentiating factor (Levitt, 1980 cited in Czinkota and Ronkainen 1995; Treacy and Wiersema, 1995 cited in Hope and Hope 1997; Porter, 1998) from the competitors. Although the competitors followed by also offering lap-tops and PCs as augmented products (Kotler *et al.*, 2001), Elisa maintained its competitive advantage (Porter, 1998) by the differentiated lap-tops and more aggressive pricing, following Moore's (2003) price-point tactic.

Most of the interviews raised the issue of the broadband market's evolvement. Until Q1/06, the speed has been the matter, which has been promoted and sold. When the market evolves, broadband access will be complimented by a host of new services, features and different quality levels (Figure 4.1.4.1), as in the product development cell in Ansoff's Matrix (1984).

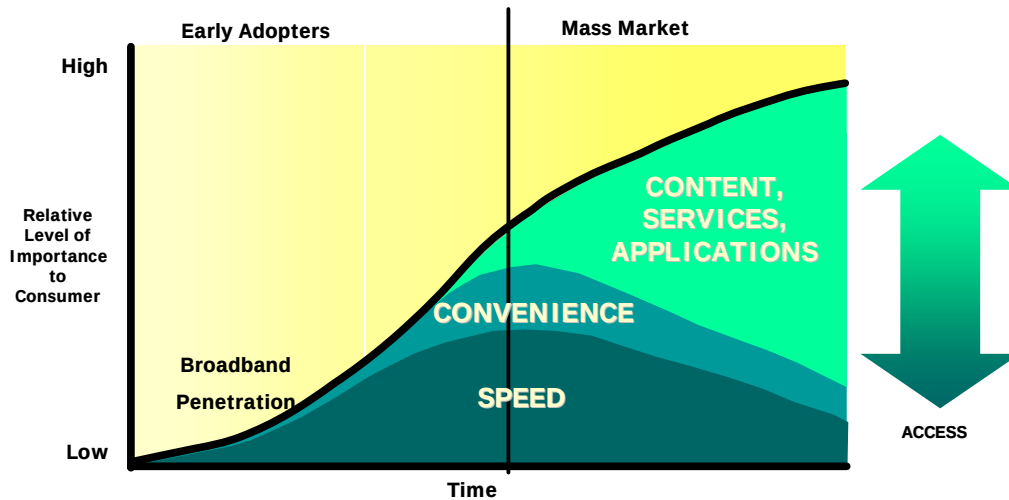


Figure 4.1.4.1: The selling of the broadband features. When the market evolves, the relative importance of the key – featured – selling points to consumers will change. The broadband access will be complimented by a host of new services (Source: Penhune, J. (2005) Broadband and the Digital Home: Strategic Overview. Strategy Analytics. *Broadband & Media*, 13th October, 2005. Helsinki, Finland. p. 4.)

Therefore, the operators are trying to introduce new augmented services (Kotler *et al.*, 2001) for the broadband. E.g. the three-play services are already launched by PHP (2006b). It was stated in the interviews (#2, #3, #7 and #10) that Elisa will launch the new services over broadband later in 2006. Moore (2003) has emphasised the +1 extension to the actual or augmented product, which could even compensate the price reductions, as the interviewee #10 stated.

4.1.5 Price

Two interviewees (#7 and #9) told that at the introduction stage, the SMP operators tried to use the skimming pricing (Czinkota & Ronkainen, 1995; Keegan, 1995). The pricing was forced to change due to the opened competition, and to follow the market prices. According to the inter-

views (#2, #3, #7 and #10), Elisa was the active influencer for the market prices through its tornado strategy's price-point tactic (Moore, 2003). E.g. the lap-tops were priced with a very low, or even a negative marginal in the campaigns (#2), as in penetration pricing (Czinkota & Ronkainen, 1995). As a result of the hypercompetition (Johnson and Scholes, 2002), the broadband subscriber prices have declined a total of some 56% in two last years (MINTC, 2006a-b). On the other hand, this has also assisted Elisa to the market leadership (Figure 4.1.3.1).

CITY AND OPERATOR	PRODUCTS					na = not available			
	ADSL					Premises LAN (prices from. + speed)	Cablemodem		
	256	512	1M	2M	4M		256/ 64	512/ 128	1M/ 128
HELSINKI,VANTAA & ESPOO	17,4	19,8	23,8	33,9	41,9		16,9	17,9	21,9
Elisa	17,9	19,9	24,9	34,9	44,9	15,90 (128/128)	16,9	17,9	21,9
Sonera	17,5	19,9	23,9	33,9	43,9	na	na	na	na
DNA	17,4	19,8	23,8	34,0	43,8	16,90 (256/256)	na	na	na
Saunalahti	17,9	19,9	24,9	34,9	44,9	na	na	na	na
GoHome (GoVerkko)	17,9	19,9	23,9	36,0	41,9	na	na	na	na
HTV	na	19,9	25,0	36,0	45,0	na	17,9	na	na
OULU + Haukipudas, Kempele	19,9	24	32	42	45				
Elisa	19,9	24,9	33,0	45,0	54,0	15,90 (128/128)	na	na	na
Sonera	23,9	24,0	32,0	44,0	59,0	na	na	na	na
DNA (OPOY)	19,9	25,0	33,0	47,0	54,0	19,90 € (512/512	na	na	na
Saunaverkko	19,9	24,5	32,0	42,0	45,0	25 (1M)	na	na	na
Saunalahti	19,9	24,9	33,0	45,0	54,0	na	na	na	na
GoHome	na	27,5	na	49,0	na	na	na	na	na
ROVANIEMI	25,9	27,5	37	47	59				
Elisa	25,9	33,0	37,0	47,0	59,0	15,90 (128/128)	na	na	na
Sonera (Rovaniemi ja entinen r	25,9	33,0	37,0	47,0	59,0	na	19,9	25,0	29,0
DNA	na	na	na	na	na	na	na	na	na
Saunalahti	25,9	33,0	37,0	47,0	59,0	na	na	na	na
GoHome	na	27,5	na	49,0	na	na	na	na	na

Table 4.1.5.1: The retail prices in three Finnish locations in the week 15/06. The capital area (Helsinki, Vantaa and Espoo) is part of the Elisa's SMP area. Oulu is the SMP area of Oulun Puhelin Plc, and Rovaniemi is part of the TeliaSonera's SMP area. The retail prices are in euros and include the VAT of 22%. (Source: Elisa)

The broadband prices vary by location. The recent retail prices (week 15) are shown in the Table 4.1.5.1. The comparison between the prices indicates that the competition is harder at the densely populated locations. I.e. the bigger customer potential, the lower the prices due to economy of scale, which was also brought up in two interviews (#1 and #7). Another item worth notice is that according to Moore's model, the 'gorilla', i.e. the market leader Elisa in its own SMP area, can keep its prices slightly higher than the rivals. A fact, which was also brought up in two interviews (#2 and #10) as an example of the adaptability of Moore's model to the mass-marketing of technology (2003). Furthermore, it seems that Elisa is still practising the penetration pricing (Czinkota and Ronkainen, 1995) outside its own SMP area. There are also signs of differentiation (Porter, 1998) in Oulu, where there is greater variation between the rivals on the pricing of the different speed levels.

4.1.6 Place

Four interviewees (#2, #3, #7 and #10) saw channel management as a one of the CSFs (Johnson and Scholes, 2003) in executing Elisa's tornado strategy. Elisa's own channels (the retail shops, outbound and inbound call centre, and electronic point of sale) were supplemented by two household electronic retail chains (Markantalo and Gigantti) in terms of market development (Ansoff, 1984). It was recognised that Elisa's own sales channels were more cost effective and easily manageable than the outsider channels. This gave Elisa excellent opportunities for quick promotions. On the other hand, two key informants (#2 and #10) stressed that the outsider channels were also a differentiating factor (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998). The rivals did not have such geographically widespread outsider channels as Elisa, and could not sell as much. Therefore, it could be argued that Elisa had

not only the operational excellence (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998; Moore, 2003) but also the better 7Ps marketing mix including the people and processes (Grönroos, 2000).

A half of the interviewees stated that Elisa had done some strategic withdrawals from the sparsely populated rural areas outside the reach of Elisa's network. The wholesale prices of the local incumbents in these areas were so high compared to the customer potential that the profit margin was too thin. These withdrawals can be interpreted as market consolidation as suggested in Ansoff's Matrix (1984), or a focusing (Porter, 1998).

One interviewee (#1) told that Elisa's own DSLAM capacity is built, if as a rule of thumb there is 60% penetration of the households and the 20% market share exceeds 4,000 potential broadband subscribers. The borderline cases are further evaluated according to the number of the potential business customers. This calculation concerns the network outside Elisa's own SMP area. This rule was used in section 4.2.2 to illustrate the Estonian broadband market's potentiality.

4.1.7 Promotion

Aggressive promotion as a part of Elisa's tornado strategy was seen as essential in the interviews. This promotion was seen (#2, #3, #4 and #10) to lead to success as the most appealing telecommunications brand in Finland. Telecommunications were in 2005 the third largest (ca. 57 M€) industry in Finland, measured by the used advertisement budget (Elisa, 2006). Elisa's investment in media campaigns just for the broadband advertising was 3.2 M€. This effort has

meant an enduring number one position for Elisa in the broadband buying preference measures (Figure 4.1.7.1).

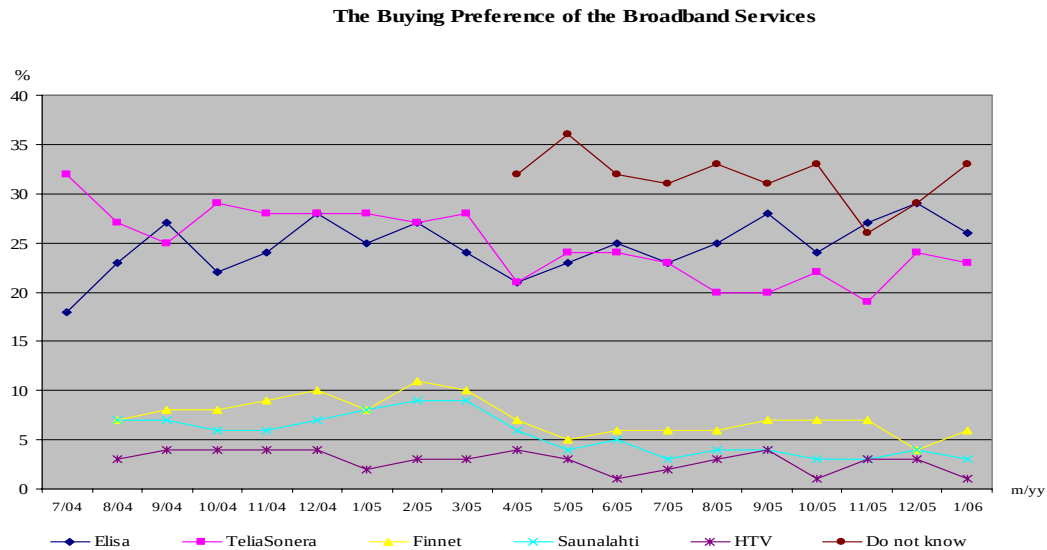


Figure 4.1.7.1: The development of the broadband buying preference. During the tornado strategy's execution, Elisa gained TeliaSonera and began to increase the excess in August 2005. The bottlenecks in the delivery process can be seen from the figure. E.g. the successful Christmas sale in 2004 blocked the delivery process, especially on the outside of Elisa's own SMP area, which reflected as a decrease in the curve till 4/05. (Source: Elisa, data provided by IRO Research)

Furthermore, the brand campaigns has used two fictional employee characters (Sauli and Pauli), that have become the popular symbols of Elisa. This phenomenon is also backed by theories, as Kotler (1999) emphasises that strong brands usually have something (e.g. the slogan or symbol) from which the customers can identify it.

One interviewee (#4) emphasised that Elisa's customer loyalty program (see 1.1) has also had a positive effect on the customers' buying preferences and decisions. This viewpoint is supported

by Treacy and Wiersema (1995 cited in Hope and Hope, 1997) through their argument of customer intimacy and, as one of its factor, a profound long-term customership. Additionally, the loyal customers tend to be the profitable customers (Reichheld, 1996 cited in Hope and Hope, 1997).

4.1.8 Findings

The CSF (Johnson and Scholes, 2002) of Elisa was the tornado strategy (Moore, 2003; Hautamäki *et al.*, 2005). This strategy was composed from factors such as channel management, brand, aggressive mass-marketing, and active price management, and these factors manifested themselves as more efficient and extensive pursuit of customers than among the rivals. Currently, the Finnish broadband market has turned to the late maturity stage of the PLC (FSTAT, 2006). Now the key question is how Elisa will be able to persuade new customers, i.e. the conservatives, to enter the market (Porter, 1996; Moore, 2003; Hautamäki *et al.*, 2005). Furthermore, the relative importance of the key – featured – selling points to consumers will change (Moore, 2003; Penhune, 2005; Hautamäki *et al.*, 2005). The CSF for Elisa is how it is able to manipulate its marketing mix corresponding to the PLC's late maturity market. Moore's (2003) ideas of the high-tech adaptation process and relating tactics, or the adapted HBS's combination of the PLC and 7Ps (Grönroos, 2000), can be used to assist in illustrating the evolution of the markets and the pertinent marketing mix, and, furthermore, the adjustments required in the processes. Effective segmentation strategies (Porter, 2001; Moore, 2003), could help to allure new subscribers, to boost the brand loyalty and to reduce the churn, as well as to increase the ARPU. Moreover, Ansoff's Matrix (1984) gives a sound foundation for the product and market

strategies, while via Porter's (1998) framework the trends and discontinuities in the industry's forces can be predicted.

4.2 Analysis of the Estonian Telecom Industry and Broadband Market

This section represents the data from the interviews and secondary sources. Five of the ten key informants have experience from the international telecommunication markets, and three have also empirical knowledge of the Estonian Telecom industry. The remaining five have earlier experience from the Finnish broadband market. The most important secondary data sources were the Estonian Statistics' (ESTAT) databases, and the Commissions Staff Working Document (2006). Additionally, the company web-pages, journals, newspapers and their counterparts on the Internet were used.

Four interviewees (#3, #5, #6 and #7) strengthened the secondary sources' indications about the Estonian telecom industry being practically a monopolistic market. The incumbent ET with its subsidiaries, Elion and EMT, rules the industry. Elisa and Tele2 are the main competitors to EMT in the mobile phone business. Currently, Starman seems to be Elion's only broadband rival worthy of consideration, although it is mainly using different technology for its service.

4.2.1 Politics and Legislation

Three interviewees (#3, #5, and #6) emphasised that Estonia has developed very rapidly after its independence into one of the world's leading countries in the citizens' access to a variety of e-services (Commission, 2006; Point Topic, 2006). The government's strategy is to widen the broadband access available over the nation in order to enable the use of e-services for the in-

habitants. Additionally, the strategy includes the creation of new jobs for the rural areas, promoting working from home (Kalamees, 2005). The interviewee #6 told that the government is racing the operators against each other not only for the rural areas but also for the new suburbs, and subsidising the operator with the lowest bid. The government has allocated 640,000 euros for this purpose in 2006 (Kalamees, 2005).

Being a member of the EU, Estonia shares the same fundamental legislation for telecommunications and competition as other EU nations. This was seen by the interviewees as essential to improving the availability of the services and to adding competition. However, two key informants (#5 and #6) told that there is neither a functioning wholesale market nor fair competition in the broadband market. Moreover, many operators have found the NRAs' actions cumbersome and prolonged, which have been alleged to be the reason for Tele2's withdrawal from the Estonian fixed-line market (Heinsalu, 2005; Karlberg, 2005b; Tele2, 2005b). The EU Commission (2006) has also noticed these grievances and the absence of SMP obligations for the incumbent's wholesale products, and has formally approached the Estonian government. Therefore, the wholesale market has not opened yet as it should, as it was stressed in two interviews (#5 and #6). The ULL pricing, the absence of bitstream and shared access products, and the access denial to Elion's telecommunication premises are examples of this. If the incumbent is following its main owner's policy in obstructing the competition in the broadband market (Svenska Dagbladet, 2005), it will mean harsh times to the competitors. The interviewees told, based on their experiences, that this would reflect to Elisa e.g. as a weaker profitability, unless its strategy is based on technologies which keep the incumbent's role as minimal as possible.

In three interviews (#1, #4 and #5), doubts emerged towards the existence of the Estonian national or municipal databases, and their accuracy in processing the data. This referred e.g. to the dwellings and their addresses, accommodation, equipment, and especially the wirelines. Also a concern rose about the possible difficulties in getting them from the local authorities.

4.2.2 Customers

Two interviewees (#5 and #6) emphasised entrepreneurship as an Estonian characteristic. Furthermore, they described the Estonian customers as innovators and early adopters (Roger, 1995, cited in Kotler *et al.*, 2001; Moore, 2003) of new trends and ideas. This viewpoint is supported by the attitude of the young adults who are said change the cafés, if the first one does not have a wireless Internet connection (Tervola, 2006). In table 4.2.2.1 can be found a few comparisons between the Estonian and Finnish demographics.

	Estonia	Finland
Population density [inhabitants per km ²]	31	15.5
Population density in the capital area [inhabitants per km ²]	120.2	409.9
Living in the cities	67.4%	70.1%
Banking on line	>70%	66%
Expenditure of income in communications	ca. 5.8%	3.7% (2001 – 2002)

Table 4.2.2.1: Comparisons between some of the Estonian and Finnish demographics (Sources: ESTAT, 2006b; ESTAT, 2006d; FiCom, 2006; FSTAT, 2003; FSTAT, 2006b; Kuntaliitto, 2006; Point Topic, 2006).

As Table 4.2.2.2 suggests, the Estonians used their money to the sixth most (126 €/household member/year) in telecommunications in 2004. Put it in another way, 10.50 € per month (ESTAT, 2006d) for telecommunication services. This gives a rough estimation of the entire Estonian telecommunication industry's revenue as ca. 170 M€ annually, and this is expected to rise.

	Whole country	Harju county	..Tallinn	..Harju county, Tallinn excl.	Järva county	Lääne-Viru county	Pärnu county	Rapla county	Saare county	Tartu county	Võru county
Total expenditure	2 147	2 520	2 489	2 621	2 104	2 156	2 077	2 104	1 949	2 148	1 976
Food and non-alcoholic beverages	607	635	619	684	641	572	624	670	593	592	620
..bought food and non-alcoholic beverages	537	590	591	586	522	497	534	565	485	510	506
..self-produced or received free of charge food and non-alcoholic beverages	70	45	29	98	119	75	90	104	108	82	113
Alcoholic beverages	40	44	42	51	41	40	33	46	40	42	35
Tobacco	34	35	32	43	41	47	26	45	34	31	24
Clothing and footwear	129	161	165	150	98	137	89	141	113	135	127
Housing	331	408	423	361	264	284	292	279	227	332	276
Household equipment and operation	120	128	126	132	97	192	108	110	160	123	117
Health	73	75	73	82	54	64	63	98	51	78	82
Transport	236	318	340	249	225	195	237	215	190	248	223
Communication services	126	149	148	152	121	126	113	116	134	120	119
Recreation, leisure and entertainment	143	169	168	173	158	192	162	132	149	156	126
..newspapers, magazines and books	20	20	21	18	21	26	26	28	24	23	23
Education	35	56	44	92	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hotels, cafes, restaurants, ...	74	105	89	154	75	62	63	74	58	68	66
..eating out	72	101	85	150	75	62	63	74	58	68	66
Miscellaneous goods and services	114	142	139	152	112	128	113	95	101	99	94
Non-monetary consumption	35	48	42	66	21	30	68	35	14	36	22
Consumption expenditure	2 098	2 472	2 450	2 541	2 039	2 088	2 025	2 082	1 892	2 086	1 931
Other expenditure	49	48	39	80	65	68	52	23	58	62	45

Table 4.2.2.2: The expenditures in Estonia. The average expenditure per household member in Estonia in a year, by the eight counties where the expenditure is over 19,000 EUR. The values in the table are shown in euros with a currency rate 1 € = 15.6466 EEK. In Tallin (148 €) and the rest of the Harju county (152 €), significantly more money is used for the communication services. Besides these areas, only the Saare county (134 €) has an expenditure over the average 126 €. This might be caused by the fact that the county is an island, where the needs for telecommunication could be greater than on the main land on average (Source: ESTAT, 2006d).

The population density in Estonia is illustrated in Figure 4.2.2.1, and by administrative units in Appendix XII. The biggest cities after Tallinn are Tartu, Narva, Kohtla – Järve, and Pärnu (ESTAT, 2006c).

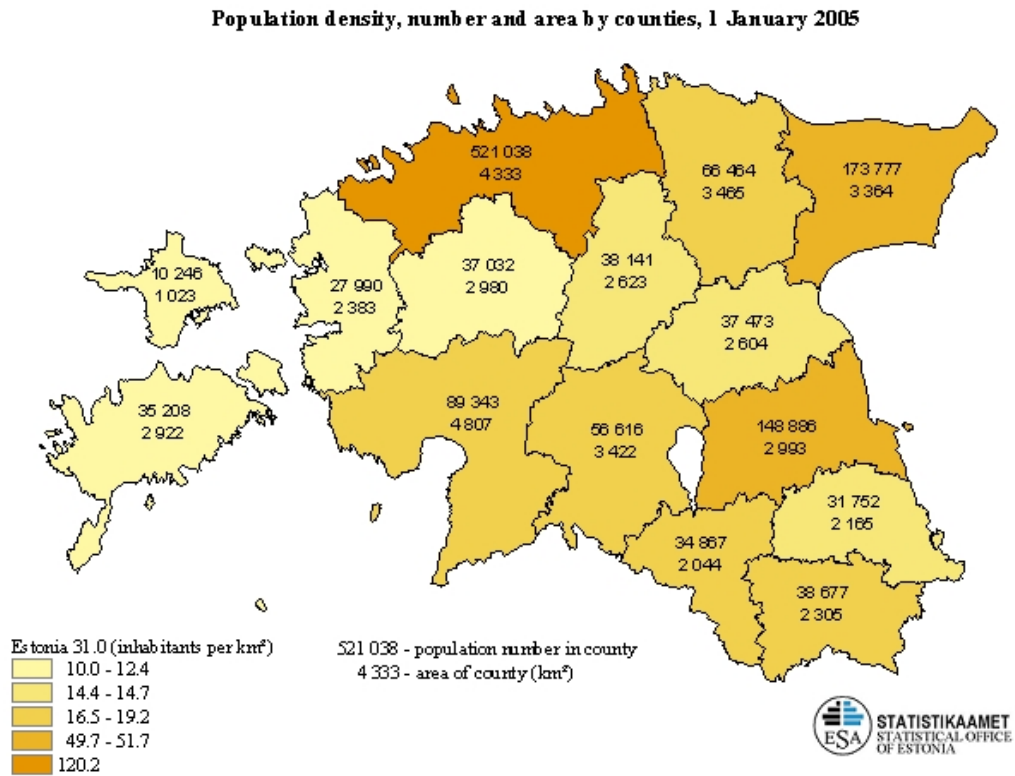


Figure 4.2.2.1: The population density in Estonia by county. This can be found in table format in Appendix XII (Source: ESTAT, 2006b).

The Estonian cities with over 10,000 inhabitants can be seen in Appendix XI with an illustration of the disposable incomes and expenditures in the communication services per household member in a year in the cities. By using the rule of thumb given by the key informant #1, the minimal number of possible Elisa broadband customers would be 1,116 by the assumption of a 20% market share. This could mean a total of some 125,000 broadband customers for Elisa. If the assumption is raised to a 30% market share in these cities, the minimum amount of customers in Paide would be 1,674 customers, and the entire potentiality would be almost 218,000 customers. On the other hand, if the minimum customer number is limited to 4,000 like in Finland, it would mean some 121,000 customers with the 20% market share and approximately

187,500 with the 30% market share. However, it could be argued that the penetration could be higher than the 60% used in the calculation – even over 70%, which the key informant #2 predicted to be Finland's penetration figure in 2007. Based on the information from the interviews, according to which Estonians are inclined to adopt technology without prejudice, and the Estonian government's strategy and efforts for e-governance and remote working, the penetration could rise to as high a level as the fixed-line phone penetration in the western EU countries was, i.e. 80 – 95%. On the other hand, the wireless and cable modem broadband solutions could fashion a 1/3 of the total broadband market.

4.2.3 Competition

Although, there are 66 broadband operators in Estonia (Commission, 2006), two interviewees (#5 and #6) told that broadband competition only exists in the cities where the cable-operators Starman and STV have their networks. The public open WiFi networks could be also seen as competitors, and networks are found in many Estonian towns as it was mentioned in four interviews (#3, #5, #6 and #7). It was also said that many restaurants and hotels have their own open WiFi networks, a phenomenon which was also supported by the secondary sources (e.g. Tervola, 2006). Based on the figures (Table 1.4.1) announced by the operators, it could be argued that the penetration rate per household in 12/05 was something like 30 – 35%, and furthermore that Elion has increased its market share even more. In addition, Elion was said (#6) to make a powerful entry into the IT market selling PCs and laptops as a part of its broadband campaign. One interviewee (#6) told that Tele2 is only offering mobile phone services actively, although it has continued to serve its existing fixed phone customers (Current Analysis, 2005b).

One interviewee (#3) emphasised that acquiring Starman could be a good entry strategy. Starman is the broadband market's number two, has its own cable network coverage which is expanding (interviewee #6), and is offering pay-TV, broadband and voice services to an existing customer base (Starman, 2006). When the DSL technology currently fashions just 48% of the market, and Starman is ruling the majority of the cable modem market (Commission, 2006; MINTC, 2006a; Starman, 2006) it could be argued that these factors could offer significant synergies for Elisa. The overlapping of these businesses would be minimal. In the broadband market would be a variety of the technologies (DSL2+, cable modem, HSDPA, 3G, WiFi and WiMAX) complementing each other. Moreover, the synergy would come from Starman's existing pay-TV collaboration, which could be offered as part of the triple-play services over the DSL2+. Furthermore, the know-how from Elisa's Finnish cable-TV could be transferred to Estonia and vice versa. An additional attraction is that Starman is a publicly noted company on the Estonian stock exchange.

4.2.4 Product

One key informant (#6) stated that Elisa would probably sell laptops bundled with broadband subscription like in Finland. However, this is not a differentiation mean (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998) due to Elion's significant position in the Estonian laptop market (Elion, 2006b). The interviewee #6 told that other major players in the laptop market are domestic manufacturers, while the traditional pure IT retail chains have almost vanished.

TeliaSonera's announcement of launching WiFi services in Estonia (Ny Teknik, 2005) as if it were something new and sensational was considered (#6) a sign of the company's poor knowledge of the Estonian telecommunication market. The WiFi networks are widespread in Estonia and have already been used there for years (see 4.2.2 and 4.2.6).

Most of the interviewees pointed out that the chosen technological platform also influences the end-user offerings through the speed and the service coverage, e.g. in the case of the DSL2+ technology, by which higher speeds could be offered to the customers than with the DSL technology (Table 4.2.4.1). The interviewees (#1, #5 and #7) estimate that the 20–24 Mbit/s speed provided by the DSL2+ technique would mean less than one kilometre long local loops. With the 12–18 Mbit/s speed they would be two kilometres, which is also backed by the secondary data (Karvonen, 2005b).

Length of Local Loop [metres]	Theoretical Maximum Downstream Speed
1500	8 Mb/s
2000	7 Mb/s
2500	5.5 Mb/s
3000	4 Mb/s
3500	3 Mb/s
4000	2 Mb/s
4500	1 Mb/s
5000	512 kb/s
over 5000	256 kb/s

Table 4.2.4.1: The theoretical lengths of the local loop in the DSL technique. The faster the speed, the shorter the local loop. Regional differences do exist due to e.g. the quality of the cable (Source: Elisa).

The importance of the access to the operator facilities will rise, because the long interconnection cables shorten the length of the local loop to the customer, which is a fact that the majority of the interviewees noticed. Therefore, three interviewees (#1, #8 and #9) further stressed the

DSLAM's positioning. It should be as close to the incumbent's fixed-line concentrator as possible, i.e. preferably in the same premise. This allows non-discriminating and equal terms and conditions also for other operators than just the incumbent's service provider. On the other hand, if the used technology were wireless, e.g. the WiMAX, this dilemma with the local loops would not even exist, as the interviewees pointed out. However, other issues like security would then rise, which was mentioned in two interviews (#1 and #5).

The absence of the wholesale products was mentioned in two interviews (#5 and #6), and this is also supported by the Commission's (2006) working document. E.g. the ULL, shared access, bitstream, access to ATM network, and operator premises are the products which would relate to broadband production.

4.2.5 Price

In Table 4.2.5.1 are depicted the prices of Elion and STV. Starman's prices were no longer available on the Internet to Finland from the mid-March to end of April. The traffic from Starman's network was blocked due to Denial Of Service (DOS) and other hostile attacks towards the Finnish hosts. The Estonian price level compared to the Finnish (Table 4.1.5.1) seemed to be in generally at the same level, but there were also differences. The DSL retail prices in Elisa's capital SMP area are somewhat lower than in Estonia. Correspondingly, the Finnish sparsely populated areas have a higher price level than in Estonia. However, in Estonia, the upstream, i.e. the speed from the user to the network, is just half of the Finnish return channel. Furthermore, the premises LAN and cable modem subscriptions are ca. one half of the Finnish price level. Additionally, in Estonia, the upstream in the cable modem connections is higher.

CITY AND OPERATOR		PRODUCTS									
							na = not available				
		ADSL				Premises LAN connection (starting price + speed)	Cable modem				
	Initial charge	512/128	512/256	1M/256	2M/256		1M/256	2M/512	3M/640	4M/640	8M/768
TALLINN											
Elion	n/a	22.05	n/a	31.64	n/a	7.35 (256/256)	n/a	n/a	n/a	n/a	n/a
Elion	n/a	n/a	n/a	n/a	n/a	10.55 (1M/1M)	n/a	n/a	n/a	n/a	n/a
Elion (double-play: fixed line telephone)	offer	n/a	16.94	25.25	34.83	15.02 (1M/1M)	n/a	n/a	n/a	n/a	n/a
STV	15.40 - 105.45	n/a	n/a	n/a	n/a	n/a	15.40	31.38	60.14	89.48	204.52
Starman	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 4.2.5.1: The broadband prices of Elion and STV as per the 15th of March 2006. (Sources: www.elion.ee, www.stv.ee)

The absence of the wholesale products makes the incumbent's offering to other operators discriminating. The interviewees stressed that this will lead to price squeeze in comparison to the incumbent's retail prices (Table 4.2.5.1), which is also noticed by the EU Commission (2006).

4.2.6 Place

Three interviewees (#1, #3 and #7) brought up the issue of the rather limited telephone network in Estonia. This limitation has its origin in the former Soviet Union's telephone policy. Furthermore, some interviews (#1, #4 and #9) raised misgivings about the wirelines in the apart-

ments, and especially in block of flats. However, one interviewee (#5) told that actually the fixed-line access network covers all the major cities due to prompt building after the independence. Furthermore, he emphasised that the missing wirelines in the apartments are common business practise in Estonia, which the customers acknowledge, and are thus willing to pay the cabling costs. On the other hand, Elion has had difficulties in renting ULL. Two interviewees (#5 and #6) wondered whether it was more of a question of a physical lack or Elion's strategy to protect its monopoly, a conduct which the Commission (2006) has also recognised.

Four of the interviewees (#3, #5, #6 and #7) recognised the significance of the wireless networks in the Estonian culture and the business environment. As a part of the Estonian information society, there exists the idea of the widely spread free open WiFi networks. Additionally, there are also a large number of WiFi networks with a charge like Elisa's. Furthermore, the WiMAX technology has started to spread (e.g. Elion, 2006a), and Levira has opened the wholesale market for its network. The interviewee #5 told that Levira has been very active in selling capacity from its WiMAX network to the ISPs and other service providers. This could be interpreted as the government's strategy to extend the broadband service coverage, and simultaneously to open wholesale markets outside the fixed network's coverage. However, this might just be a policy for ensuring broadband services in the rural areas.

In one interview (#5) it came up that Elisa is currently collaborating with Baltic Optical Network, intending to provide fast connections for the business customers in three Baltic countries. Elisa could exploit this optical trunk network as the backbone of its broadband services. Two interviewees (#5 and #6) stated that Elisa will roll out a residential Internet access solu-

tion based on the DSL2+ technology in the spring of 2006. The service will feature a 24 Mbit/s speed. Elisa's DSL2+ network will be available to 85% of the households in Tallinn in 12/06. Two interviewees (#3 and #6) mentioned that Elisa has existing sales channels for the Estonian mobile markets. This can be a competitive advantage and differentiation factor (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998) compared to other new entrants. However, like the experience from the Finnish growth market suggests (#2 and #10), it is essential to also have outsider channels for the tornado stage (Moore, 2003; Hautamäki *et al.*, 2005) to guarantee the ease of purchasing. Therefore, channel development and management have to be applied.

4.2.7 Promotion

Four interviewees (#3, #5, #6 and #7) stressed that the Elisa brand is already known in Estonia due to its mobile phone activities. However, this brand was first known as Radiolinja, as in Finland, but was changed together with the starting of the new Elisa (#5). Elion has raised juridical actions against Elisa claiming that the Elisa brand name is too similar to its own. This dispute is still under the authorities' consideration (Tänavsuu, 2005), and according to the key informant #6 it could even take years before the judgement is given. By that time, the entire claim will have lost its meaning (#6).

4.2.8 Findings

Estonia is predicted to enjoy good economic growth also in this year (IMF, 2006). The telecommunication industry is monopolistic and is ruled by the incumbent ET and its subsidiaries

Elion and EMT, as it was stated in the interviews, and backed by the EU Commission (2006). The EU wide trends of the decreasing fixed phone and increasing mobile phone businesses are the same in Estonia (Commission, 2006; Karlberg, 20005a; Äripäev, 2006). However, the current 53% fixed-line penetration means potential broadband users. The interviewees acknowledged that the broadband market is in its growth stage (Commission, 2006), but it could be argued that Moore's (2003) tornado stage has not yet begun due to the undeveloped wholesale market (Commission, 2006). Two key informants stressed the NRAs' powerlessness to execute the EU regulations and SMP obligations (Commission, 2006; Heinsalu, 2005; Tele2, 2005b). Due to this, the Commission (2006) will designate pressures towards the Estonian government and optimistically the change could happen in this year. Two interviewees emphasised that the Estonians are enthusiastic towards adopting new technologies and applications (Roger, 1995 cited in Kotler *et al.*, 2001, Moore 2003; Point Topic, 2006). Furthermore, three interviewees highlighted the cable network's significant role (Commission, 2006; MINTC, 2006a) in the Estonian broadband market. These factors could mean that Estonia is also a very attractive market for the triple-play service and other applications via the broadband connection, when the market has evolved to that stage. The cable operator and broadband market's #2, Starman, seems to be a potential acquisition target, like one interviewee stated. The bare broadband access market was said in the interviews to be shared in the next 12 – 18 months.

5 Conclusions and Recommendations

This chapter introduces the conclusions made on the basis of this research, but also the limitations of this research.

5.1 Critical Evaluation of Elisa's Experience of Serving the Finnish Broadband Market

Active dialogue with the NRAs is still an important aspect of the development of not just the broadband market, but the Finnish telecom industry as a whole. Therefore, Elisa should continue its dialogue with the NRAs through lobbying and contributing in the different FICORA workgroups. This collaborative and influencing action should be applied in a better manageable way than previously, e.g. according to Gummesson's 30Rs model (1998), which depicts all the stakeholders as trying to exploit the best balance between them.

Based on the broadband growth (ca. 13% in 2006 and ca. 10% next year) as estimated in the interviews together with the recent penetration rate (51%), it might be argued that the Finnish broadband service has moved to the saturation stage of the PLC, or to the main street stage in Moore's model (2003). The interviewees suggested further market penetration, and for Elisa to apply both the product and market development means (Ansoff, 1984) in the saturated Finnish broadband market. The new customer segments to allure (Porter, 1996, cited in Hope and Hope, 1997) are: a) the customers with analogue modems and presumably with insufficient PCs, b) the customers with a PC, but no Internet connection or experience, and c) the customers without any earlier PC or Internet experience. The customers in the classes a) and b) are the late majority in Roger's (1995, cited in Kotler *et al.*, 2001) adoption process model, or the con-

servatives in Moore's terms (2003). According to these theories, the c-class consists of the so-called laggards or sceptics. According to Treacy and Wiersema (1995, cited in Hope and Hope 1997), a firm needs to define its customer intimacy strategy in the saturated market. The customers are willing to pay more for the products they want. This product development (Ansoff, 1984) means that the broadband products need to be customised for the different customer segments e.g. offering new services and applications (Penhune, 2005). Furthermore, Moore's model (2003) suggests the same for the conservatives, by which name he calls the late majority. These approaches and Moore's +1 tactic could give Elisa a chance to increase the ARPU even if the prices of the bare broadband access continue to erode.

Two interviewees emphasised aggressive advertising through the different medias as a part of Elisa's tornado stage strategy. This gained the mind-share and buying preference for the Elisa brand, and Moore's price-point tactic (2003; Hautamäki *et al.*, 2005) could be applied to Elisa as the price leader. The promotion campaigns and strategies were seen as easier to implement outside of Elisa's own SMP area. In these areas Elisa could exploit the marketing mix (Kotler *et al.*, 2001) without the SMP restrictions, and their reflections on pricing (i.e. price squeeze accusations). Furthermore, Elisa's own sales channels were recognised as important in carrying out the promotions.

5.2 Analysis of the Estonian Telecom Industry and the Broadband Market

Estonia joined the EU in 2004 and is still working to align its national telecommunications laws and regulations with those of the EU. As it came up in the interviews and the secondary data, both the EU and other operators have found that this is happening too slowly, especially

in the wholesale market (Commission, 2006; Heinsalu, 2005; Tele2, 2005b). However, Levira's WiMAX network (Paimets, 2006) and its sales activity, which the key informant #5 stressed, could be interpreted as the Estonian government's strategy to extend the broadband service coverage (Kalamees, 2005), and simultaneously to open the wholesale markets outside the fixed network's coverage. However, this might just be a policy for ensuring the broadband services in the rural areas.

The Estonian lifestyle exploiting the communication services took a giant step after the independence, and according to the interviews this shows in many aspects of the adaptation of new products and ideas. This was also backed by the secondary sources (Commission, 2006; Point Topic, 2006). The penetration of fixed-line phone was initially rather low (53%), and nowadays has a decreasing trend. On the other hand, in the end of 2004 there were ca. 2.7 times more mobile phone subscribers (1.26 million) than traditional fixed phones. Furthermore, the free WiFi networks are also an excellent example of the unbiased adoption of new technologies in the Estonian culture. These factors will offer a sound ground and genuinely good possibilities for innovative new communication services in Estonia.

According to the interviews and statistical databases (ESTAT, 2006a-h), Tallinn and the entire Harju county appear quite a lucrative market due to their small geographic area and dense population. Furthermore, the wealthy households are located mostly in that area. The other big cities also have potential. The economic growth will continue in Estonia (IMF, 2006).

The estimated penetration rate of 30 – 35% indicates that the Estonian broadband market is somewhere around the half-way point of the growth stage in the PLC. Yet, as it was estimated in the interviews, this could still mean 12 to 18 months of tornado stage before the market is shared. On the other hand, the tornado stage might not appear at all, if the competition did not open. Furthermore, true competition would not begin unless a proper wholesale market evolved.

5.3 Key Issues for Elisa's Entry to the Estonian Broadband Market

In the case of Elisa, it is too early to state whether Elisa would belong to the proactive or reactive category in the internationalisation model (Czinkota and Ronkainen, 1995). Elisa has aspects (Table 5.4.) that fit in the both categories. There are also both internal and external change agents that influence the Elisa's internationalisation process.

Major Motivators for Elisa to Internationalise	
Proactive	- Profit Advantage - More profit from abroad in the business where the trend is a diminishing revenue - Exclusive Information - Elisa has demonstrated its ability to increase its market share under the hypercompetition in the broadband markets in Finland - Managerial Urge - A competitive Management Group with experience of international marketing - Economies of Scale - Better exploitation of the rising volumes in the operations and increasing bargaining power towards the suppliers
Reactive	- Competitive Pressures - All the major European telecommunication firms seek new market areas - Saturated Domestic Markets - Finnish broadband market is at its late maturity stage - Proximity to Customers - Following the Elisa's business customers in their internationalisation process
Change Agents in the Elisa's Internationalisation Process	
Firm Internal	- Enlightened and New Management - A competitive Management Group with experience of international marketing - Significant Internal Event - New main owner
Firm External	- Demand - Growing broadband markets in Estonia - New applications, content and other e-services over broadband - Other Firms - All the major European telecommunication firms seek new market areas

Table 5.4: The current major motivators and change agents for Elisa to internationalise (Adapted from: Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*. 4th ed. Harcourt Brace & Company, Orlando, USA.)

The key issues for Elisa's entry to the Estonian broadband market are gathered under the appropriate subheadings.

5.3.1 Business Environment

The economy in Estonia will grow (IMF, 2006) and the living standards will rise due to the EU. Although many dwellings lack wirelines, the Estonian customers are familiar with their living environment and used to these kinds of restrictions. Furthermore, the business environment is the same for the rivals, except the incumbent who owns the local loops. This means that Elisa's broadband concept needs to be adapted for the Estonian circumstances. Particularly the business processes have to be rethought (Hamel and Prahalad, 1994 cited in Hope and Hope, 1997) in order to gain a competitive advantage (Porter, 1998)

As in Finland, the public databases (e.g. ESTAT) and maps should be further exploited in Estonia in order to define the integrity of the potential customers/areas. These will help to visualise the necessary service coverage and investments for the infrastructure. Additionally, these visualisations will support the marketing and sales activities. A more detailed customer analysis is relevant to be carried out closer to the time when the market begins to turn towards the saturation stage (Kotler *et al.*, 2001; Moore, 2003).

In Estonia, proper wholesale markets do not exist for operator products (Commission, 2006). Furthermore, the absence of fair and non-discriminating terms and conditions can reflect e.g. as a slowness in the ULL's delivery times. Due to initially low fixed phone penetration and its diminishing trend (Karlberg, 2005a; Äripäev, 2006), the ULL seems to be the only choice. As the key informant #5 stated, there is no shared access available from the incumbent, perhaps due to its pricing which tends to be only a half of the ULL's pricing (Commission, 2006). Additionally, the information of the boundaries of the local concentrators together with the local

loop lengths and quality aspects need to be gathered from the incumbent in advance. This is true especially when plans are to use the DSL2+ technology to offer higher speeds for the customers (Karvonen, 2005b). The access to the operator premises also will rise essentially, because the interconnection cables correspondingly shorten the length of the local loop.

5.3.2 Government and Regulatory Policy

The EU is scheduled to review the Framework Directive later on this year (Commission, 2006). However, Estonian NRAs' implementations of the new framework could then be delayed into 2008 - 2009 or even beyond. On the other hand, optimistically, the competitive environment could equalise and the wholesale markets open as early as in this year, due to the ongoing processes, e-government policy, and the Commission's pressure. Therefore, Elisa needs to lobby the Estonian politics and media more intensively (Gummesson, 1998) for the opening of the wholesale market. The experiences from the Finnish market could be applied.

The interviewees stressed the importance of an accurate address database and the relevant information about the dwellings as a part of Elisa's broadband operations concept in Finland. The databases have an essential role in describing the service availability and coverage. In addition, they are a substantial part of the provision and delivery processes. Therefore, if there are even imperfect databases to exploit, these databases need to be obtainable from the authorities. The same concerns the data and maps of the fixed networks' boundaries, and the facilities, which should be received from the incumbent. The NRAs' practises are of vital importance for opening the broadband competition.

5.3.3 Customers

In an interview (#6) it was stated that Elisa is targeting its current mobile phone customers in the first phase of its entry into the Estonian broadband market. The Estonian people are advanced and willing to adopt new technological applications (Commission, 2006; Point Topic, 2006), which was also stated in the interviews. This phenomenon is significant not only for the broadband access but for the services and applications (Penhune, 2005) which can be offered through it. It might be argued that Estonia could be an important testing market for Elisa's new content and application services. This could happen by alluring the techies and visionaries, and transforming these experiences into the mass-market (Moore, 2003). This could give Elisa an excellent chance to introduce new content services for the broadband, which could be adapted for other markets including Finland.

5.3.4 Competitors

Elion has 98% of the DSL market, which is almost 48% of the entire Estonian broadband market, while the cable operator Starman has the majority of the cable modem market (Commission, 2006; Elion, 2006a; MINTC, 2006a; Starman, 2006). As it came up in the interviews, new technologies and innovative business models could emerge through new entrants to the broadband markets. The possible new entrants could be TDC, Telenor, Tele2 or some Russian or German operator seeking a new market. Also, the consolidation of the Estonian start-ups is possible while entrepreneurship is greatly appreciated in the country.

The Estonian population is concentrated in a few urban locations (ESTAT, 2006b-c). Especially for the rural areas, Elisa should explore new collaboration opportunities (e.g. the wireless

operators), and study the possibilities with current partners to bypass the incumbent's fixed network. An economy of scale together with the quality of operations could be reached with subcontractors also operating in Finland.

5.3.5 Product

Basically all operators are offering the same kind of broadband access at almost the same price. The broadband access product needs to be adapted (e.g. Walker *et al.*, 1992; Czinkota and Ronkainen, 1995) for the Estonian market.

For the actual product (Kotler *et al.*, 2001), the packaging needs localisation. The quality and other features depend largely on the technological choice. Elisa's relative advantage (Onkvisit and Shaw, 1995) and a differentiating (e.g. Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998; Kotler *et al.*, 2001) factor will be the DSL2+ based connections. Elion (2006b) has also backed its broadband sales with lap-top sales, like Elisa in Finland. For the augmented product, the delivery process and the subcontractor agreements need to adjust e.g. to correspond to the apartment's wireline defects. The after-sales services, including the help-desk and fault repairing, need to be localised (Van Mesdag, 1985 cited in Phillips *et al.*, 1995; Grönroos, 2000; Kotler *et al.*, 2001), and the system tools should allow remote fault management. The triple-play service would also be possible for Elisa's offerings in Estonia. Therefore, new content services could be applied in a more lucrative and cost effective market than in Finland. The economy of scale could be achieved if Estonian-speaking people for the remote fault management are hired to work in Finland and use current management tools and

systems. On the other hand, and in a more long-term perspective, the more cost effective way would be to transfer this function from Finland to Estonia.

Mobility is the ‘*thing*’ in Estonia. The free WiFi networks could limit the number of potential customers. On the other hand, with appropriate marketing and differentiation (Treacy and Wiersema, 1995 cited in Hope and Hope, 1997; Porter, 1998; Kotler *et al.*, 2001) through features like quality, speed and data security, users might be allured to become Elisa’s customers. The next phase is the content and applications as the new augmented services (Kotler *et al.*, 2001). Furthermore, it can be interpreted that free networks have been positioned as services for the people with low incomes. This customer segment would not appeal Elisa anyhow. Despite of this, it is advisable to observe the phenomenon of the free open WiFi networks and their development.

5.3.6 Price

A new entrant can differentiate by its lower pricing (Czinkota and Ronkainen, 1995; Porter, 1998), but in that case, the operations needs to be extremely cost effective, or the company’s financing in good shape. On the other hand, the penetration pricing (Keegan, 1995) should be applied carefully, because too low prices do not fit Elisa’s image in Estonia as a service-oriented quality operator. The experiences from the Finnish growth market could be exploited and applied in Estonia (Hautamäki *et al.*, 2005). Therefore, the basic pricing strategy could be the market pricing (Czinkota and Ronkainen, 1995; Keegan, 1995), but with the evolvement of the market share, Moore’s (2003) active price-point tactic would be applicable.

5.3.7 Place

Elisa's further plan, as the key informant #5 told, is to expand the DSL2+ network to other Estonian cities. According to the Table XI.1 in Appendix XI, the most alluring locations are Pärnu, Tartu, Keila, Maardu, Rakvere and Narva. In these cities, the expenditures and/or population are in favour of the communication services (ESTAT, 2006b-e). The sales channels should be planned properly, as their significance was emphasised in the interviews, and as they are a part of the tornado stage strategy (Moore, 2003; Hautamäki *et al.*, 2005). The sales channel need to be supplemented with outsider channels in order to offer more sales power than the rivals as a competitive advantage (Hamel and Prahalad, 1994 cited in Hope and Hope, 1997; Onkvisit and Shaw, 1995; Porter, 1998; Kotler *et al.*, 2001). These need to be further investigated in order to find the appropriate collaboration models with e.g. the household electronic retail chains which also operate in Finland, due to economies of scale and a deeper collaboration (Johnson and Scholes, 2002).

The expansion to the rural areas could depend much on Levira's pricing of its wholesale Wi-MAX service (Paimets, 2006), or other collaboration models with operators or energy companies (Johnson and Scholes, 2002). It is noteworthy that in the rural areas there can be brand offices for Elisa's important business customers, which need broadband connections, as the interviewee #5 stated. Therefore, Elisa's different sales units must also collaborate when the expansions are planned.

The processes should be planned thoroughly according to the market stage e.g. using the 7Ps or Moore's (2003) model. The delivery process, including the subcontractors who are taking care

of the installations, is a CSF (Johnson and Scholes, 2002) at the tornado stage (Moore, 2003), where is important that Elisa has operational excellence (Porter, 2001).

5.3.8 Promotion

The interviewees' experiences from the Finnish broadband market's growth stage advise to put the effort on selling, promoting, and delivering, which Hautamäki *et al.* (2005) have also emphasised, following Moore's model of the tornado strategy (2003). Based on these experiences mass marketing is essential, particularly since it was suggested in the interviews that this is the year when the Estonian broadband market shares are conquered. Therefore, the customer segmentation should be kept simple at the growth stage, and more detailed marketing analysis and customer segmentations (Kotler *et al.*, 2001; Moore, 2003) should be introduced at the market's saturation stage.

5.4 Pertinent Strategy Suggestion for the Entry to the Foreign Broadband Market

Currently, the regulatory environment will be a major determining factor when operators are planning to internationalise (Commission, 2006). Operators need to pressure the local NRAs, e.g. through the members of the European Parliament, to pursue legal challenges towards the anti-competitive practices in EU countries and especially in the new candidate countries. A profitable broadband business for the new entrant demands a proper wholesale market for operator products. This needs to include public pricelists, access into operator premises, the right to install the company's own equipment and interconnection cables at these premises, and electronic ordering interfaces towards the incumbent. Furthermore, the ULL, shared access and

bitstream products need to be available. Only these factors would make it possible to fully exploit the BVNO (Broadband Virtual Network Operator) model. The importance of precise deeper marketing analysis and customer segmentations grows, when the market matures and additional growth is harder to gain (Kotler *et al.*, 2001; Moore, 2003). Furthermore, the need for the adaptation of the marketing mix (e.g. Keegan, 1995) becomes essential in order to allure the late majority, i.e. the conservatives (Porter, 1998; Moore, 2003). Additionally, product development (Ansoff, 1984) is vital due to a change in the broadband market's nature from bare access to new services through the access (Penhune, 2005). The penetration pricing (e.g. Czinkota and Ronkainen, 1995) is appropriate for a new entrant in order to achieve volume sales and a market share fast. Moreover, combined with the tornado stage strategy and its price-point management, this pricing strategy could give the chance to disrupt the market positions (Porter, 1998; Moore, 2003). The CSF's (Johnson and Scholes, 2002), such as the sales channels and marketing strategy, should be planned in advance. It might be argued that the telecommunication firms should make more use of other market entry strategies (e.g. Root, 1987, cited in Walker *et al.*, 1992; Onkvisit and Shaw, 1995) than just the M&As. Also, the forms of joint ventures, or other collaborations (Johnson and Scholes, 2002), should be studied more closely regarding their potentiality and usefulness. However, the entry to a market where the incumbent has a 50% market share or more is not easy to implement. In such cases, it is more advisable to acquire the market's number two or three to gain a quick market share. Thus, in Estonia, the Starman acquirement could be justified. There are bad examples of this, e.g. TeliaSonera (2005) and Telenor (Oslo Børs, 2006) which are in trouble with their post-acquirement obscurities, and therefore the background of the acquired company needs to be studied closely. Another diversification strategy (Ansoff, 1984) is the joint venture (e.g. Walker *et al.*, 1992;

Onkvisit and Shaw, 1995) with a partner. The partner could be e.g. the number two operator. This collaboration could also be contractual by nature. E.g. in the Elisa's case, a management contract where Elisa could sell its know-how of the broadband growth stage strategies. The right timing is the most valuable CSF (Johnson and Scholes, 2002). There needs to be potential demand, i.e. the growth stage in its beginning. Furthermore, the market's rivalry needs to be opened, and a wholesale market needs to exist supported by active and powerful NRAs. This is when the industry forces (Porter, 1998) are advantageous for the market entry. These kinds of markets could be found in other Baltic countries than Estonia, and further in the Eastern Europe countries, which all need further investigation.

Like Johnson and Scholes (2002) have pointed out, the relevance of the powerful stakeholders' expectations might lead to the diversification strategy in Ansoff's Matrix (1984). Therefore, in Elisa's case, the key change agent for internationalising further could be Thor Björgólfsson.

5.5 Research Limitations

This section tries to analyse the limitations together with the validity and reliability of this research.

Although this research used additional sources to avoid excessive interdependency (Yin, 2003) of the key informants, a bias towards the opinions rises from their similarity. The interview data is based on the key informants perceptions of events rather than purely factual information. Moreover, different people perceive things differently. This could have been avoided by a

larger sample. A greater sample could also have extended the experiences from the Finnish broadband market, and deepened the knowledge of the Estonian telecommunication industry.

The interviewer's better skills to carry out the interviews as a semi-structural concept could have increased the validity of this research. As Jankowicz (1997) has warned, the interviewer needs to be on solid ground with his technique for a semi-structured interview. From the audio tapes it can be heard that sometimes the question sequence was too low. Furthermore, the interview situations were not as undisturbed as they should have been. Some interviewees had to answer their phones during the interview, which is reflected in a loose conduction of the interview.

The idea to use the five-force framework (Porter, 1998) as a foundation for the interviews and the PESTLE (Peters, 1987) for the matrix analysis (Gall *et al.*, 1996) purposes seems in retrospect rather an inappropriate method. The in-depth discussions in some interviews ignored some of the issues, depending on the interviewee's own specialised knowledge or interests. This led to negative effects like Yin (2003) has underlined: inadequate questions and notes, and reflexivity between the participants in the interview situation. However, as Holstein and Gubrium (1995) have argued, the answers of the interviews create meanings, although bias is a distinguishable part of the interactivity in the interview situation.

5.6 Recommendations for Further Research

For the saturated Finnish broadband market, it is recommendable to carry out more detailed customer research in order to determine the pertinent customer segments for different augmented services over the broadband access.

In the Estonian broadband market, a search of the public databases and maps should be begun in order to define the precise areas of service coverage and investments for the infrastructure. This could support the marketing and sales activities. It is relevant to carry out a more detailed customer analysis at an earlier stage of the PLC than in Finland, in order to find new services which tempt the ‘techies’ and ‘visionaries’ in Estonia, where people tend to be more willing to adopt new things than in Finland. These services can then be transferred and adapted for Finland. Detailed research is advisable concerning Starman and its backgrounds, with a view for its acquisition. Furthermore, other possible acquisition targets, sales channels and partners need to be explored in-depth.

Generally, further research is necessary on broadband markets which have not yet evolved into the growth stage. Local rivalries and companies in these countries should be examined, and also indications of other possible entrants’ plans. These kinds of markets could be found in Eastern Europe.

‘It is clear that the Finnish telecommunication market does not offer growth for Elisa. Elisa has to expand abroad.’ (Thor Björgólfsson cited in Taloussanomat, 2006).

6 References

Abell, D. F. and Hammond, J. S. (1979) *Strategic Market Planning: Problems and Analytical Approaches*. Prentice Hall Inc., Englewood Cliffs, USA. p. 214. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. p. 183.

Abernathy, W. and Utterback, J. (1978) *Patterns of Industrial Innovation*. Technology Review 80 (7) pp. 40 - 47.

Aina Group (2006a) Aina Group Osti Finnet Comin ja Vahvistaa Asemaansa Pääkaupunkiseudulla. Ajankohtaista. 10th February. www.ainagroup.fi Available Internet: http://www.ainagroup.fi/service/gpublisher/images/image_521.pdf [Accessed 14th April 2006]

Aina Group (2006b) Aina Uudisti Runkoverkkonsa ja Tuo Markkinoille Huippunopean Vauhti Armas-laajakaistaliittymän. 30th March. www.ainagroup.fi Available Internet: http://www.ainagroup.fi/service/gpublisher/images/image_545.pdf [Accessed 10th April 2006]

Alkio, J. (2005) Thor Tuli Omistajan Elkein Elisaan. *Helsingin Sanomat*. 6th December. Section B, Talous, p. B5.

Ansoff, I. H. (1984) *Implanting Strategic Management*. 1st ed. Prentice Hall Inc., Englewood Cliffs, USA.

American Marketing Association (1985) AMA Board Approves New Marketing Definition. *Marketing News*. 1 March 1985, 1. In: Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*. 4th ed. Harcourt Brace & Company, Orlando, USA. p. 18.

American Marketing Association (2005) Dictionary of Marketing Terms. *Marketingpower.com*
Available Internet: <http://www.marketingpower.com/mg-dictionary-view1311.php> [Accessed 3rd October 2005]

Baltic News Services (2006) Broadband Internet Market Smallest In EU. 21st February.

Bell, A. G. (1876) Bell's Experimental Notebook. The Library of Congress, American Memory, Technology, Industry, The Alexander Graham Bell Family Papers: Collection Highlights. *Memory.loc.gov* Available Internet: <http://memory.loc.gov/ammem/bellhtml/bell1.html> [Accessed 3rd October 2005]

British Marketing Research Association (2003) Glossary. *BMRA.org.net* Available Internet: <http://www.bmra.org.uk/content.asp?category=103&article=700&top=glossary> [Accessed 3rd October 2005]

British Telecom (2005a) What Is Broadband? FAQ's. *BT.com* Available Internet: <http://www.bt.com/broadband> [Accessed 30th October 2005]

British Telecom (2005b) Technology. *BT.com* Available Internet: <http://www.bt.com/broadband> [Accessed 30th October 2005]

Chartered Institute of Marketing (2005) Knowledge Hub, Resources, Marketing Glossary. *CIM.co.uk* Available Internet: <http://www.cim.co.uk/cim/ser/html/infQuiGlo.cfm?letter=I> [Accessed 3rd October 2005]

Citigroup (2006) European Telecoms. View for 2006: Natural Selection. Industry Report, Telecommunications Services. 11th January.

Cohen, L. and Manion, L. (1997) *Research Methods in Education*. 4th ed. Routledge, London, UK.

Collis, J. and Hussey, R. (2003) *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*. 2nd ed. Palgrave Macmillan, New York, USA.

Commission Staff Working Document 2006/193/SEC Vol. I.

Council Directive 2002/21/EC.

Crainer, S. (1998) *The Ultimate Business Guru Book. 50 Thinkers Who Made Management*. Capstone Publishing Ltd., Oxford, UK.

CreditSuisse (2006) Telecoms 2006 Outlook, Sub GDP Growth. Sector Review, Europe, Telecommunication Services. 20th January.

Current Analysis (2005a) Local Operators MPY and SPY Launch Scandinavian WiMAX in the Wild. 23rd November.

Current Analysis (2005b) Tele2 Freezes its Baltic Fixed Services Presence. 17th October.

Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*. 4th ed. Harcourt Brace & Company, Orlando, USA.

Dagens Næringsliv (2006) Tar Kontrollen i Glocalnet. Søk i Arkivet. 13th February.
www.dagensit.no Available Internet: <http://www.dagensit.no/bedrifts-it/article715012.ece> [Accessed 14th April 2006]

Day, G. S. (1984) *Strategic Market Planning*. West Publishing Company, St. Paul, USA. p. 128. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. p. 183.

Day, G. S. (1986) *Analysis for Strategic Market Decisions*. West Publishing Company, St. Paul, USA. p. 100. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. p. 265.

Domzal, T. and Unger, L. (1987) Emerging Positioning Strategies in Global Marketing. *Journal of Consumer Marketing*, 4 (4), Fall. In: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK.

DSL Forum (2005a) Booming Broadband Adds More Than 24 Million - DSL Dominates Growth. News Release. www.dslforum.org Available Internet: <http://www.dslforum.org/dslnews/pdfs/2005/Q205DSLsubscriberfigures.pdf> [Accessed 30th October 2005]

DSL Forum (2005b) Glossary. Learning About DSL. www.dslforum.org Available Internet: <http://www.dslforum.org/learnDSL/glossary.shtml> [Accessed 30th October 2005]

DSL Forum (2006) DSL Flourishes in 2005 – 41 Million New Subscribers. Latest News. www.dslforum.org Available Internet: http://www.dslforum.org/PressRoom/0604_Q405dsl_figures.pdf [Accessed 14th April 2005]

Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002) *Management Research*. Sage Publications Ltd., London, UK.

Elion (2006a) The Number of Elion's Internet Broadband Connections Has Increased During the Past Year by 40%. About Elion, News, News & Press Releases. www.elion.ee Available Internet: <http://www.elion.ee/wwwmain?screenId=html.general-profile.21431.43370&locale=en> [Accessed 1st February 2006]

Elion (2006b) The Sales of Laptops by Elion Retail Outlets Has Increased Three Times. About Elion, News, News & Press Releases. www.elion.ee Available Internet: <http://www.elion.ee/wwwmain?screenId=html.general-profile.21431.44915&locale=en> [Accessed 11th March 2006]

Elisa (2004a) The Telephone Arrives in Finland. Corporate Info, History, text, the 1870's. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=6&o=6532.40> [Accessed 3rd October 2005]

Elisa (2004b) Emergence of Broadband Networks. The Sector Is Finally Deregulated. Corporate Info, History, text, the 1990's. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=6&o=6531.20> [Accessed 3rd October 2005]

Elisa (2004c) The 2000's. Corporate Info, History, text. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=6&o=6531.10> [Accessed 3rd October 2005]

Elisa (2004d) German Authorities Have Approved the Sale of Elisa's Germany-Based Business. Info On Elisa, Press, Releases, Search, Archive 2004, Subject Germany. 18th May. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=7&o=7135.00&redir=tiedotearkisto.cfm> [Accessed 14th April 2006]

Elisa (2005a) Acceptance of Subscription for Elisa Shares Associated with the Saunalahti Tender Offer. Press, Releases, Corporate Stock Exchange Bulletins. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=7&o=7110.00&did=12391> [Accessed 6th December 2005]

Elisa (2005b) Notice Pursuant to the Finnish Securities Market Act, Chapter 2, Section 10. Press, Releases, Corporate Stock Exchange Bulletins. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=7&o=7110.00&did=12406> [Accessed 6th December 2005]

Elisa (2005c) Dividend. Investor Relations, Share Information. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=8&o=9030.00> [Accessed 3rd October 2005]

Elisa (2005d) Elisa Laajakaistan Markkinajohtajaksi. Tietoa Elisasta, Pressi, Tiedotteet, Tiedotehaku. www.elisa.com Available Internet: http://www.elisa.fi/ir/frame_document.cfm?t=5&o=5120.00&did=12164 [Accessed 3rd October 2005]

Elisa (2005e) Elisa's July-September Pre-Tax Result Amounted to EUR 28 Million. Info on Elisa, Press, Releases, Corporate Stock Exchange Bulletins. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=7&o=7110.00&did=12323> [Accessed 30th October 2005]

Elisa (2006a) Historical Quotes Search. Investor Relations, Share Information, Share Tools, Closing Rates. www.elisa.com Available Internet: <http://irtoolbox.fe.quartal.com/hpl2/HPL> [Accessed 14th April 2006]

Elisa (2006b) Elisa's Holding in Saunalahti Reaches 100 per cent. Investors, Press, Releases, Stock Exchange Bulletins. 28th March. www.elisa.com Available Internet: <http://www.elisa.com/english/index.cfm?t=7&o=7110.00&did=13092> [Accessed 14th April 2006]

Elisa (2006c) Mainospanostusraportti 12/2005. Company Report. Source: TNS Adex/Carat.

Elisa (2006d) Annual Report. Investors. 20th March. www.elisa.com Available Internet: http://www.elisa.com/english/docimages/attachment/Elisa_vsk05_englanti.pdf [Accessed 14th April 2006]

ESTAT (2006a) Telecommunication Services. Statistical Database, Economy, Communications. Statistical Office of Estonia, www.stat.ee [Accessed 11th March 2006]

ESTAT (2006b) Population Density, Number and Area by Counties. Statistics, Maps, Fields of Statistics, Population. Statistical Office of Estonia, www.stat.ee Available Internet: <http://www.stat.ee/139126> [Accessed 11th March 2006]

ESTAT (2006c) De Facto Population and Usual Resident Population in Administrative Units. Statistical Database, Population Census 2000, Distribution of the Population. Temporary Presence and Absence. Statistical Office of Estonia, www.stat.ee [Accessed 11th March 2006]

ESTAT (2006d) Expenditure per Household Member in a Year by Year, County and Kind of Expenditure. Statistical Database, Social Life, Living Niveau, Expenditures. Statistical Office of Estonia, www.stat.ee [Accessed 11th March 2006]

ESTAT (2006e) Disposable Income per Household Member in a Year by Year, County and Source of Income. Statistical Database, Social Life, Living Niveau, Expenditures. Statistical Office of Estonia, www.stat.ee [Accessed 11th March 2006]

ESTAT (2006f) ADSL-lines by Counties, 2004. Statistics, Maps, Fields of Statistics, Economy. Statistical Office of Estonia, www.stat.ee Available Internet: <http://www.stat.ee/139110> [Accessed 11th March 2006]

ESTAT (2006g) ADSL-lines by Counties, 2004. Statistics, Maps, Fields of Statistics, Economy. Statistical Office of Estonia, www.stat.ee Available Internet: <http://www.stat.ee/139115> [Accessed 11th March 2006]

ESTAT (2006h) Population Density, Number and Area by Counties. Statistics, Maps, Fields of Statistics, Population. Statistical Office of Estonia, www.stat.ee Available Internet: <http://www.stat.ee/139131> [Accessed 11th March 2006]

European Commission (2006) Broadband Growth in the EU. Europa, Gateway to the European Union. Information Society, eEurope, IS Industry, Communications, Broadband, Read More.

http://europa.eu.int/index_en.htm Available Internet:

http://europa.eu.int/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/factsheets/broadband.pdf [Accessed 14th April 2006]

Evli (2006) Nordic Operator Update. Evli Research. 24th March.

FiCom (2006) Suomalaiset hoitavat pankkiasioitaan netissä. Ajankohtaista, Uutisarkisto. 5th October. www.ficom.fi Available Internet:

http://www.ficom.fi/fi/a_uutisaread.html?Id=1128510086.html [Accessed 14th April 2006]

FICORA (2005a) Mikä on Laajakaistayhteys ja Mihin Sitä Käytetään? Teletoiminta, Tietoa Kuluttajille, Laajakaistayhteydet, Ostajan Opas. www.ficora.fi Available Internet:

<http://www.ficora.fi/suomi/tele/lkostajanopas.htm> [Accessed 3rd October 2005]

FICORA (2005b) Broadband Connections in Finland (table). Telecommunications, Broadband Statistics. www.ficora.fi Available Internet: <http://www.ficora.fi/englanti/tele/broadband.htm> [Accessed 6th December 2005]

FICORA (2005c) Päätös Päijät-Hämeen Puhelin Oyj:n Kyt Kentämaksujen Hinnoittelusta. Teletoiminta, Talousvalvonta, Annetut Päätökset, Viestintävirasto 498/933/2004. 30th May.

www.ficora.fi Available Internet:

http://www.ficora.fi/suomi/document/PHP_30052005_PAA.pdf [Accessed 14th April 2006]

Fetterman, D. M. (1998) *Ethnography. Step by Step. Applied Social Research Methods Series. Vol. 17.* 2nd ed. Sage Publications Ltd. London, UK.

Finlex (2005) Amendment 47/2005. 28th January. www.finlex.fi Available Internet:

<http://www.finlex.fi/fi/laki/alkup/2005/20050047> [Accessed 14th April 2006]

Finnet (2005a) VLP Lanseeraa Toisen Sukupolven ADSL-liittymät. Finnet-ryhmä, Ajankohtaista, Uutisarkisto, 2005. 25th April. www.finnet.fi Available Internet:

<http://www.finnet.fi/default.asp?link=359.156> [Accessed 14th April 2006]

Finnet (2005b) Finnet Tuo Pääkaupunkiseudun Nopeimman Laajakaistaliittymän Markkinoille. Finnet-ryhmä, Ajankohtaista, Uutisarkisto, 2005. 31st May. www.finnet.fi Available Internet:

<http://www.finnet.fi/default.asp?link=359.173> [Accessed 14th April 2006]

Finnet (2005c) Kouvolan Hallinto-Oikeus Keskeytti Viestintäviraston Päätöksen Täytäntöönpanon. Finnet-ryhmä, Ajankohtaista. 1st August. www.finnet.fi Available Internet:

<http://www.finnet.fi/default.asp?link=117.267> [Accessed 14th April 2006]

Finnet (2006) TDC Song ja Finnet-yhtiöt Strategiseen Yhteistyöhön - Tähtäävät Yhdessä Markkinajohtajaksi Suomessa. Finnet-ryhmä, Ajankohtaista. 9th February. www.finnet.fi Available Internet: <http://www.finnet.fi/default.asp?link=117.355> [Accessed 14th April 2006]

France Telecom (2005) France Telecom to Buy Minority Shareholders in Orange Slovakia. News & Financials, Financial News, October 2005. www.francetelecom.com Available Internet: http://www.francetelecom.com/en/financials/investors/news/CP_infos/cp051020.html [Accessed 6th December 2005]

FSTAT (2003) Kotitalouksien Kulutusmenojen Rakenne Suomessa, 1985-2002, %. Tilastot, Tilastot aiheittain, Tulot ja kulutus, Kotitalouksien kulutus, Kotitalouksien Kulutus Numeroina 2003, Taulu 2.1. 27th March. Statistics Finland. www.tilastokeskus.fi Available Internet: http://www.stat.fi/tk/el/kulutustutkimus/kulutust_t2_1.html [Accessed 14th April 2006]

FSTAT (2004) Subscriptions and Calls in 1995 and 2000 - 2004. Statistics, Statistics by Topic, Science, Technology and Information Society, Telecommunications, 2004. Statistics Finland. www.tilastokeskus.fi Available Internet:

http://www.tilastokeskus.fi/til/tvie/2004/tvie_2004_2005-08-26_tau_003_en.html [Accessed 3rd October 2005]

FSTAT (2005) Use of Information Technology in Enterprises. Statistics, Statistics by Topic, Science, Technology and Information Society. Statistics Finland. www.tilastokeskus.fi Available Internet: http://tilastokeskus.fi/til/ict/index_en.html [Accessed 30th October 2005]

FSTAT (2006a) Consumer Sentiments Improved in February. Statistics, Statistics by Topic, Income and Consumption, Consumer survey, 2006, February. Statistics Finland. www.tilastokeskus.fi Available Internet: http://www.stat.fi/til/kbar/2006/02/kbar_2006_02_2006-02-27_tie_001_en.html [Accessed 11th March 2006]

FSTAT (2006b) Density of Population. Statistics, Products and Services, Online Services, World in Figures, Index. Statistics Finland. www.tilastokeskus.fi Available Internet: http://www.stat.fi/tup/maanum/03_pinta-ala_vakiluku_ja_paakaupunki_maittain.xls [Accessed 14th April 2006]

Gall, M. D., Borg, W. R. and Gall, J. P. (1996) *Educational Research: An Introduction*. 6th ed. Longman Publishers, White Plains, USA.

Glaser, B. G. and Strauss L. L. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine, Chicago, USA. In: McMillan, J. H. and Schumacher, S. (2001) *Research In Education – A Conceptual Introduction*. 5th ed. Addison Wesley Longman Inc., New York, USA.

Grönroos, C. (2000) *Service Management and Marketing. A Customer Relationship Management Approach*. 1st ed. John Wiley & Sons Inc. New York, USA.

Gummesson, E. (1998) *Suhdemarkkinointi 4P:stä 30R:ään*. Gummerus Kirjapaino Oy, Jyväskylä, Finland.

Hamel, G. and Prahalad, C. K. (1994) *Competing for the Future*. Harvard Business School Press, Boston, USA. In: Hope, J. and Hope, T. (1997) *Competing in The Third Wave: The Ten Key Management Issues of The Information Age*. 1st ed. Harvard Business School Press, Boston, USA. pp. 43 – 47.

Hautamäki, S., 10, A. and Suomalainen V. (2005) *Kilpailustrategia Suomen Laajakaistamarkkinassa Geoffrey Mooren Uuden Teknologian Elinkaariteorian Valossa*. Dissertation, Elisa Master Class. Helsinki, Finland.

Heinsalu, K. (2005) Tele2 Lõpetab Aktiivse Tegevuse Tavatelefoniteenuse Turul. *Äripäev*. 17th October.

Holstein, J. A. and Gubrium, J. F. (1997) *The Active Interview. Qualitative Research Methods Series. Vol. 37*. Sage Publications Ltd, London, UK.

Hope, J. and Hope, T. (1997) *Competing in The Third Wave: The Ten Key Management Issues of The Information Age*. 1st ed. Harvard Business School Press, Boston, USA.

HSBC (2006a) Quadrophonia. Fixed, Broadband, Mobile and Media Will Band Together to Form 'Quad-Play' – a New Generation of Services. Global Research, Telecoms & Media. February 2006.

HSBC (2006b) Moviles, Vodafone, Cosmote. Quad-play Favours Minoriti Buy-outs by Fixed Operators. Global Research, Telecoms & Media. 16th March 2006.

Hussey, J. and Hussey, R. (1997) *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*. Palgrave, New York, USA.

IMF (2006) Republic of Estonia and the IMF. Country Info, Estonia, Republic of, Projected % Change, Real GDP. International Monetary Fund. 22nd April. www.imf.org Available Internet: <http://www.imf.org/external/country/EST/index.htm> [Accessed 30th April 2006]

Jankowicz, A. D. (1997) *Business Research Projects*. 2nd ed. International Thomson Business Press, London, UK.

Jewell, B. (1998) Igor Ansoff & Corporate Strategy. *Business Review*. September, pp. 2 – 3.

Johnson, G. and Scholes, K. (2002) *Exploring Corporate Strategy*. 6th ed. Pearson Education Limited, Harlow, England.

Jyllands-Posten (2005) TDC Eyes the Estonian Mobile Telephony Market. 18th October.

Järvinen, P. (2004) *On Research Methods*. Opinpajan kirja, Tampere, Finland.

Kalamees, K. (2005) Julge Kava Lubab Kõikjale Interneti Viia. Eesti Päevaleht, www.epl.ee
Available Internet: <http://www.epl.ee/artikkel.php?ID=304681> [Accessed 26th February 2006]

Kalberg, S. (2005a) Tele2 Taunib Riigi Suutmatust Ohjata Elioni. Eesti Päevaleht, www.epl.ee
Available Internet: <http://www.epl.ee/artikkel.php?ID=303162> [Accessed 26th February 2006]

Kalberg, S. (2005b) Lauatelefon Loovutab Koha Mobiilidele. Eesti Päevaleht, www.epl.ee
Available Internet: <http://www.epl.ee/artikkel.php?ID=304787> [Accessed 26th February 2006]

Kankare, M. (2006) Finnet-ryhmä Halkeaa. Talouselämä, 13th March, www.talouselama.fi
Available Internet: http://www.talouselama.fi/doc.te?f_id=867315&s=u&wtm=te-13032006
[Accessed 13th March 2006]

Kaplan, A. (1973) *The Conduct of Inquiry*. Intertext Books, Aylesbury, UK. In: Cohen, L. and Manion, L. (1997) *Research Methods in Education*. 4th ed. Routledge, London, UK.

Karvonen, T. (2005a) Langaton Laajakaista Ennätti Pohjois-Suomeen. 23rd November.

www.itviikko.fi Available Internet: <http://www.itviikko.fi/uutiset/uutinen.asp?UutisID=71347>

[Accessed 13th December 2005]

Karvonen, T. (2005b) Adsl2+ Vasta Tulossa Britanniaan. 11th November. www.itviikko.fi

Available Internet: <http://www.itviikko.fi/uutiset/uutinen.asp?UutisID=71150> [Accessed 13th

December 2005]

Keegan, J. W. (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc., Englewood Cliffs, USA.

Koch, R. (1995) *Financial Times Guide to Strategy*. FT/Pitman, London, UK. In: Crainer, S.

(1998) *The Ultimate Business Guru Book. 50 Thinkers Who Made Management*. Capstone Publishing Ltd., Oxford, UK.

Kotler, P. (1999) *Kotler on Marketing: How to Create, Win, and Dominate Markets*. 1st ed. The Free Press, a Division of Simon & Schuster Inc., New York, USA.

Kotler, P., Armstrong, G., Saunders, J. and Wong, V. (2001) *Principles of Marketing*. 3rd European ed. Pearson Education Limited, Harlow, UK.

Kuntaliitto (2006) Asukasluvut, asukastiheys, asukasluvun muutos edellisestä vuodesta, pinta-
alat, (kunnat, seutukunnat, maakunnat). Tilastot, Väestö, Asukasluvut, asukastiheys. 14th

March. www.kunnat.net Available Internet:

<http://www.kunnat.net/attachment.asp?path=1;29;374;36984;822;59138;59143> [Accessed 15th

April 2006]

Lambkin, M. and Day, G. S. (1989) Evolutionary Processes in Competitive Markets: Beyond the Product Life Cycle. *Journal of Marketing*. July 1989. pp. 4 – 8. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA.

Laitner, S. (2006) Telecoms Liberalisation Hailed As Success. 21st February. www.ft.com
Available Internet: <http://news.ft.com/cms/s/2d040bc6-a27e-11da-9096-0000779e2340.html>
[Accessed 23rd February 2006]

Levitt, T. (1980) Marketing Success Through Differentiation – of Anything. *Harvard Business Review*. Vol. 58, January – February, pp. 83 - 91. In: Czinkota, M. R. and Ronkainen, I. A. (1995) *International Marketing*. 4th ed. Harcourt Brace & Company, Orlando, USA.

McCormick, A. (2005) Broadband Users Focus on Cost to Decide on Service Provider. 3rd November. www.nma.co.uk Available Internet:
<http://www.nma.co.uk/Articles/25910/Broadband+users+focus+on+cost+to+decide+on+service+provider.html> [Accessed 15th December 2005]

McGivern, Y. (2003) *The Practice of Market and Social Research. An Introduction*. Pearson Education Ltd., Harlow, UK.

McMillan, J. H. and Schumacher, S. (2001) *Research In Education. A Conceptual Introduction*. 5th ed. Addison Wesley Longman Inc., New York, USA.

Miles, M. B. and Huberman, A. M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. Sage Publications Inc., Thousand Oaks, USA. In: Yin, R. K. (2003) *Case Study Research. Design and Methods. Applied Social Research Methods Series*. Vol. 5. 3rd ed. Sage Publications Ltd., London, UK.

MINTC (2005) Liikenne- ja Viestintäministerin Vastaukset Eduskunnan Kirjallisiin Kysymyksiin. Ministeriön Esittely, Ministeri, Kirjalliset Kysymykset, 456/2005 Tillgång till bradband. www.mintc.fi Available Internet:
<http://www.mintc.fi/scripts/cgiip.exe/WService%3Dlvm/cm/pub/showdoc.p?docid=2014&menuid=96&channelitemid=11357> [Accessed 3rd October 2005]

MINTC (2006a) EU-maiden Laajakaistahinnat 2005. Viestintätietoa, Julkaisut. 25th January.

www.mintc.fi Available Internet:

http://www.mintc.fi/oliver/upl139-Julkaisu_2_2006.pdf [Accessed 11th March 2006]

MINTC (2006b) Suomen Telemaksujen Hintataso 2005. Viestintätietoa, Julkaisut. 31st March.

www.mintc.fi Available Internet: http://www.lvm.fi/oliver/upl266-Julkaisu_2019_2006.pdf

[Accessed 14th April 2006]

Moore, G. A. (2003) *Inside the Tornado: Strategies for Developing, Leveraging, and Surviving Hypergrowth Markets*. Reissue ed. Harper Collin Publishers Inc., New York, USA.

Morgan, G. and Smircich, L. (1980) The Case of Qualitative Research. *Academy of Management Review*, 5, pp. 491 – 500. In: Collis, J. and Hussey, R. (2003) *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*. 2nd ed. Palgrave Macmillan, New York, USA.

Mullor- Sebastian, A. (1983) The Product Life Cycle Theory: Empirical Evidences. *Journal of International Business Studies*. Nr. 14, Winter, pp. 95 – 105. In: Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India, New Delhi, India.

National Broadband Strategy (2005a) Mikä On Laajakaista? Suomeksi. [Laajakaistainfo.fi](http://www.laajakaistainfo.fi)

Available Internet: <http://www.laajakaistainfo.fi/teknologiat/> [Accessed 30th October 2005]

National Broadband Strategy (2005b) Eri Teknologiat. Suomeksi. www.laajakaistainfo.fi

Available Internet: http://www.laajakaistainfo.fi/mikaon_laajakaista/ [Accessed 30th October 2005]

National Broadband Strategy (2005c) Broadband Strategy. In English. www.laajakaistainfo.fi

Available Internet: <http://www.laajakaistainfo.fi/english/index.php> [Accessed 30th October 2005]

National Broadband Strategy (2005d) Työryhmän Esittely. Suomeksi. www.laajakaistainfo.fi
Available Internet: http://www.laajakaistainfo.fi/tyoryhman_esittely/index.php [Accessed 30th October 2005]

National Broadband Strategy (2005e) Interim Report II. In English. www.laajakaistainfo.fi
Available Internet: <http://www.laajakaistainfo.fi/english/report271005.php> [Accessed 30th October 2005]

Ny Teknik (2005) TeliaSonera to Go in for WLAN. *Ny Teknik*. 30th November.

Ohmae, K. (1985) *Triad Power*. The Free Press, New York, USA. In: Keegan, J. W. (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc., Englewood Cliffs, USA.

Onkvisit, S. and Shaw, J. J. (1983) An Examination of the International Product Life Cycle and Its Application within Marketing. *Columbia Journal of World Business*. Nr. 18, Fall, p. 74. In: Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India, New Delhi, India.

Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India, New Delhi, India.

OnlineReporter (2005) Consolidation Coming to Western European Broadband. 3 – 9 December. Issue no. 471.

Oslo Børs (2006) Tel Proposes That Vimpelcom Acquire Kyivstar For Cash. 20th March. www.newsweb.no Available Internet:
http://www.newsweb.no/index.asp?interval=20&languageID=1&ncat_id=&symbol=TEL&date_start=14.04.2003&date_stop=14.04.2006 [Accessed 14th April 2006]

Paimets, V. (2006) Levira Hakkab Traadita Internetti Pakkuma. *Äripäev*. 27th February.

Pardla, A. (2006) Uus Interneti Teenusepakkuja Jahib Põhiliselt Erakliente. *Äripäev*. 26th January.

Penhune, J. (2005) Broadband and the Digital Home: Strategic Overview. *Broadband & Media*, 13th October, 2005. Helsinki: Strategy Analytics, p. 4.

Peters, T. (1987) *Thriving on Chaos*. 1st ed. Alfred A. Knopf Inc., CA., USA.

Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK.

PHP (2006a) PHP Laajentaa Toimialaansa. Yrityksenä, Yritys, Tiedotteet. 8th March. www.php.fi Available Internet: <http://www.php.fi/default.asp?link=145.619> [Accessed 14th April 2006]

PHP (2006b) PHP:n Uudet Verkot Käyttöön Hämeenlinnassa, Hyvinkäällä ja Riihimäellä. Yrityksenä, Yritys, Tiedotteet. 22nd February. www.php.fi Available Internet: <http://www.php.fi/default.asp?link=145.615> [Accessed 10th April 2006]

Point Topic (2005a) World Broadband Maps Q2 2005. Broadband Analysis. www.point-topic.com Available Internet: <http://www.point-topic.com/content/dslanalysis/World%20Broadband%20Statistics%20Q2%202005.pdf> [Accessed 30th October 2005]

Point Topic (2005b) World Broadband Maps Q2 2005. Broadband Analysis. www.point-topic.com Available Internet: <http://www.point-topic.com/content/dslanalysis/OPSwbbmapsq205051012ana.htm> [Accessed 30th October 2005]

Point Topic (2006) Estonia. [www.point-topic.com](http://www.point-topic.com/content/operatorSource/profiles/Estonia%20Broadband%20Overview.htm) Available Internet: <http://www.point-topic.com/content/operatorSource/profiles/Estonia%20Broadband%20Overview.htm>

[Accessed 17th March 2006]

Porter, M. E. (1996) What Is Strategy? *Harvard Business Review*. November – December, p. 65. In: Hope, J. and Hope, T. (1997) *Competing in The Third Wave: The Ten Key Management Issues of The Information Age*. 1st ed. Harvard Business School Press, Boston, USA.

Porter, M. E. (1998) *Competitive Advantage. Creating and Sustaining Superior Performance*. The Free Press, New York, USA.

Porter, M. E. (2001) The Competitive Advantage. *Leaders' Forum 2001*. 16th February. Helsinki, Finland.

Reichheld, F. F. (1996) *The Loyalty Effect*. Harvard Business School Press, Boston, USA. In: Hope, J. and Hope, T. (1997) *Competing in The Third Wave: The Ten Key Management Issues of The Information Age*. 1st ed. Harvard Business School Press, Boston, USA. pp. 158 – 182.

Robert, M. (1993) *Strategy Pure and Simple: How Winning CEOs Outthink Their Competition*. McGraw-Hill Inc., New York, USA. In: Keegan, J. W. (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc., Englewood Cliffs, USA.

Roberts, C. (2005) *Wholesale Line Rental: a Hedge Against Unbundlers?* Report. June 2005.

Roger, E. M. (1995) *Diffusion of Innovations*. 4th ed. The Free Press, New York, USA. In: Kotler, P. (1999) *Kotler on Marketing: How to Create, Win, and Dominate Markets*. 1st ed. The Free Press, New York, USA. pp. 222 – 225.

Root, F. R. (1987) *Entry Strategy for International Markets*. D.C. Heath and Company, Lexington, USA. In: Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA. p. 352

Starman (2006) Q 4 - February 28th, 2006. Investor Relations, Financial Reports, EUR.

www.starman.ee Available Internet:

http://www.starman.ee/files/doc/STARMAN_2005_4Q_EUR_ENG.pdf [Accessed 11th March 2006]

STV (2006) Available Internet: www.stv.ee [Accessed 11th March 2006]

Svenska Dagbladet (2005) PTS i Bredbandsbråk med Telia. Näringsliv, 29th September.

www.svd.se Available Internet: http://www.svd.se/dynamiskt/naringsliv/di_10654826 [Accessed 6th December 2005]

Swan, J. E. and Rink, D. R. (1980) Effective Use of Industrial Product Life-Cycle Trends. *Marketing in the 80's*. American Marketing Association.

Taloussanomat (2006) Islantilaisomistaja Vaatii Elisaa Laajentumaan. 28th March.

www.taloussanomat.fi Available Internet:

http://www.taloussanomat.fi/doris/doriswww_45018.asp [Accessed 10th April 2006]

TDC (2005) Statement of the BoD. Investor Relations. www.tdc.com Available Internet:

http://www.tdc.com/about/investor/releases/?pr_id=639 [Accessed 6th December 2005]

Tele2 (2005a) Tele2 Acquires Mobile Operator In Lipetsk, Russia. Press, More Press Releases, 2005. www.tele2.com Available Internet:

<http://www.tele2.com/pages/Release.aspx?id=165&source=125464&year=2005> [Accessed 26th February 2006]

Tele2 (2005b) Tele2 Halts Any Further Investments in its Fixed-line Operations in Estonia, Latvia and Lithuania. Press, More Press Releases, 2005. www.tele2.com Available Internet:

<http://www.tele2.com/pages/Release.aspx?id=165&source=1021324&year=2005> [Accessed 6th February 2006]

Telecompaper (2005) European Commission Starts Telecom Proceedings against Sweden and Poland. Infobites. 12th December.

Telecompaper (2006a) Booz Allen Hamilton Research: Triple Play to Drive Digital Economy in Europe: by 2010, DigiTV in 60% European Households. Infobites. 23rd January.

Telecompaper (2006b) Pyramid Research Publishes 10 Telecom Predictions for 2006. Infobites. 17th February.

Telecompaper (2006c) West European Broadband Penetration to Reach 46.6% In 2006. Infobites. 17th February.

TeliaSonera (2005) TeliaSonera Initiates Legal Action Against Russian Alfa Group. Press, Press Releases, More Press Releases. www.teliasonera.com Available Internet: http://www.teliasonera.com/articlewide/0,2859,l-en_h-12815,00.html [Accessed 6th December 2005]

TeliaSonera (2006a) Annual Review 2005. Investor Relations, TeliaSonera's Annual Report and Annual Review for 2005. www.teliasonera.com Available Internet: http://www3.telia.se/koncern/ow_engelsk/index.html [Accessed 14th April 2006]

TeliaSonera (2006b) TeliaSonera Increases Holdings in Eesti Telekom. Press, Press Releases, More Press Releases. www.teliasonera.com Available Internet: http://www.teliasonera.com/articlewide/0,2859,l-en_h-12815,00.html [Accessed 11th March 2006]

Tervola, M. (2006) Langaton Kaupunki. *Helsingin Sanomat*. Talous, p. E3.

Tesch, R. (1990) *Qualitative Research: Analysis Types and Software Tools*. Falmer, New York, USA. In: Järvinen, P. (2004) *On Research Methods*. Opinajan kirja, Tampere, Finland.

Treacy, M. and Wiersema, F. (1995) *The Discipline of Market Leaders*. Harper Collins, London, UK. In: Hope, J. and Hope, T. (1997) *Competing in The Third Wave: The Ten Key Management Issues of The Information Age*. 1st ed. Harvard Business School Press, Boston, USA. pp. 73 – 76.

Tremblay, M. A. (1982) The Key Informant Technique: a Non-Ethnographic Application. In: Burgess R. (ed.) *Field Research: a Sourcebook and Field Manual*. Allen & Unwin, London, UK. In: Jankowicz, A. D. (1997) *Business Research Projects*. 2nd ed. International Thomson Business Press, London, UK.

Tänavsuu, T. (2005) Elion ja Elisa Vaidlevad Nime Üle. Eesti Päevaleht, www.epl.ee Available Internet: <http://www.epl.ee/artikkel.php?ID=303364> [Accessed 26th February 2006]

Utterback, J. M. (1994) *Mastering the Dynamics of Innovation*. Harvard Business School Press, Boston, USA.

Vaalist, H. (2005) Parjaisipa Edes Elisa. *Taloussanomat*, Saturday Appendix, 1st October. Helsinki, Finland. pp. 8 – 9.

Van Mesdag, M. (1985) The Frontiers of Choice. *Marketing*. 10th October. In: Phillips, C., Doole, I. and Lowe, R. (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge, London, UK.

Vodafone (2005) Update of Refinancing in Newly Acquired Czech and Romanian Subsidiaries. Media Centre, Investor News, Global Footprint. www.vodafone.com Available Internet: <http://www.vodafone.com/assets/files/en/vod1209lbprl.pdf> [Accessed 6th December 2005]

Walker, O. C. Jr., Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*. Richard D. Irwin Inc., Boston, USA.

White, D. (2006) NTL's £1bn Virgin Move Challenges Sky. Daily Telegraph, 5th April.
www.telegraph.co.uk Available Internet:
<http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2006/04/05/ccntl05.xml> [Accessed 20th April 2006]

Yin, R. K. (2003) *Case Study Research. Design and Methods. Applied Social Research Methods Series. Vol. 5.* 3rd ed. Sage Publications Ltd., London, UK.

Äripäev (2006) 21st March.

APPENDIX I: Recent Mergers and Acquisitions in the Telecommunication Industry

Global players like Vodafone (2005) and Sprint, merging with Nextel, have continued their operations with the additional mergers to rearrange their structures in order to better compete in the markets. In Japan, Vodafone's mobile operation was acquired by the fixed-line triple-play operator, Softbank. In the USA, Verizon has announced interests to buy out Vodafone's mobile operations from Verizon Wireless. AT&T has an intention to merge with BellSouth (HSBC, 2005b).

In the EU e.g. Tele2 (2005) and France Telecom (2005) have gone through same kind of actions. In the United Kingdom, the cable operator NTL (White, 2006) acquired the Virgin Mobile in order to offer the quadruple-play, i.e. cable television, broadband, fixed phone and mobile services. In Spain, Telefonica will buy out the small minority stake in Telefonica Moviles. Previously Telefonica merged with Terra Lycos (HSBC, 2005b).

At the Nordic level, Norwegian Telenor acquired Swedish broadband company Glocalnet in the February 2006, as a part of the Telenor's strategy to become a leading player in the Nordic broadband market (Dagens Næringsliv, 2006). TeliaSonera (2005) is still competing of the ownership of the Turkish and Russian operators. The ownership in the Danish origin TDC is also a sign of that same trend.

In Finland, Elisa merged together with Saunalahti on December 2005 (Elisa, 2005a). Besides the Icelandic Novator Group (Elisa, 2005b) became as the biggest owner of the Elisa.

APPENDIX II: Development of the Organisational Structure of Elisa

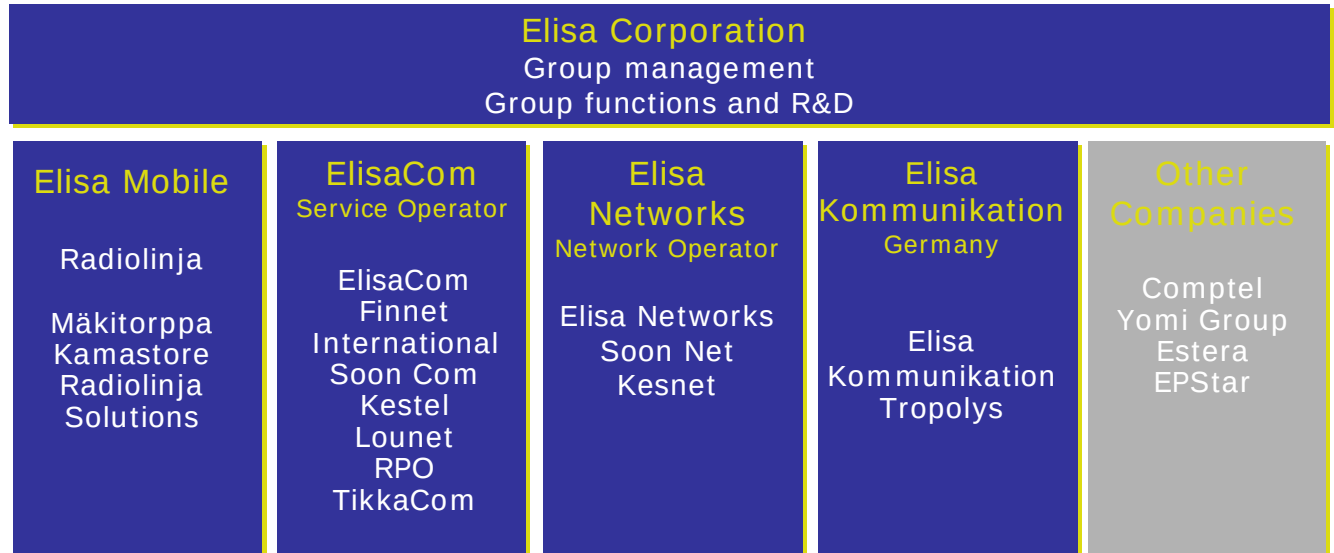


Figure Appendix II.1: The group structure of Elisa Communications in 2004 before the changes.

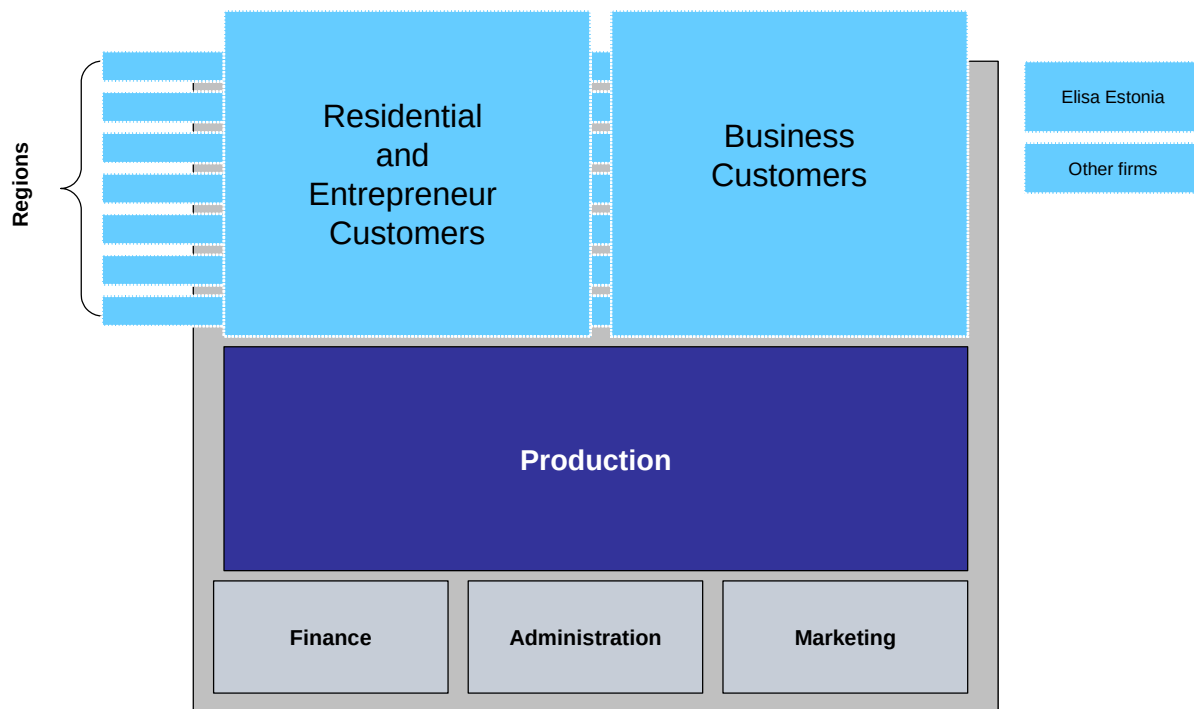


Figure Appendix II.2: The functional model of Elisa since the January 1st 2006. The number of firms have been reduced by incorporating them into the parent company.

APPENDIX III: Elisa's Business Idea, Vision, Strategy and the Key Stakeholders**Business Idea**

'Elisa offers telecommunications services for fast, efficient and secure communication.'

Vision

'The most attractive and effective operator.'

The attractiveness means smoothness and easiness to approach and do business with Elisa. It also means cheerfulness and delightfulness of the brand and the staff of Elisa. Thirdly, it means reliability of the services and the staff of the Elisa i.e. reclaiming the value promises.

The effectiveness means quickness of services and deliveries, and furthermore the rapidity to answer to customer requests. Secondly, it means cost efficient in all actions and levels of operations. In addition to these, it means an attitude to do it right at once.

Operational Surroundings

Elisa practices business in Finland, Estonia and selected international market locations.

Value Promise

Elisa is for its customers the most attractive and efficient partner, which offers easily approaching, cheerful and active customer service, reliable and smooth telecommunication services, and benefiting total customership.

Elisa will operate cost efficient by doing things quick and right at once.

Roadmap of the Implementing the New Strategy

The statement of the board of directories is that "Elisa is in the right tracks". During 2004 to 2006, focus is on the one unified Elisa. This means adding efficiency by clarifying operations, unifying legacy infrastructure systems (e.g. customer relations management (CRM), billing and different network management tools), reducing other operating costs (e.g. supply prices and the number of suppliers), and strengthening the objective orientation of operations.

During the years 2005 to 2008, the focus is on the strengthening of market positions in main markets. This signifies efforts to grow market share on broadband subscriptions market, intensifying market share on mobile market, and the total customership.

The total customershipness means that Elisa has total solutions for communication needs i.e. the best portfolio. Secondly, Elisa will reward customers of total customership by best customer benefit programs in the branch. Moreover, Elisa knows how to meet the customer, i.e. the best customer service in the branch.

During the years 2006 to 2010, the focus is on the emerging markets. New business raises from the innovations, so Elisa wants to be creative. Effective utilization of innovations means that Elisa is performing. Thirdly, new growth areas determined development will start already in next year, showing that Elisa renews.

Key Stakeholders

The financing sector and the shareholders belong to the key stakeholders due to need of financing for new infrastructure (e.g. 3G and 4G mobile networks and MPLS data network) investments and the long-term stability for the Elisa (net debt development from 742 M€ Q2/03 to 513 M€ Q2/04) . It is essential that Elisa could improve its ratings (BBB/Stable/A-2, S&P; Baa2/Stable, Moody's) in order to get cheaper loans. At the same time, both financiers and shareholders expect profitability, more value and dividends from Elisa. Shareholders are expecting to have dividends from each fiscal year together with the increasing value of the share.

The employees of Elisa are also the key stakeholders. Many business professionals and consultants argue that without committed staff a firm can reach neither profitability nor excellent service for the customers. The employees are expecting meaningful and stable jobs under fair management style and chances to develop and proceed in their career.

The customers to whom Elisa sells its products and services are also amongst the key stakeholders. In order to gain more market share and revenue Elisa needs solid and loyal customer

base. In return, the customers expect to have value for their money when purchasing services of Elisa. By the segmentation of its customers - consumers, small and medium businesses, and large businesses - Elisa is able to focus its offerings and develop its portfolio to appropriate customer demands and fulfilling them, which should lead to better customer intimacy and loyalty.

Due to legislation changes, which have resulted both deregulation and regulation in order to add competition in telecommunication markets, the importance of authorities and government has become more significant. For instance, in order to gain more market share in broadband subscriptions market, Elisa have to penetrate on areas in Finland where it has not have in the past its own infrastructure. To over come this, there are two alternatives: invest on new own infrastructure or hire capacity from its local competitors on the operator wholesales market. Even in the first option, Elisa has to hire the last mile copper from its rivals. On the other hand, Elisa has to convince the authorities of its own willingness to add competition and show it in practice by hiring its own infrastructure to the rivals with fair prices and conditions comparing to those, which it admits to its own service operator. By doing this, Elisa would expect more co-operations from the authorities' side to open up competition on other locations of Finland so this justifies the government and the authorities as one of the key stakeholders.

Stakeholder group	The input or output/expectations of the stakeholder group for Elisa	The input/expectations or output of Elisa for stakeholder group
financing	investment protection, interests and pay backs	better credit grade, cheaper loans
shareholders, both the institutional and private ones, and especially Thor Björgólfsson, the Icelandic investor and the chairman of Elisa's biggest owner the Novator Group.	higher stock rates, dividends, investment protection, profitability, revenue, especially the biggest owner expects new market areas for the better possibilities to fulfil their other expectations	long term investments,
employees	wages, secure jobs, fair employer policy, good management	better process, shorter throughput times, more sales, better customer satisfaction, commitment
government	public broadband strategy, project Information Society	jobs, taxes
authorities like Ficora and KiVi	executing the EU and national regulations, confirming the fair competition and non discriminating prices and conditions for the rivals on wholesales markets, no entry barriers on local markets	making sure that the competition is fair and open in the market and the wholesales market prices are reasonable, adequate and non discriminating
customers (both business and residential ones);	better products and services, competitive prices, accurate invoicing, ease and secure use of the products, easiness of purchasing	incomes, market-share, customer loyalty, additional purchases,
vendors, equipment manufactures	more investments on their products, incomes, customer loyalty, big volumes	mutual R&D and processes, better support, cheaper prices, better products, accurate invoicing, ease and secure use of the products, easiness of purchasing
competitors	bigger market-share, prices are reasonable and adequate on whole sales market, accurate invoicing,	prices are reasonable and adequate on whole sales market, lower costs of hiring copper lines, accurate invoicing,
content providers: entertainment business, media houses	co-operation, mutual R&D and processes,	more appealing services which demand broadband subscriptions, co-operation, mutual R&D and processes,

Table Appendix III: The table describes the inputs and outputs/expectations of each stakeholder group for Elisa and the inputs and outputs/expectations of Elisa for each stakeholder group.

APPENDIX IV: Analysis Tools

The SWOT analysis is targeting to clarify the extent to which the current internal strengths and weaknesses are appropriate to, and competent of, treating of the threats or exploiting on the opportunities in the business environment. The purpose is to convert the opportunities to the strengths. Further, the strengths should match the threats from the business environment that convert to the weaknesses of an organisation. The SWOT is also known as a position analysis.

The pitfall of the SWOT analysis is the unrealistic evaluation of the strengths and the weaknesses of a firm. This evaluation is usually done by the internal personnel and the comparison to the rivals might be inadequate. Another pitfall is to achieve the realistic view from a firm's abilities to respond to the opportunities and the threats.

By the PESTLE analysis, a firm can identify different factors and forces in the wider business environment that are relevant to it. There are different applications of the PESTLE analysis, some times called SLEPT, or STEEP depending on the approach and the need for analysis. Some authors add competitive and/or cultural dimensions on this analysis.

The pitfall of the PESTLE analysis is that the identifying of the factors and forces is insufficient. They are just raw material for the strategic thinking. The real challenge is to cope with the interactions of the different factors and forces, and bearing in mind that the point of view should be in their future impacts. Furthermore, the complexity of the PESTLE analysis in the

international markets is very challenging due to many factors which can distinct significantly from those in the home country. Johnson and Scholes (2002) have suggested the use of scenarios as a supporting expedient.

Henderson and the Boston Consulting Group (BCG) developed the growth/share matrix, also known as the BCG Box (Figure Appendix IV.1). The matrix measures the market growth and share for all the SBUs of a firm. The assumption of the matrix is that firms with the higher market growth and share are more profitable. The relative market share is compared to the market leader i.e. the right side of the scale describes the SBU's size in percent-age of the market leaders size, and the left side describes how many times the market leader is larger than the nearest rival. The further to the left the SBU's are on the BCG box, the stronger a firm should be. It is noticeable that the horizontal market growth line is a moving line, and it can move up and down the scale according to the market growth of an industry.

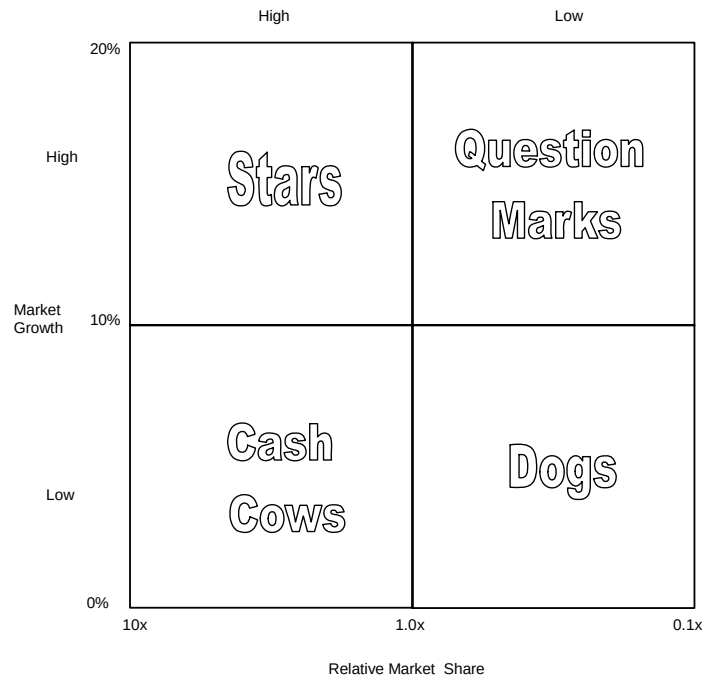


Figure Appendix IV.1: The original Boston Consulting Group matrix (BCG box). The matrix measures the market growth and share for the SBUs of a firm. The assumption of the matrix is that firms with the higher market growth and share are more profitable.

The purpose of the BCG box is to study, does a firm has a balanced product portfolio or not. If it is not in the balance, there need to be strategically decisions made. In its barest the BCG box does not tell anything of the cash flow (Figure Appendix IV.1). However, BCG further developed the BCG box so, that it contains the implications of the cash flow, and the relative market share (Figure Appendix IV.2). Both the high market share/growth rate, and the low market share/low rate of growth do not generate surpluses. These cases differ from each other by the actual cash flow, which is bigger in the first case. The shortage of the cash occur, when the market share is low but the growth rate is high. E.g. promoting the new products or enter-

ing to the new market areas. This shortage can be financed either by the surplus if the portfolio is in the balance, or otherwise the firm needs the external financing.

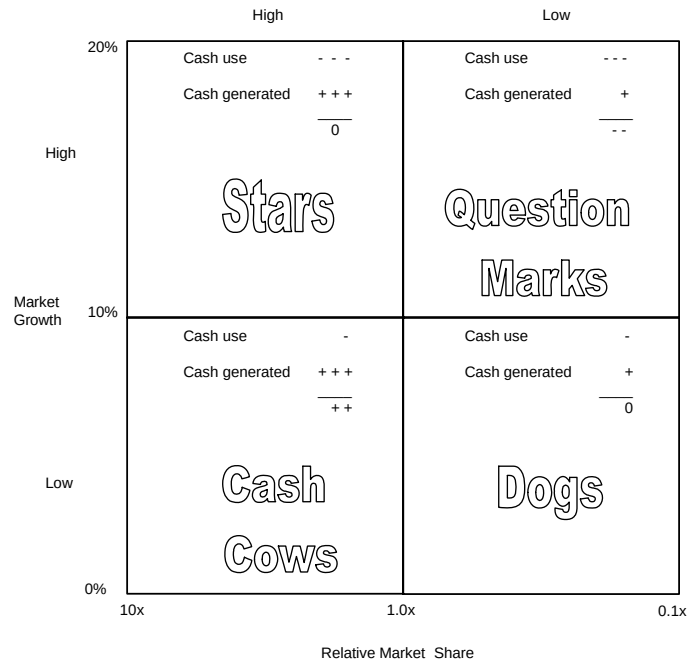


Figure Appendix IV.2: The BCG box with the cash implications. The cash can be thought to flow between the quadrants of the BCG box so, that when the market share is high and the growth rate low, it generates a surplus of cash.

Koch (1995) explained the renewed BCG box, that the most efficient use of the cash is to protect the cash cows. The cash cows rarely use cash, but in the case of the new investment in a production, it should be executed without the hesitation. The stars will need cash in order to gain or sustain the relative market share. Thirdly, the earned cash by the cash cows can be invested in the developing and promoting new products i.e. the question marks. According to the BCG, the dogs should be even left without the new investments, or as minimal investments as possible.

However, Johnson and Scholes (2002) claim that firms could have more critical resources than the cash, like the innovative capacity of the employees. To these resources the ‘question marks’ and the ‘stars’ could be so time and energy consuming that the aggregate might be jeopardised.

The basis of the Product Life Cycle (PLC) model is in the works of Abernathy and Utterback (1978) and their other articles published in the 1970’s. They developed a model of the dynamics of the innovation. This product and process innovation model (Figure Appendix IV.3) suggests that the rate of the major innovation follows a general pattern over the time, which can be from the months even to the centuries.

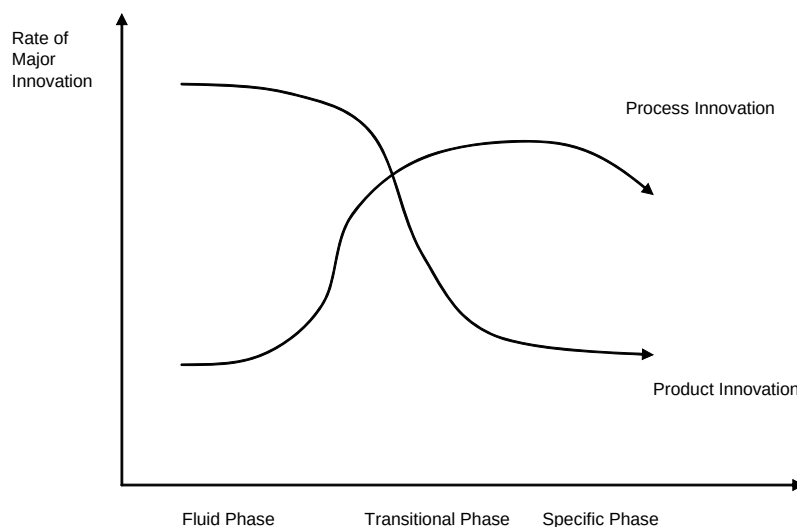


Figure Appendix IV.3: The product and process innovation model of Abernathy and Utterback. They implemented this idea, and with the experience from the many different industries, they argued that there are different stages in the technology life cycle (Source: Utterback, J. (1994) *Mastering the Dynamics of Innovation*. Harvard Business School Press. Boston, USA. p. 256).

The PLC is a generalised model of a products sales history over a time period i.e. its lifetime.

The PLC consists of the four stages: the introduction, growth, maturity, and decline. Some theorists like to add more stages in the PLC model (Figure Appendix IV.4). The product development stage is added especially if the profits are liked to shown in the same figure. The maturity stage can be divided into two stages as an early and late maturity. Harvard Business School (HBS) uses five stages PLC, where the late maturity stage is called the saturation.

Some PLCs decline in to the niche stage, which can last many years if any substitute products are not developed or the customers appeal more the original product (e.g. the music of Elvis).

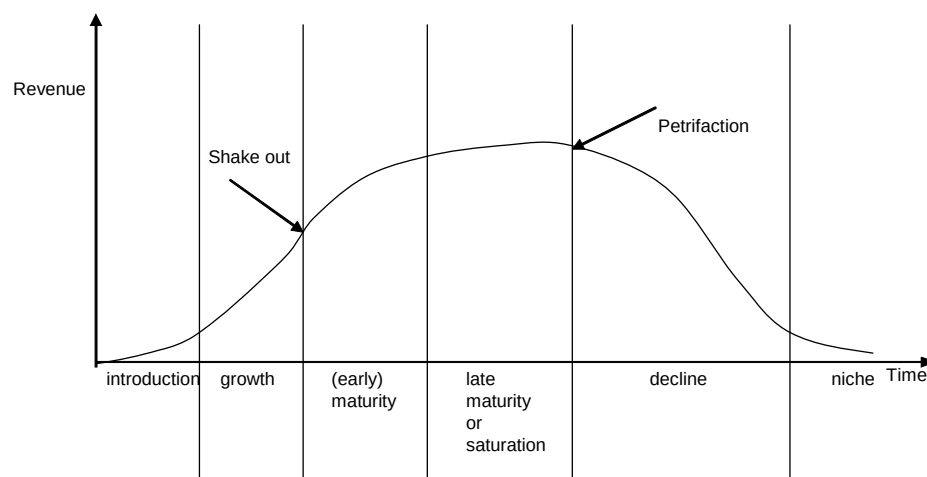


Figure Appendix IV.4: The different stages of the classical PLC. (Adapted from: Kotler, P.

(1999) *Kotler on Marketing: How to Create, Win, and Dominate Markets*. 1st ed. The Free

Press, a Division of Simon & Schuster Inc. New York, USA. p. 518; and Walker, O. C. Jr.,

Boyd, H. W. Jr., and Larréché, J-C. (1992) *Marketing Strategy: Planning and Implementation*.

Richard D. Irwin Inc., Boston, USA. pp. 147 - 148.)

At the introduction stage of the classical PLC, the sales growth is low when the product is just introduced to the market. The profits tend to be negative at this stage due to the marketing efforts. The growth stage is the rapid market acceptance and increasing profits. At the shake-

out-point, the growth changes to the maturity stage, where the sales begin to slowdown, and the fierce price competition might raise. In the late maturity stage, the sales slows down even more due to product's achieved acceptance by the potential target market. At this stage, the profits might decrease due to e.g. competition. Though, profits could be tried to sustain e.g. by re-engineering the process. At the petrification-point, the decline stage begins where both the sales and profits diminish. In the niche stage, the sales is very minimal, but the profits might be relatively reasonable depending on the product and the target market. Additionally, not just the classical PLC varies, but the whole PLC. A study, by Swan and Rink in 1980, could identify 12 different types of PLCs (Walker *et al.*, 1992).

In order to extend the product's PLC at the maturity stage, a firm can try to introduce new features or modifications on the product (Figure Appendix IV.5). This product development (Kotler *et al.* 2001) is widely used e.g. in the automobile industry, where cars will have so-called face-lifts before the model is totally changed. This is analogous with the cell number two in the Ansoff's Matrix, and the pertinent methods in this cell (see Figure 2.2.1).

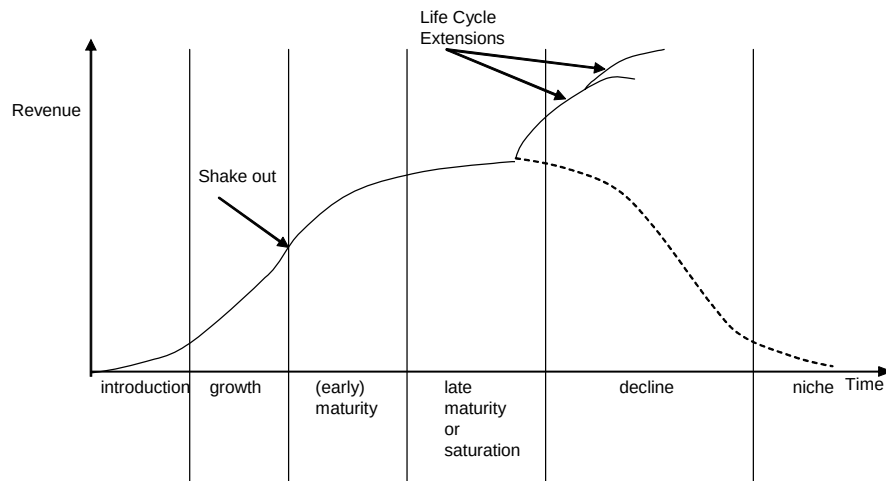


Figure Appendix IV.5: The life cycle extensions on the PLC. In order to extend the product's PLC, a firm can introduce new features or modifications on the product before the petrification-point i.e. before the decline begins. By this, a new burst of the demand could be created, i.e. a new growth stage. This is widely used method e.g. in the TV-set and automobile industries.

The market development is another way to extend the PLC. There are alternative methods to apply it e.g. by targeting the new customer segments, repositioning the brand, or by introducing sub-brands. The third method is the marketing innovation where a firm can amend its marketing-mix by e.g. lowering the prices, find new sales and distribution channels, or launch new advertisement campaigns and other sales promotions. These two methods are mentioned also in the Ansoff's Matrix cell number three.

The rapidly growing demand at the growth (i.e. tornado in the Moore's term) stage will also give a change to put the market shares into a new order by the use the market innovation. According to Moore (2002), the pragmatists (i.e. the early majority) are favouring the market

leader in their buying decisions. Furthermore, they prefer the same supplier or brand, as they friends and nearest. This allows the market leader, or the '*gorilla*' in the Moore's term, to achieve even bigger share of the market. Other players in the market are left behind being '*chimps*' or just '*monkeys*'.

Moore has outlined, that the market leadership is a consequence of the firm's positive motion energy and momentum together with the right timing in the management. When the '*gorilla*' status has been achieved, i.e. 35 – 40% market share, the buying preference of the tornado stage would strengthen itself as in a snowball effect. Moore has claimed that this will direct all the orders to the '*gorilla*', which it can only have time to process.

When the market is saturating, in the Moore's term transferring to the main street, the market leader will get the largest proportion of the profits. Additionally, the market leader will gain the major part of the augmented services and business, which are the function of the core products installation base. Therefore, the '*gorilla*' will get all the benefits during the rest of the PLC. This viewpoint is also backed by the assumption, when the '*gorilla*' has set the reference price in the market during the tornado, its profits will increase compared to the rivals. The '*chimps*' and the '*monkeys*' have to sell at lower prices in order to cope with the competition.

Phillips *et al.* (1995) have suggested that the international PLC (IPLC) is one form of the extending the PLC. When the domestic market are beginning to saturate, transferring to a foreign country will start a new introduction and growth stages. This operation can be done all

over again if the product has an multinational appeal. Furthermore, when this product managing is carried out with an appropriate plan, a firm will have many markets at the different phases of the PLC guaranteeing the steady profit flow. This approach modifies the PLC as an illustration of the market life cycle (Figure Appendix IV.6).

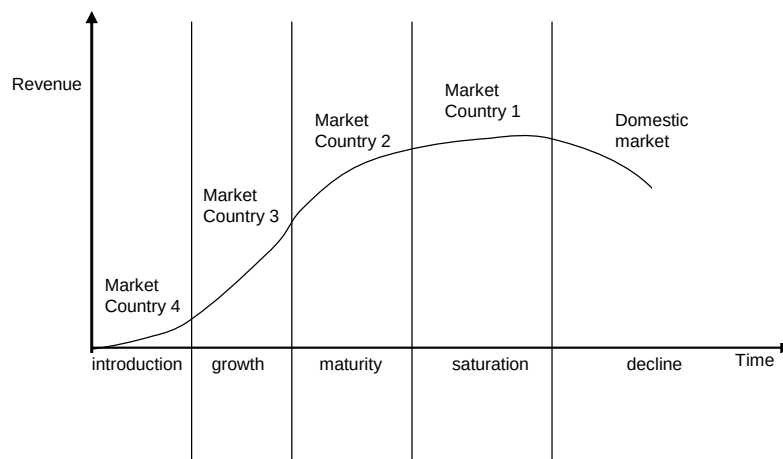


Figure Appendix IV.6: The PLC extension by the international marketing. In order to extend the product's PLC, a firm can penetrate abroad. (Adapted from: Phillips *et al.* (1995) *International Marketing Strategy. Analysis, Development and Implementation*. 2nd ed. Routledge. London, England. p. 296.)

In generally, the PLC is a practical tool to study the phases of the broadband product or market. However, the PLC does not tell anything about the changes in the business environment nor market shares. It ignores also the whole portfolio of a firm and its competitors. Further criticisms towards the PLC framework have presented Lambkin and Day (1989). They have criticised that the PLC framework has conceptual gaps like the different positions and resources that competing firms have, and the strategic options on the supply factor.

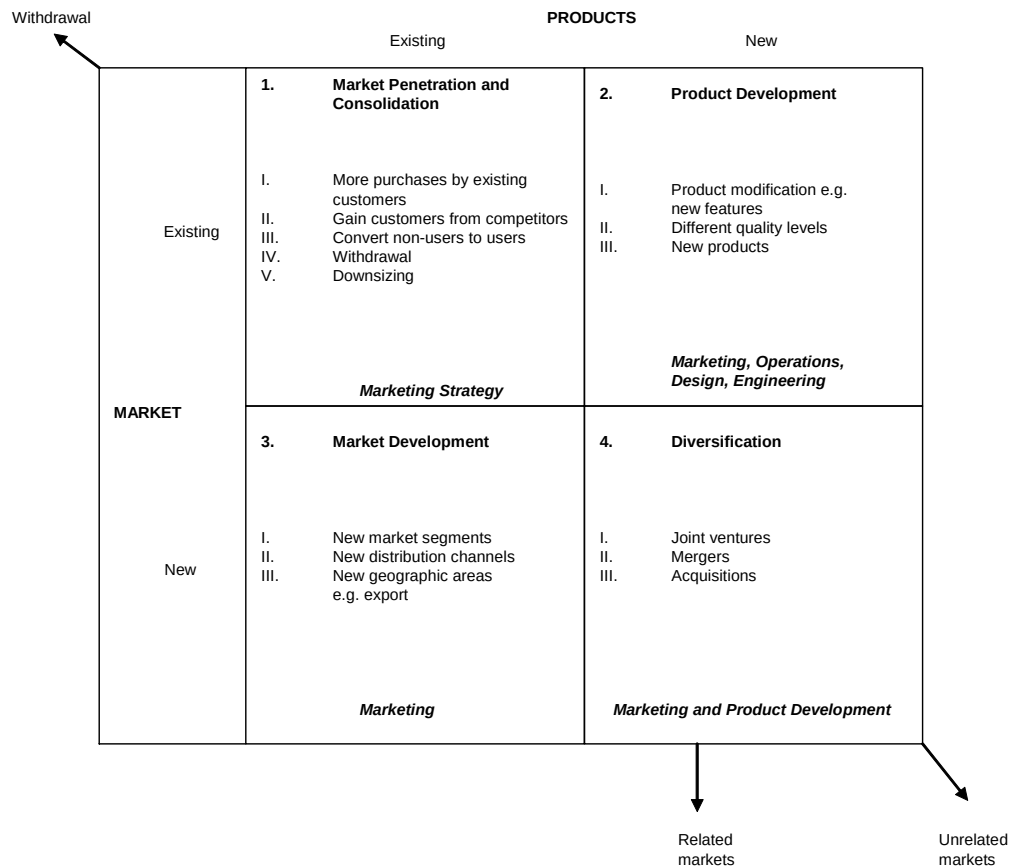


Figure Appendix IV.7: The Ansoff's Matrix is a product – market vector. Each quadrant has its own suggestion for the strategic direction adequate to that market and product stages. The numbering of the quadrants (1 – 4) follows the easiness of implementation and the level of the risk (Sources: Ansoff, I. H. (1984) *Implanting Strategic Management*. 1st ed. Prentice Hall Inc. Englewood Cliffs, USA; Jewell, B. (1998) Igor Ansoff & Corporate Strategy. *Business Review*. September, pp. 2 – 3; Johnson, G. and Scholes, K. (2002) *Exploring Corporate Strategy*. 6th ed. Pearson Education Limited. Harlow, England. p. 362.)

The Ansoff's Matrix is a simplified product – market vector, which gives an analysis of the directions that a firm should take in its competitive environment. The quadrant has been numbered in a suggestive way, which a firm should consider before moving to the next cell. The market penetration and consolidation (1) is the most obvious and easiest way to start.

Shortly, it is selling more of the same to the same customer segments. In the product development cell (2), it is a question of selling the new products to the existing customers. At the market development quadrant (3), the strategy is to sell current products to new customers. In the last cell (4, the '*suicide cell*'), the strategy is to sell the new products to the new customers by using the so-called diversification strategy. Therefore, Jewell (1998) has argued that the market penetration strategy should be exhausted before moving to use any other strategy.

Thus, the market penetration is the less risky strategy due to firm's ability to exploit current resources and capabilities. This strategy is the most appropriate in a growing market. It is been argued, that only keeping the market share will guarantee the growth without any extra effort. In a case of the rivals meeting their capacity limits, it is even possible to increase the market share. In a declining or saturated market, the market share or the growth need to gain at the expense of the rivals, by consolidation and creating a competitive advantage over the rivals. Consolidation can be done e.g. by the withdrawal from the certain existing markets or products, convert non-users to users, or downsizing some marketing activities.

The product development strategy is useful when a firm is familiar with the specific customers. Then it can put all its efforts to produce the new products targeting to these existing customers. The assumption is that a firm does have the needed capacity, innovation, and technological knowledge. The advantage comparing to the market development is, that the product development has relations with the customers and the markets where the profits already exist. Johnson and Scholes (2002) have emphasised the meaning of the critical success factors (CSFs) and their modifications in order to keep ahead of rivals in this context. The CSFs are

features which *‘are particularly valued by the customers and used to distinguish between the potential providers’*. E.g. the reputation of the brand, after-sales services, delivery reliability, technical quality, product range, and innovation could be such CSFs.

The third quadrant concerns with the market development strategy. This strategy suits to a firm which have its strengths in a specific product. The market development could be implemented by the new customer segments (e.g. new uses for the existing products), new sales channels or new geographic sales areas. The disadvantage is that a firm needs to operate in an unfamiliar business environment, e.g. abroad.

The diversification strategy is commonly considered as the most risky strategy of these four, due to that the ‘suicide cell’ demands simultaneously both the product and the market development. The situation is even more risky when a firm does not have such competencies in-house, and it has to rely on the outside knowledge in a form of the joint or sole ventures (see 2.3). However, diversification might be the only alternative in a case of a saturated and/or declining market. Furthermore, it might be a sensible alternative if a high return is achieved, or to gain a foothold in an attractive market. The advantage could be also the balancing effect in the business portfolio (see 2.4.1), if the markets differ by their behaviour. Johnson and Scholes (2002) have pointed out the relevance of the powerful stakeholders’ expectations which might lead to the diversification strategy.

APPENDIX V: Applicable Entry Strategies for the Service-oriented Firm

The licensing means that a firm grants an allowance to another firm in the target country to produce and market its services by the means it has its competitive advantage. This competitive advantage could be based on the intangible assets like the technology know-how, brand name, trademarks etc. The licensor gets royalties or other payments for the exchange.

The franchising differs from the licensing so, that the franchisee is typically more motivated due to earning possibilities than the licensor. Additionally, the agreement could be for the shorter period than in the licensing. It is common that the franchisor helps setting up the business e.g. the tangible assets, organisational structure, and marketing. McDonald's is a good example of the successful global franchising.

The management contract means that a firm gives its expertise to manage and run the business for the local owners.

In the turnkey operations, a firm train the buyer firm's personnel to manage and run the business independently, and simultaneously establishing the business processes and needed contracts with the stakeholders.

In a joint venture, a firm takes a local partner or partners to form a local enterprise.

The sole venture strategy means to establish a local subsidiary from the scratch. It is typical that the parent firm provides the finance, R&D, product specifications and production technology while the subsidiary runs the operations based on the local decisions. This was the entry strategy for Elisa, when the mobile phone business was established in Estonia.

The acquisition is another sole venture approach. In this case a firm buys a local firm taking over its resources and competencies in order to enter fast to the market.

APPENDIX VI: International Product Life Cycle

Based on their studies, Onkvisit and Shaw (1995) have argued that the theory of the International Product Life Cycle (IPLC) is relatively unknown. In their opinion: '*...IPLC theory describes the diffusion process of an innovation across national boundaries.*' (Onkvisit and Shaw, 1995 p. 482).

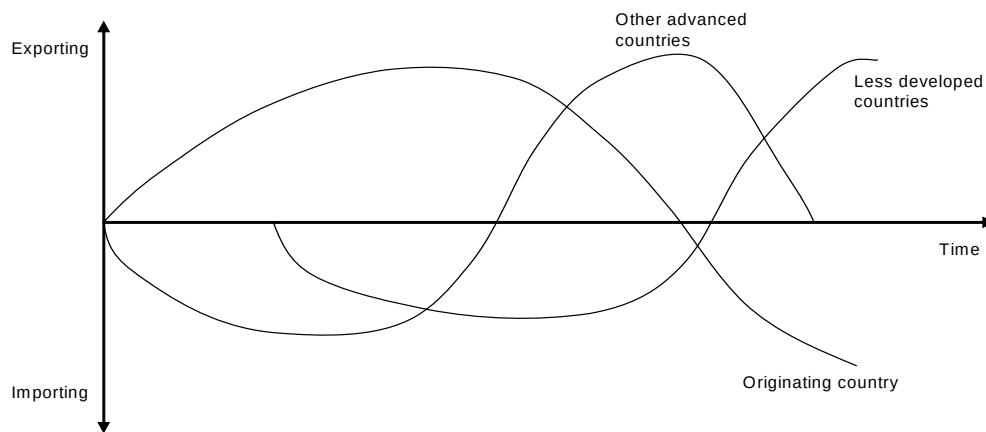


Figure Appendix VI.1: The international product life cycle (IPLC) curves. The assumption of the IPLC curves is that when a product's originating country has export the product long enough creating a need or an appeal towards it, other advanced countries start to manufacture the similar products corresponding to these needs. Soon after, the less development countries (LDC) will follow this phenomenon. Furthermore, the LDCs will gain a comparative advantage by the cost structure and efficiency. This will end up in a situation where more developed countries import the very same products than they used to produce. This IPLC theory is supported by practice e.g. the manufacture of the sneakers and other sports gear, and the semiconductors which are currently mainly produced in South-East Asia (Adapted from: Onkvisit, S. and Shaw, J. J. (1983) An Examination of the International Product Life Cycle and Its Application within Marketing. *Columbia Journal of World Business*. Nr. 18, Fall. p. 74. In: Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India. New Delhi, India. p. 483).

Although the IPLC theory explains relatively good the changes in the product manufacturing, it seems to be lack something. The empirical evidences by the study of Alicia Mullor-Sebastian (1983) have implied that the commodities sometimes fail to behave in the way the theory predicts. Onkvisit and Shaw have argued that the IPLC is more applicable for the products related to the new technology, and satisfying global basic needs, such as washing machines rather than dyers.

Onkvisit and Shaw have classified five stages in their IPLC model (Table Appendix VI).

Stage	Import/Export	Target Market	Rivals	Production Costs
0. Local Innovation	-	originating country	few: local firms	initially high
1. Overseas Innovation	increasing export	originating country & advanced countries	few: local firms	decline owing to economies of scale
2. Maturity	stable export	advanced countries & LDCs	advanced countries	stable
3. Worldwide Imitation	declining export	LDCs	advanced countries	increase owing to lower economies of scale
4. Reversal	increasing import	originating country	advanced countries & LDCs	increase owing to comparative disadvantage

Table Appendix VI: The five stages of IPLC and characteristics in the each stage (Adapted from: Onkvisit, S. and Shaw, J. J. (1983) An Examination of the International Product Life Cycle and Its Application within Marketing. *Columbia Journal of World Business*. Nr. 18, Fall. p. 74. In: Onkvisit, S. and Shaw, J. J. (1995) *International Marketing: Analysis and Strategy*. 2nd ed. Prentice Hall of India. New Delhi, India. p. 482).

On the other hand, today's mass marketing has moved to online which means that new products are almost simultaneously available all over the globe at the same time. Additionally, PLCs have shortened into months, and even weeks, instead of years (Czinkota and Ronkainen, 1995). This sets more challenges, and possibilities, for firm's product development by combined means of new markets and new features. Czinkota and Ronkainen further suggest that firms should develop products and domestic strategies always so, that the possible penetration abroad is considered.

Ohmae (1985) has another approach to IPLC (Figure Appendix VI.2). He calls it as a 'waterfall' model while some schools of thought use the term 'trickle down'.

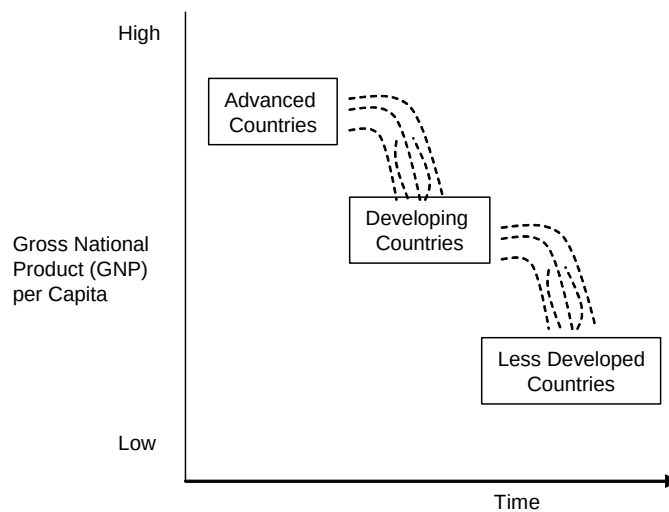


Figure Appendix VI.2: The IPLC as a trickle down model or as Ohmae calls it, as a waterfall model. The products are first introduced in the advanced countries and then in the countries with less GNP. The manufacturing of products will follow the introduction process (Adapted from: Keegan, J. W. (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc. Englewood Cliffs, N.J., USA. p. 42).

The pitfall of following the traditional IPLC models is that the firms may focus just on reducing the manufacturing costs. Simultaneously these firms might lose the competition to the rivals which are more innovated introducing e.g. the new features, functionalities, and quality issues (Keegan, 1995).

Keegan have further argued, that in the times of globalisation the so-called 'shower' approach on the IPLC (Figure Appendix VI.3) is more adequate. This model assumes that the market areas all over the globe develop at the same time rather than step by step as in the 'waterfall' model. The strategy in the 'shower' model is to introduce the product everywhere when it is launched.

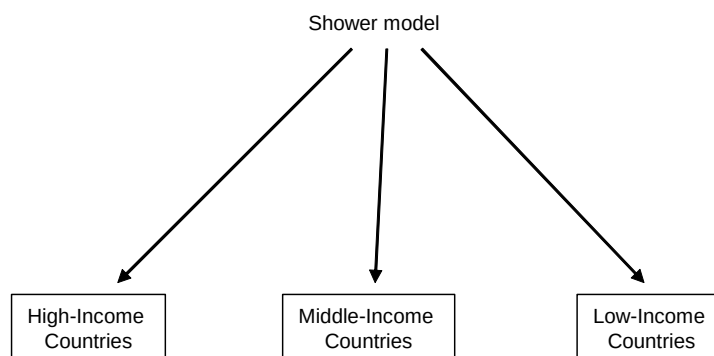


Figure Appendix VI.3: The IPLC as a shower model. The products are introduced simultaneously all over the world (Adapted from: Keegan, J. W. (1995) *Global Marketing Management*. 5th ed. Prentice Hall Inc. Englewood Cliffs, N.J., USA. p. 43).

APPENDIX VII: Background of the Adoption Process

Roger (cited in Kotler *et al.*, 2001) laid a foundation for the adoption process model in the early 1960's. The adoption process considers the phases how the individuals accept new products or ideas. Roger's research suggested that people go through five stages from the first attention of a product to the buying of the very same product. These five stages are:

1. Awareness. An individual becomes aware of a product. Marketers use the advertising for this purpose.
2. Interest. An individual seeks more information of a product. An individual's shift from the viewing position to the monitoring position has occurred. Marketers use the research activities and competitions for this purpose.
3. Evaluation. An individual combines mentally a product to the present and future situations. The purchase decision is made. Marketers use the examples and celebrities and other opinion leaders for the promotion.
4. Trial. An individual likes to, depending on a product, make a trial before the actual purchase, or buy it. Marketers use the free samples and free trials for this purpose.
5. Adoption. An individual buys a product.

APPENDIX VIII: Interviews

Prefix	Lastname	Surname	Title	Business Unit	Organisation
Mr.	Hanikka	Harri	Development Manager	Production	Delivery Control
Mr.	Heino	Ismo	Production Director	Production	Backbone and Access Networks
Mr.	Jahnukainen	Jarkko	Sales Manager	Residential and Entrepreneur Customers	Fixed Product Sales
Mr.	Karpakka	Jari	Head of Department	Production	Product Elements
Mr.	Kantinkoski	Jukka	Procurement Manager	Production	Operator Agreements
Mr.	Kavanti	Olli	Head of Department	Production	Broadband Networks
Mr.	Lehti	Panu	Director	Saunalahti	Residential and Entrepreneur Customers
Mr.	Nisula	Markus	Director	Elisa Eesti	Network Operator
Mr.	Perälä	Ari	Customership Director	Residential and Entrepreneur Customers	Customerships
Mr.	Seppänen	Sami	CEO	Elisa Eesti	

Table Appendix VIII.1: The names and organisational status of the key informants, which were interviewed for the research.

Table Appendix VIII.2: The answers and highlights of the interview discussions.

Entry Barriers	Economies of scale	Access to distribution	Proprietary product differences	Brand identity	Switching costs	Capital requirements	Absolute cost advantages	Government policy	Expected retaliation
1	use of capacity lowers the average costs, need for proper accommodation management,	limited amount of fixed-lines (last mile copper) and internal lines in houses also fibre access and backbone	fixed-lines xDSL, wireless (WLAN, Wi-MAX, 3G/UMTS), kiinteistöliitymät	current incumbent		investments in equipments, backbone and maybe access	service easily bought from e.g. guardian firms (=easy change of faulty equipment), local alliances with maintenance in lines, availability in geographical sense, fault management (= automatic), need for excellent management centre, need for local (or at least native speaking) help desk, address based data of flats and houses (applicable in Estonia?, copper, in-house wires), rural areas with wireless	regulatory authorities, need for opened competition, last progress in Finland is not so good due to price settings, fastness of implementations is relatively weak, need for exploitation of regulation; good to be in the FI-CORA's WGs	couple of years (need for volume, danger in evolving technologies)
2	Finland: one million bb users and one million users without PC (or appropriate PC for bb usage) and approx. 250 thousand dial-up (modem) users, in relatively small customer amount (i.e. Estonia,	own distribution and sales channels are strategic advances due to better management and cost efficiency,		mass marketing is essential, buying preference growth due to mass marketing in Finland,		need for capital for investments because it is essential to have big volumes and own DSLAM capacity, as a virtual operator is	lucrative market due to small geographic area and large number of inhabitants (e.g. St. Petersburg) which whole Estonia is not, just Tallinn and maybe Pärnu	EU legislation and local regulation, price screw?, lobbying politicians and being active towards authorities,	

APPENDIX VIII

SECRET

Jorma Salo

	volumes need to be achieved to justify investments), in Estonia 26% bb penetration (PC penetration?), low profits(?) due to current low street prices					hard to make profit			
3	network investments are via corporation agreements which may offer economies of scale in this sector compared to small incumbents,	challenges of local loop and access in operator accommodations, in-house cabling could be problem if its not thought well in advance, the whole sale price of local loop and its quality should be known in advance (reflection to the bb strategy which could be also wireless and more precisely extension of 3G networks),						regulator's attitude is essential to improve competition, EU regulations are the base for the local legislation, good relations with the authorities are advisable, Ficora workgroups have helped the process development, national bb strategy has strengthen the actions of Finnish authorities,	

APPENDIX VIII

SECRET

Jorma Salo

4	participating workgroups of FICORA has improved the delivery process and brought cost savings	whole sale markets should be existing including price-lists, access in operator accommodations, order interfaces, and delivery times;		using local media (e.g. quality newspapers) for promoting free competition and revealing incumbents monopoly and lazy authority politic,				EU regulations as in Finland to improve the availability of the services and to add competition, discussions and negotiations with regulator of the whole sale markets and its conditions in advance to reveal regulator's attitude and actions (this can also reflect to the chosen technological platform e.g. minimise the incumbent's involvement),	
5	exploitation of Finnish experience and contracts; in provisions is used same	incumbent is obligated to rent fixed-line access; no access to teleoperator				need to invest in own teleoperator premises	shared access is priced so high by the incumbent that the ULL is the obvious solution;	no working wholesale market; Elisa has lobbied	

APPENDIX VIII

SECRET

Jorma Salo

	scripts than in Finland;	premises; difficult and time consuming to get licenses for own premises; Elion has raised the wireline channels' rent by four times, which reduces the competitors network's building; Elisa rents both the copper line and wireline channel, Starman just the channel;				and the interconnection cables;		actively three years for the opening of the wholesale market; new Communications Act -05 with the SMP obligations and definitions but nothing has happened; the Act is more like a driving force for the parallel networks than wholesale market; it seems that the market has evolved passing by the wholesale market; according to EU case, customers are allowed to hire further the broadband e.g. by	
--	--------------------------	---	--	--	--	---------------------------------	--	---	--

APPENDIX VIII

SECRET

Jorma Salo

								sharing it;	
6								government's policy is to practice e-governance; NRA will send the SMP suggestions to the Commission in March-April -06 and some feedback could be expected in the summer -06 of the broadband wholesale market; government has a strategy called "home street" where it is competing the service providers for the rural area and offers substitutions to	the retaliation time for the broadband infrastructure is three years which seems to be also the technological lifecycle of the current DSLAMs;

APPENDIX VIII

SECRET

Jorma Salo

								the winning provider;	
7	bigger customer volumes mean efficiency in production;	the access to the operator premises is vital especially when the DSL2+ technique is applied;	DSL2+ technique will offer more speed which can be a differentiation mean before the competition evolves to the applications and services top on the broadband;	Elisa's brand is stronger and more simplified after the re-organisation and killing the other brands (Radio-linja, Elisa Internet, In-voicia, Elisa Solutions etc.)				NRAs activity is essential to handle rising issues of the entry barriers and complains; own activity significant in authority lead work-groups; NRAs need more power and staff to apply these	three years for DSLAMs
8	technologically entering is relatively easy						bb subscriptions lack value compared to mobile business due to plain bit tube instead of value added services or killer applications for the operator, further the price erosion due to competition diminish the margins more in bb	worst entry barriers is regulation both competition and telecommunications, the lack of it or incumbent protecting politics, price screw (whole sale prices vs. retail prices), access to	

APPENDIX VIII

SECRET

Jorma Salo

								operator accommodations, local loop availability, connections between accommodations and their pricing, delivery times, these reflect as non profitable business	
9	the interfaces of the processes should be electric, the improvement has occurred in Finland, but there is much development left, the operational systems should “discuss” without manual work phases the meaning of the mediator operators between the telcos could be a solution as in SAP billing transforming the messages suitable for	the dependency on the incumbent and its fixed-lines (ULL and shared access, bitstream); incumbent’s entry barriers e.g. offering worse premises to competitors;					supporting IT systems for the processes that manual phases can be minimised on the processes; the impact on Elisa’s own SMP area and its network operator products cannot be avoid but when Elisa is active this impact could be minimised or done with more manageable;	NRAs actions is essential removing entry barriers industry workgroups and their role is important, in Finland the NRA (FICORA) has conducted the workgroups; NRAs’ decisions should be	

APPENDIX VIII

SECRET

Jorma Salo

	the receiver or as in number transparency, on the other hand the costs of the transactions could be too high, the NRAs impact is also significant as was seen number transparency which was implemented quite quick through the co-owned company (Numpac) which takes care of the operation some operators, i.e. typically the smallest one, use the influent processes as an entry barrier							more binding and executable without the slowing effect of the appeals; lobbying the politics because the NRAs are powerless and they need to have more power	
10	“gorilla” has the economy of scale due to its market share and further it can add a price premium because of it;	Elion’s strategy to block the competition for the next two years when the market-shares are divided; after the saturation it is much difficult and expensive to change the market than in							

APPENDIX VIII

SECRET

Jorma Salo

		the growth stage;							
New Entrants									
1	due to new technologies	due to new innovative business models							
2	own sales channel	own distribution	better management, cost efficiency,	supporting external sales channel (Markantalo),					
3	strategy could be to transfer Elisa Laajakaista concept	earlier German experience fell with joint venture model and disagreements with local German management altogether with high internal transmission fees	current German model is that the price of DSL subscription is relatively low, as whole sale price, but the ISP prices are high meaning that incumbent T-Com (DT) is protecting its market share	it is hard for new entrant to differentiate from existing services, price and speed are inappropriate differentiation methods due to xDSL technique,	Telenor's actions, Tele2 partly withdrawn from Estonia in fixed network business, others? local spin-ups? Russians?				
4	when operating outside of the own "HMY" area the possible manoeuvres are more numerous due to ignorance of reflection to own HMY business and pricing,								
5	Elisa's IP backbone is just in Tallinn and sur-								

APPENDIX VIII

SECRET

Jorma Salo

	roundings; SDH-ring network (Tallin-Haapsalu-Pärnu-Tarto-Jöhvi-Tallinn);								
6	some new entrants have begun to build WiMAX networks								
7	VNO model could be tempting solution, but it requires the functional wholesale market								
8	Saunalahti used the virtual operator approach in Finland and abroad								
9	Saunalahti gain more than other VNOs of the market shares in bb and mobile								
10	Moore's model: chasm is not so important, but the tornado is the most significant; "gorilla" needs min. 35% of the market share which guarantees the "gorilla's" share of the product's PLC profits	main-street pragmatists are following the market leader;	active price-point-tactic is Moore's model's tool; in Finland Elisa conducted the price erosion on its favour with the speed level rises; the main competitor could not pre-	at the tornado stage the meaning of the sales channels and delivery are the most critical; "forget the customer" like e.g. HP and Oracle has done;	price-point tactice was time scheduled during the summer holidays and just before Xmas and straight after the Xmas which the competitors				

APPENDIX VIII

SECRET

Jorma Salo

			dicted this and was always behind and have to adapt their marketing according to this;		could not predict and were in trouble to follow Elisa's moves;				
Determinants of Supplier Power	Differentiation of inputs	Switching costs of suppliers and firms in the industry	Presence of substitute inputs	Supplier concentration	Importance of volume to supplier	Cost relative to total purchases in the industry	Impact of inputs on cost or differentiation		
1	smaller DSLAMs,	tele accommodation,		monopoly on access lines	whole sale discounts?, wholesale markets?				
2			TV channels (canal+, others?)						
3		exploiting corporation agreements							
4	automatic interfaces to the suppliers (ordering, fault management),			incumbent (local loop owners) is used for field fault repairs (copper lines but could be more depending on the attitude and pricing),					
5	Elisa has rented capacity from Eesti Energia's fibre network, 2*STM-1, and two optional STM-1 at the	installation and maintenance companies are competed; from the Eltel's Estonian quality are bad experiences;	Levira has built a WiMAX network and is willing to rent capacity from it, Elisa could exploit it for the	exploitation of Finnish corporation agreements					

APPENDIX VIII

SECRET

Jorma Salo

	same price;		business cus- tomers;						
6									
7									
8									
9									
10			own sales chan- nels (retail shops, inbound and outbound call centres, EPOS) with outsider home electronic retail chains and changing Elisa's mobile retail shops to broaden the offerings to include broad- band	sales channels are critical in tornado stage;					
Determinants of Substitution Threat	Relative price performance of substitutes	Switching costs	Buyer propen- sity to substitute						
1	DSL2+ offers more speed and is more cost effec- tive than older ATM based tech- nologies	DSL to DSL2+ is not easy nor cheap to imple- ment due the current custom- ers	digiTV is not ready, mediaCentres replacing TV or PC or both?						
2	technology change								
3	switching the DSLAMs to newer DSL2+								

APPENDIX VIII

SECRET

Jorma Salo

4	Ethernet is simpler and cheaper than old ATM DSL technology								
5									
6			fixed-line phone market declines rapidly than in Finland and the initiative penetration was much lower; voice calls are transferring to the VoIP via broadband more quicker than in Finland; Estonians are more eager to adopt new technologies than Finnish; e.g. Skype adoption is wide and partly because it is been made in Estonia;						
7	Elisa will upgrade the network with DSL2+	customers are switching the service provider							
8									
Determinants of Buyer Power									
Bargaining Leverage	Buyer concentration versus firm concentration	Buyer volume	Buyer switching costs relative to firm switch-	Buyer information	Ability to backward integrate	Substitute products	Pull-through		

APPENDIX VIII

SECRET

Jorma Salo

			ing costs						
1			free for customers but costly for the operator			digiTV, cableTV, wireless, (CPE: PC, TV, medi-acentre)			
2	hot spots (=big urban towns), profitable customers could be focus in early stage when investments and input costs are high, customer who already have Elisa mobile, big cities	penetration 48% in Finland, main street stage in Moore's model, estimated growth in Finland 06 13 – 14%, 07 growth 10%, 08 ca. 70% is a saturation point		PC users, Elisa's mobile customers, bb users, replacing bb users are from the competitors (net could be the right sales channel at that time), keep market studies simple: current bb users, current dial-up users, current non Internet users; reflection to market strategy; pay-TV penetration reflects to triple play, mobile users to whom is sold bb and vice versa, (outbound Cc and direct mailings),	mass tailoring,	media centres are in their early market stage, substitute firm could gain 20% of the current market when entering to the new market, technical differentiation by wireless (vs. costs, investments), otherwise price is too obvious			
3		Saunalahti acquire meant more customers							

APPENDIX VIII

SECRET

Jorma Salo

		and increased the market share; new service for current mobile customers, competitors bb customers, new users							
4				market analysis implemented in Finland by person and real estate data bases offered by the authorities, maps used for defining the integrity of potential customers/areas, helps to visualise availability and needed investments for equipments, also support marketing and sales					
5			free WiFi networks in the hotels, restaurants and cafés; some Tallinn city districts offer WiFi			WiMAX might not be a proper substitute technique for the mass product; Elisa is testing	the provisions will be made automatically; the fundamental database need to be get from the incumbent;		

APPENDIX VIII

SECRET

Jorma Salo

						HSDPA technique for a supplementary broadband service for the hot-spots (harbours, airports, leading hotels); Elisa do have ca. 50 chargeable WiFi hot-spots; the DSL CPE could support WiFi;			
6	the number of the households is 500.000 which makes the household penetration 30 – 40%; in Tallinn's area are ca 50 - 60% of the potential broadband households which are in Elisa's broadband networks' coverage;					ISDN and dial-up market are not so importanta due to low user numbers which was initially due to regulated markets when those technologies boomed elsewhere;			

APPENDIX VIII

SECRET

Jorma Salo

7	customer segments are changing when market saturates								
8	Saunalahti – Elisa merger raised the customer volumes								
9									
10		when the main-street evolves also the market strategy have to adapt according to it; in tornado stage the customers are pragmatists and after the growth stage conservatives;							
Price Sensitivity	Price/total purchases	Product differences	Brand identity	Impact on quality/performance	Buyer profits	Decision makers' incentives			
1	incomes vs. spendings	basically same, more like a question who is bringing new technologies first (e.g. VDSL), triple play is also the same amongst the rivalries	marketing difficulties if fragmented markets, basically bb is bulk for the masses (maybe different strategy in Estonia),		triple play, killer application?				
2	PC's are sold even with negative marginal to	PC as a supporting product, distribution and	large marketing through printed media and tele-	sales reps are taught to sell more expensive	shops, dealers, net, contact cen-				

APPENDIX VIII

SECRET

Jorma Salo

	increase bb sales,	sales channels are important, in plain bb differences are hard to find, in cable bb the delivery time, other features, mail, size of the web pages, data security, selling just one high speed bb (e.g. 8M)	vision, direct mails are supporting methods	models than are advertised,	tres; triple play for current bb users, TV channels,				
3	Saunalahti acquire increased the buying volume	existing sales channels (Uninet for business and Elisa for residential customers), street visibility and presence and credibility by retail shops, 3G as an alternative bb product designated for lap-top users who value mobility and wireless, product modification will increase the costs in maintenance e.g. product data sys-	virtual operator model suitable for innovators and early adopters like Saunalahti did in Finland		killer application could be self produced content by combined video, data and voice where operator offers the lines and the back-upped disk space together with web-pages,				

APPENDIX VIII

SECRET

Jorma Salo

		tems, billing systems etc., the concept for the local distribution/sales channel,							
4	loyalty schemes like in Finland by Elisa and its partners (e.g. S-Bonus, special offers), cross sales for existing mobile customers, price is the most important feature, price level vs. incomes and relative buying power, pricing should support penetration,	technological platform's structure and quality will define also the offered speeds,	marketing and promotion either Elisa way or Sauna8's cheap way, current marketing in Estonia is for quality, Saunis seeks for innovators and early adopters focusing first in the branch services,	customers could use portal for ordering additional services or service changes also quality problems and even malfunctions, supporting medias could be SMS and HD/CC, remote fault management is essential,					
5	market pricing, ca. 20 €/month currently; campaigns that promise special price for the limited (3 – 6 months) time and then the normal monthly charge;		Elisa brand is well known;	free WiFi networks are not secure and hackers have disturbed some of them completely; business users usually have and use VPN clients of their companies;	cross selling for the current mobile customers				
6	price level comparison between Finland and Esto-	triple-play market is in its introduction	target customers are the current Elisa mobile			electronic banking is common in			

APPENDIX VIII

SECRET

Jorma Salo

	nia need to be proportion to the net buying power (after the taxes, living and food costs, traffic/cars and clothes) which means that they are quite even what is left for the free time and fun;	stage and Starman is the only player at the moment; Elisa could use the Finnish know-how when the market is ready for the triple-play in Estonia;	users and the early adopters from the rivals based on the "quality is speed" approach;			Estonia and more advanced (ca. 85% penetration) than e.g. in Sweden (ca. 50%)			
7	decreasing profit though volumes increased when the prices are falling and costs don't follow	in beginning the retail prices and wholesale prices were very high but competition and FICORA and KiVi have influenced							
8	Saunalahti – Elisa merger increased the volumes								
9									
10	negative side of the price-point-tactic is that the production costs do not follow like in the PC manufacturing industry; profits might decline	for the conservatives need to be mass-tailored products e.g. following Moore's +1 extensions by which can compensate the eroding price levels and gain more profit in			customers could choose either the current speed with lower price or more speed at the current price, only 10% chose the lower price and 90%	in Finland main-street customers demanding price conscious and benefit oriented; typically over middle-aged without			

APPENDIX VIII

SECRET

Jorma Salo

		some segments; this is the key question in the Finnish broad- band market this year;			wanted more speed at the same charge;	kids in home;			
Rivarly Deter- minants	Industry growth	Fixed (or stor- age) costs/value added	Intermittent overcapacity	Product differ- ences	Brand iden- tity	Switching costs	Concentration and balance	Informa- tional com- plexity	Diversity of competitors
1				basically the same, Finnet uses DSL2+, pricing			urge to broaden where the competitors are vs. focusing,		Finnet, Son- era, TDC is interesting what's going to happen with co-op with Finnet
2				some operators use DSL2+ technology					TeliaSonera and Finnet incumbents
3	it seems that this is the year when the Estonian bb market shares are conquered,	increase of market share is dependent also on the chosen technological platform, e.g. DSL invest- ments demand cost efficiency in operations, the counter actions of the rivals and their ability in quick manoeuvres are important to watch, operative efficiency is		wireless solu- tions (WiMAX, WLAN, 3G) as supporting technologies for DSL increasing availability (rural areas), first level sup- port services need local staff (HD/ CC), network moni- toring, fault definition and management could be de- ployed from	creating and sustaining a brand is very expensive, long lasting work need to be supporting the brand and image, co- branding is one alterna- tive to con- sider with a local partner (e.g. bank, food chain like in Finland),	DSL to DSL2+ switch is costly to existing operators, new en- trants can exploit it from the scratch	Tallinn centred plus few towns, rural areas are less developed, Focus on populated areas, exploiting Uninet back- bone and Elisa mobile bases, in rural areas cable operator is hard to replace by DSL tech- nique due to long local loops which reduce the affordable speeds,		buying an existing cable/bb operator could be one strategy to enter the markets or co-operation, TDC may strengthen, Aina interest- ing concept, Telenor?

APPENDIX VIII

SECRET

Jorma Salo

		remarkable by cable and mobile operators,		centralised SMC, triple-play (video, data and voice) is most natural for cable operators (as FastWeb in Italy where customers are more familiar with pay-TV than in rest of the EU), with triple-play the ARPU could be raised but most of the profit goes to the content providers,	these partners could also act as distribution or sales channels,				
4			customer interfaces are in order, connections between customer systems to the operative systems must have been compromised,	differentiation by aggressive pricing, brand, modern image of Elisa and its services, additional services, sensitivity for changes;		same operational environment for all (except local loop owner),		copying Sauna8's customer interface in the Net in VNO model, address data base as a foundation of availability In Finland this data in good and accessible via authorities (Estonia 5),	virtual operators(no local loop), local operators and nation wide operators (often incumbents), Teli-aSonera's role in Elion/ET is a question mark, where lies the ultimate command and management? (threat or

APPENDIX VIII

SECRET

Jorma Salo

								maps,	possibility),
5	broadband growth ca. 60%		Elion has had some WiMAX pilot projects;	DSL2+ , incum- bent currently use DSL- technique; DSLAM need to be within 500 metres from incumbent's premises; Elisa's broad- band network will cover 1/3 of the Estonian households; Elion will deliv- ery the access to the house end- point; in-house wirelines pays the customer and they are built by an order; fault repairs at the field; DSL2+ offers more speed with the same price;	TeliaSonera's ownership shows in strategic level e.g. the pres- sure against NRA's, like in Sweden, because some of the direc- tors are from Sweden; Elisa changed the brand on 9.2.2005, before that there was fixed busi- ness brand Uninet and mobile brand Radiolinja; Elisa brand is well known; Elisa had registered the former trademark Elisa Com- munication before Elion had its own;	Elion could be in trou- ble when changing its broadband technique from the DSL to DSL2+ due to variety of old net- work's suppliers (e.g. Erics- son, Nokia, Siemens);	2/3 of Tallinn by sum- mer and rest by year end; Elion has built the copper access network for all new suburban, in some cases just fibre;		Elion is the market leader in broadband ; Starman is the cable-TV leader (80%) with 2/3 of the house- holds reach- able network, ca. 30% of the broadband customers; STV Russian ethnic opera- tor serving Russian speaking customers in Tallinn and eastern Esto- nia, unreli- able informa- tion of the company; Tele2 has no broadband operations currently, but it's said that it might enter the market when/if the wholesale market

APPENDIX VIII

SECRET

Jorma Salo

									evolves
6	Elion's number of broadband users has rose ca. 25% and is approx. 110.000, while Starman has 30 – 40 thousands;			Elisa is also planning to bundle laptop sales together with the broadband as a supporting product; Elion sells also digital cameras and LCD-televvisions which makes the outlook of their retail shops were tempting; the lowest speed which Elisa offers will be 5 Mbit/s which is a differentiating feature at the beginning; HSDPA could be a supporting product to widen the coverage and offering wireless laptop broadband connections, however the business use is at its earliest in 2007;	Elisa together with Vodafone are popular brand in Estonia; it could be argued that Estonians appreciate quality brands e.g. number transparency quality brands (Elion, Elisa) gain more market share from the alternative brands (Tele2) which was opposite to what happened in Finland where low-cost operators gain more market share and the competition was based just on the price;		Elisa has 25 retail shops all over the Estonia which could help to penetrate other cities too; traditional PC retail shops are vanishing; two Estonian PC manufacturers are having their own retail shops; Elisa is also planning to use EPOS as a one sales channel;	current call centre will be trained to handle also broadband queries and problems, but the target is to direct some of these through the electronic channel;	In Tallinn there are several WiFi networks, but their data security might not be appropriate for all customers; Starman has the VoIP solution over its cable modem broadband and has won contracts on new suburban due to its broad offering, which Elion has lost due to lack of cable –TV;
7	bb market growth is slowing in	DSL2+ is cheaper to		DSL2+ offers more speed vs.	mobile business has		the big cities in Estonia;		Aina Group has different

APPENDIX VIII

SECRET

Jorma Salo

	Finland; ca. 15%	invest		DSL+ or the wireless solutions; Finnet DSL2+	created brand awareness in Estonia;				strategy; Finnet might disappear as it used to be, cause the biggest ones left out the TDCSong operation; incumbent is always the main competitor;
8									
9			wholesale market could be different if the competition would be only at the retail market level i.e. service provider level, this could add the profitability when every operator do not need to invest on own broadband infrastructure, i.e. BVNO-model, which would add utilization rate of the infrastructure	at least the biggest Finnet companies and FinnetCom used DSL2+		everybody skimmed the market with price	Elisa's strength is the nation wide operations and own broadband and backbone network		local Finnet incumbents have again argued with each other resulting a separation where the smallest ones joined with TDCSong, AinaCom is a question mark
10	according to			+1 extensions			focus on Tallinn and		TeliaSonera

APPENDIX VIII

SECRET

Jorma Salo

	MINTC's report the tornado stage has begun or is to begin; market penetration need to be quickly; if the broadband market evolves as in Finland, it means that the saturation will be in 18 – 24 months			can be seen as the extensions of the PLC like the new market areas (in Finland the areas outside of the own SMP area and in wider mean the abroad markets);			other big cities;		main competitor, Aina is different but need to be observed
--	---	--	--	---	--	--	-------------------	--	--

APPENDIX IX: Main Competitors and Competition in the Finnish Telecom Industry

The main competitors in Finland, who offer nation mobile and wide broadband access services, are the Swedish-Finnish TeliaSonera Finland (TSF) and the Finnet Group (Finnet).

TeliaSonera (www.teliasonera.com)

TSF was formerly two different corporations, Telia and Sonera. Both were government owned monopolies and still today the Swedish and Finnish governments roles and ownership in TeliaSonera are significant, which reflects on its worse, for competitors point of view, as governmental protection for TSF. The brand of TSF's broadband access is "Sonera Laajakaista". TSF uses mainly same kind of ATM-based xDSL technical platform as Elisa.

Vision 2010 and Objectives

TeliaSonera is aiming to be a genuine service company in 2010 serving individuals and families, companies and organizations. The objective is to enable the customers to connect and communicate over distance without the restrictions of the place and time.

Strategy

Strategic focus is to offer best service for the customers in telecommunications and to create value for the shareholders through strong profits and cash flows.

TeliaSonera is aiming to strengthen and improve its market position within our

home market, comprising the Nordic and Baltic markets. In the home market, further aim is to take the lead in supporting the customer driven migration from the current broad range of services to a more focused range of services, emphasizing opportunities within Internet and mobility. The more focused service portfolio intends to serve as a platform for future growth and also to reduce complexity and costs. TeliaSonera will continue to exploit scale advantages throughout the group by increased concentration of management, development and production within various operational areas.

Additional growth is planned to found in the joint venture mobile operations in Turkey, Russia and certain Eurasian countries. Furthermore, TeliaSonera is aiming to develop its operations and create value within theses geographical areas to have financial strength which allows it to participate in the potential consolidation of the European telecom industry.

Finnet Group (www.finnet.fi)

Finnet is a loose group of 35 local Finnish telecommunication companies who were partners of Elisa before the separation in mid 90's. These local companies are privately owned and are facing an organisational and ownership change from the co-operatives to public companies. The brand of the Finnet broadband access and its mobile access is DNA. Finnet has invested in and implemented to

a new IP technology for their broadband customers. The benefit of using the new technology is its cost effectiveness and scalability.

Objectives and Strategy

The objective is to provide telecommunication services on the customers terms.

The local phone companies are trying to develop products and services, which the customers are able to use and can afford. The operations of the Finnet Group has been aimed to the sustainable development.

TDCSong

The main owner of Song was the Swedish electricity and power company Vattenfall, which saved Song from bankruptcy. Danish TDC acquired Song, and now the company is called TDCSong in Finland and Sweden. (www.tdcsong.fi)

Objectives and Strategy

TDC Song offers the best data-, internet- and voice traffic broadband solutions for the business customers, and for the residential customers together with the partners.

Aina Group

Aina Group is a corporation which combines three different business lines: media, data communications and information technology. Aina Group is aiming to be significant service provider of a new era, which exploits the synergies of its

business lines, local presence and new technologies. By these Aina Group is targeting to provide extensive and comprehensive services to its customers.

According to the Statistics Finland, the number of the fixed telephone lines in Finland have decreased from 2,848,809 in 2000 to 2,390,197 in the end of 2004 while the mobile phone subscriptions have evolved from 3,728,625 to 4,999,060 (Statistics Finland, 2004). Simultaneously, the number of the broadband subscriptions has increased significantly from 978,600 (1.7.2005) to 1,067,800 in the October (FICORA, 2005b).

	1.1.2005	1.4.2005	1.7.2005	1.10.2005
DSL	658 700	759 700	845 000	921 700
Cable Modem	112 400	121 800	127 200	139 300
WLAN	3 300	3 100	3 400	3 500
PLC	900	1 000	1 000	900
Other	3 300	1 900	2 000	2 300
TOTAL	778 600	887 500	978 600	1 067 800

Table Appendix IX.1: The broadband market growth clarified by the number of Finnish broadband subscribers per technology. These figures seem to follow the global trend where DSL – technique is the dominant one. The term WLAN stands for the different Wireless Local Area Network solutions, mainly based on the 11 Mbit/s IEEE 802.11b standard, to which the Finnish municipals have started to establish the free city area networks. (Source: FICORA 2005b.)

The NBS estimated that in September 2005 the broadband penetration per households in Finland was 40%. Additionally, the coverage of the broadband services in Finland has increased to 95.3% of the population (NBS, 2005c). On

October, Statistics Finland (2005) reported that 73% of the Finnish enterprises with over five employees had a broadband access to the Internet.

APPENDIX X: Swot and Pestle Analysis of Elisa**SWOT**

STRENGTHS - new enthusiastic management team - skilled employees - good and long customer relationships, especially with the large business customers - new lower organisation structure - strong brand - customer intimacy as a value and state of mind of the employees - growing market share in mobile and broadband - cheaper contracts with the subcontractors than previously, and the business risk portability to the subcontractors	OPPORTUNITIES - fast respond to market changes - wider service cover in Finland - exploitation of new legislation - new cost efficient technology - core business and outsourcing - demand for ICT total solutions - internal and external integrations e.g. supply chains - electronic point of sales (EPOS) and service channels - ICT based processes and networks - expansion to abroad - mergers & acquisitions abroad
WEAKNESSES - old legacy IT systems - confused operation models and processes due to mergers and acquisitions - organisational slack - high old interests rates of the investments - big employee costs - still too many cultures after merges and acquisitions - attitudes after recent announcement reducing jobs - major downsizing and outsourcings in last two years, ca. 3000 employees - competence of the leadership of the middle management, can they renewal their behaviour - lack of delegation and trust in employees - hard pressure and heavy workload of employees, which does not divide equitable - dependency still on subscriptions of the fixed-lines	THREATS - price erosion of the services continues - new entrants; "low-cost operators" - bargaining power of the large business customers - slow growth of telecommunication business - legislation - merger & acquisition target in Finland

PESTLE in Finland

Political	- EU's broadband strategy - Government's project of the Finnish Information Society and the National broadband Strategy - free competition of the broadband subscriptions based on the market demand - no governmental subsidises for the telecommunication companies - security - lobbying the politics to adjust the legislation to more open and competitive business environment
Economical	- economic growth expected to grow also in 2006 – 2007 - Elisa still needs to continue the cost cuttings -
Social	- The Information Society program of Government - globalisation - aging population - security - electronic transaction processes e.g. the different kind of municipal forms and applications - working becomes independent on time and place e.g. remote jobs - self service transactions and gathering information and data - electronic point of sales (EPOS) - digital entertainment - broadband customers are changing from the early majority (pragmatists) to late majority (conservatives)
Technological	Driving forces - wired broadband technologies (DSL2+, Ethernet, VDSL, SHDSL) - wireless broadband technologies (3G, HSDPA, WLAN/WiFi, WiMAX) - IP is spreading out - digital convergence of multimedia - open source systems - ubiquitous computing, ambient networks - real time digital content - development of terminals (e.g. CPEs, PDAs, mobile communicators) - mobile and always open connections - multi-subscriptions networks
Legal	- regulation will not become less - significance of EU is yet to increase - regulation and de-regulation legislation of communication branch - EU and national competition legislation - national regulations needs to ratify by EU - national legislation need to interpret and support EU legislation Key national authorities - Ministry of transport and communication (MINTC) - Finnish Communications Regulatory Agency (FICORA) - Competition Agency (KiVi) - Ficora to set price ceilings at the wholesale markets for the bitstream, ULL, shared access and installation charges - appeals to the Supreme Court - growing demands of KiVi to increase the rights of consumers into Communication Market Law - MINTC liquidates the need to regulate setting up 3G networks and their commercial introduction

	- focus on supporting the governmental broadband strategy's objectives - security - NRAs activity essential for the functional wholesale market
Environmental	- three main competitors by the market share TeliaSonera, Elisa, Finnet Group - new innovative and dynamic competitors such as the mobile operators: Cubio, Tele2, Aina Group and the broadband operators: HTV, TDCSong, Aina Group - business customers seek savings by competing the service providers in the middle of contracts - slow growth on the telecommunication industry - competition and the speed of adaptation - multi-nationality, both competitors and large business customers - M&A might continue in 2006 - 2007

PESTLE in Estonia

Political	- EU's broadband strategy - Government's e-governance and broadband for all policies - government will compete the providers and subsidise the winner in the rural areas - government encourages for the remote job in the rural areas - security - lobbying the politics to adjust the legislation to more open and competitive business environment
Economical	- economic growth expected to grow also in 2006 – 2007 - wages are increasing due to EU membership
Social	- The Information Society program of Government - globalisation and aging population - large number of the Russian origin inhabitants - security - quick adoption of the new technologies and ideas - electronic transaction processes e.g. the different kind of municipal forms and applications - working becomes independent on time and place e.g. remote jobs - self service transactions and gathering information and data - electronic point of sales (EPOS) - digital entertainment - broadband customers are changing from the early adopters (innovators) to the early majority (pragmatists) - inhabitants are concentrated to big cities, ca. 1/3 of the population and households are in the capital Tallinn
Technological	Driving forces - wired broadband technologies (DSL2+, Ethernet, VDSL, SHDSL) - wireless broadband technologies (3G, HSDPA, WLAN/WiFi, WiMAX) - large amount of the free open or chargeable WiFi networks - IP is spreading out - digital convergence of multimedia - open source systems - ubiquitous computing, ambient networks - real time digital content - development of terminals (e.g. CPEs, PDAs, mobile communicators) - mobile and always open connections - mobility is significant factor in the phone business as well as in the data business

	- in the near future the multi-subscriptions networks
Legal	- significance of EU is yet to increase - EU and national competition legislation - national regulations needs to ratify by EU - national legislation need to interpret and support EU legislation but the implementation have not been done yet Key national authorities - Ministry of transport and communication - Communications Regulatory Agency - Competition Agency - SMP obligations have not been defined yet - NRAs activity essential for the functional wholesale market
Environmental	- lucrative small geographical area for the broadband service - monopolistic telecommunication industry ruled by the incumbent ET and its subsidiaries Elion an EMT - other competitors: Elisa, Tele2, Starman, STV - large amount of the new innovative and dynamic small competitors without any significant market share - moderate growth on the telecommunication industry - competition and the speed of adaptation - multi-nationality, both competitors and large business customers - possibilities for M&As in 2006 - 2007

APPENDIX XI: Potentiality of the Estonian Broadband Market for Elisa

	CITIES WITH POPULATION OVER OR CA.	DISPOSABLE INCOME PER HOUSEHOLD MEMBER IN A YEAR [EUR]	EXPENDITURES IN COMMUNICATION PER HOUSEHOLD MEMBER IN A YEAR [EUR]	60% PENETRATION AND 20% MARKET SHARE	60% PENETRATION AND 30% MARKET SHARE
	10,000				
HARJU COUNTY	521 002				
..Tallinn	396 879	2 744	159	47 625	71 438
....Haabersti city district	36 456			4 375	6 562
....Kesklinn city district	46 103			5 532	8 299
....Kristiine city district	30 310			3 637	5 456
....Lasnamäe city district	112 070			13 448	20 173
....Mustamäe city district	66 425			7 971	11 957
....Nõmme city district	36 867			4 424	6 636
....Pirita city district	9 762			1 171	1 757
....Põhja-Tallinn city district	57 084			6 850	10 275
..Keila city	9 413	2 679	155	1 130	1 694
..Maardu city	16 441	2 679	155	1 973	2 959
PÄRNU COUNTY	91 463	2 269	132		
..Pärnu city	46 476			5 577	8 366
IDA-VIRU COUNTY	177 104	1 818	105		
..Jõhvi city	12 123			1 455	2 182
..Kohtla-Järve city	47 097			5 652	8 477
..Narva city	67 191			8 063	12 094
..Sillamäe city	16 800			2 016	3 024
TARTU COUNTY	146 918	2 400	139		
..Tartu city	98 695			11 843	17 765
JÄRVA COUNTY	37 991	2 092	121		
..Paide city	9 302			1 116	1 674
SAARE COUNTY	35 462	1 994	116		
..Kuressaare city	14 830			1 780	2 669
LÄÄNE COUNTY	28 794	2 097	122		
..Haapsalu city	12 394			1 487	2 231
VALGA COUNTY	35 738	1 633	95		
..Valga city	14 285			1 714	2 571
LÄÄNE-VIRU COUNTY	67 341	2 422	140		
..Rakvere city	16 961			2 035	3 053
VILJANDI COUNTY	57 316	2 041	118		
..Viljandi city	20 444			2 453	3 680
VÖRU COUNTY	40 244	1 775	103		
..Võru city	14 969			1 796	2 694
				145 125	217 688

Table Appendix XI.1: The Potentiality of the Estonian broadband market for Elisa. The Estonian cities with over or ca. 10,000 inhabitants. For Tallin, is shown also the city districts. In the table is also illustrated the disposable incomes and expenditures in the communication services per household member in a year in these cities. The actual income value is based on the county average where the city belongs, therefore the actual income in the city could be presumed to be slightly more (Adapted: ESTAT, 2006c and 2006e).

APPENDIX XII: Estonian Population by the Administrative Unit

DE FACTO AND USUAL RESIDENT POPULATION, 31 March 2000 by Administrative unit and De facto and usual resident population

	De facto population
Whole country	1356931
Cities	914325
..cities without municipal status	8689
..towns	15656
..small towns	135641
..villages	281828
..settlement of rural municipality unknown	792
 HARJU COUNTY	 521002
Harju county cities	438454
..Tallinn	396879
....Haabersti city district	36456
....Kesklinn city district	46103
....Kristiine city district	30310
....Lasnamäe city district	112070
....Mustamäe city district	66425
....Nõmme city district	36867
....Pirita city district	9762
....Põhja-Tallinn city district	57084
....city district unknown	1802
..Kehra city	3185
..Keila city	9413
..Loksa city	3540
..Maardu city	16441
..Paldiski city	4148
..Saue city	4848
Harju county rural municipalities	82548
..Aegviidu rural municipality	952
....Aegviidu town	952
..Anija rural municipality	3068
..Harku rural municipality	6611
..Jõelähtme rural municipality	5351
..Keila rural municipality	3714
..Kernu rural municipality	1672
..Kiili rural municipality	2320
..Kose rural municipality	5925
..Kuusalu rural municipality	4589
..Kõue rural municipality	1719
..Loksa rural municipality	1823
..Nissi rural municipality	3300
..Padise rural municipality	1761
..Raasiku rural municipality	4357
..Rae rural municipality	7832

..Saku rural municipality	7156
..Saue rural municipality	7223
..Vasalemma rural municipality	5279
..Viimsi rural municipality	7896
..Harju county small towns	41520
..Harju county villages	39964
..Harju county settlement of rural municipality unknown	112
HIIU COUNTY	10209
Hiiu county cities	3672
..Kärdla city	3672
Hiiu county rural municipalities	6537
..Emmaste rural municipality	1261
..Kõrgessaare rural municipality	1370
..Käina rural municipality	2183
..Pühalepa rural municipality	1723
..Hiiu county small towns	1373
..Hiiu county villages	5140
..Hiiu county settlement of rural municipality unknown	24
PÄRNU COUNTY	91463
Pärnu county cities	52766
..Kilingi-Nõmme city	2208
..Pärnu city	46476
..Sindi city	4082
Pärnu county rural municipalities	38697
..Are rural municipality	1328
..Audru rural municipality	4808
..Halinga rural municipality	3533
....Pärnu-Jaagupi town	1359
..Häädemeeste rural municipality	3187
..Kaisma rural municipality	555
..Kihnu rural municipality	502
..Koonga rural municipality	1318
..Lavassaare rural municipality	544
....Lavassaare town	544
..Paikuse rural municipality	2858
..Saarde rural municipality	2286
..Sauga rural municipality	2509
..Surju rural municipality	1037
..Tahkuranna rural municipality	1976
..Tali rural municipality	767
..Tootsi rural municipality	1041
....Tootsi town	1041
..Tori rural municipality	2558
..Tõstamaa rural municipality	1635
..Varbla rural municipality	1029
..Vändra rural municipality	2568
..Vändra town's rural municipality	2658
....Vändra town	2658
..Pärnu county small towns	8265
..Pärnu county villages	24769

..Pärnu county settlement of rural municipality unknown	61
IDA-VIRU COUNTY	177104
Ida-Viru county cities	155413
..Jõhvi city	12123
..Kiviõli city	7269
..Kohtla-Järve city	47097
..Narva city	67191
..Narva-Jõesuu city	3080
..Püssi city	1853
..Sillamäe city	16800
Ida-Viru county rural municipalities	21691
..Alajõe rural municipality	437
..Aseri rural municipality	2298
..Avinurme rural municipality	1595
..Iisaku rural municipality	1520
..Illuka rural municipality	1115
..Jõhvi rural municipality	1746
..Kohtla rural municipality	1501
..Kohtla-Nõmme rural municipality	1163
....Kohtla-Nõmme town	1163
..Lohusuu rural municipality	877
..Lüganuse rural municipality	1318
..Maidla rural municipality	805
..Mäetaguse rural municipality	1554
..Sonda rural municipality	1098
..Toila rural municipality	2400
..Tudulinna rural municipality	645
..Vaivara rural municipality	1619
..Ida-Viru county small towns	9369
..Ida-Viru county villages	11132
..Ida-Viru county settlement of rural municipality unknown	27
TARTU COUNTY	146918
Tartu county cities	105882
..Elva city	5992
..Kallaste city	1195
..Tartu city	98695
Tartu county rural municipalities	41036
..Alatskivi rural municipality	1502
..Haaslava rural municipality	1689
..Kambja rural municipality	2533
..Konguta rural municipality	1384
..Laeva rural municipality	858
..Luunja rural municipality	2603
..Meeksi rural municipality	840
..Mäksa rural municipality	1734
..Nõo rural municipality	3810
..Peipsiääre rural municipality	996
..Piirissaare rural municipality	113
..Puhja rural municipality	2411
..Rannu rural municipality	1716

..Rõngu rural municipality	2989
..Tartu rural municipality	4987
..Tähtvere rural municipality	2882
..Vara rural municipality	1909
..Võnnu rural municipality	1279
..Ülenurme rural municipality	4801
..Tartu county small towns	14057
..Tartu county villages	26856
..Tartu county settlement of rural municipality unknown	123
JÕGEVA COUNTY	37686
Jõgeva county cities	12946
..Jõgeva city	6400
..Mustvee city	1744
..Põltsamaa city	4802
Jõgeva county rural municipalities	24740
..Jõgeva rural municipality	5325
..Kasepää rural municipality	1401
..Pajusi rural municipality	1479
..Pala rural municipality	1344
..Palamuse rural municipality	2457
..Puurmani rural municipality	1884
..Põltsamaa rural municipality	4590
..Saare rural municipality	1430
..Tabivere rural municipality	2473
..Torma rural municipality	2357
..Jõgeva county small towns	6351
..Jõgeva county villages	18351
..Jõgeva county settlement of rural municipality unknown	38
RAPLA COUNTY	37063
Rapla county cities	5813
..Rapla city	5813
Rapla county rural municipalities	31250
..Juuru rural municipality	1559
..Järvakandi rural municipality	1499
....Järvakandi town	1499
..Kaiu rural municipality	1652
..Kehtna rural municipality	5007
..Kohila rural municipality	2543
..Kohila town's rural municipality	3343
....Kohila town	3343
..Käru rural municipality	745
..Loodna rural municipality	1112
..Märjamaa rural municipality	3309
..Märjamaa town's rural municipality	3097
....Märjamaa town	3097
..Raikküla rural municipality	1838
..Rapla rural municipality	3799
..Vigala rural municipality	1747
..Rapla county small towns	6625
..Rapla county villages	16647

..Rapla county settlement of rural municipality unknown	39
JÄRVA COUNTY	37991
Järva county cities	15523
..Paide city	9302
..Türi city	6221
Järva county rural municipalities	22468
..Albu rural municipality	1355
..Ambla rural municipality	2364
..Imavere rural municipality	1030
..Järva-Jaani rural municipality	1815
..Kabala rural municipality	1067
..Kareda rural municipality	843
..Koeru rural municipality	2502
..Koigi rural municipality	1183
..Lehtse rural municipality	1632
..Oisu rural municipality	1337
..Paide rural municipality	1781
..Roosna-Alliku rural municipality	1250
..Türi rural municipality	2867
..Väätsa rural municipality	1442
..Järva county small towns	7314
..Järva county villages	15125
..Järva county settlement of rural municipality unknown	29
SAARE COUNTY	35462
Saare county cities	14830
..Kuressaare city	14830
Saare county rural municipalities	20632
..Kaarma rural municipality	3865
..Kihelkonna rural municipality	977
..Kärla rural municipality	1821
..Laimjala rural municipality	801
..Leisi rural municipality	2177
..Lümanda rural municipality	830
..Muhu rural municipality	1875
..Mustjala rural municipality	767
..Orissaare rural municipality	2075
..Pihlta rural municipality	1426
..Pöide rural municipality	970
..Ruhnu rural municipality	56
..Salme rural municipality	1190
..Torgu rural municipality	395
..Valjala rural municipality	1407
..Saare county small towns	4477
..Saare county villages	16127
..Saare county settlement of rural municipality unknown	28
LÄÄNE COUNTY	28794
Lääne county cities	12394
..Haapsalu city	12394
Lääne county rural municipalities	16400
..Hanila rural municipality	1752

..Kullamaa rural municipality	1458
..Lihula rural municipality	2789
....Lihula city without municipal status	1470
..Martna rural municipality	1045
..Noarootsi rural municipality	874
..Nõva rural municipality	489
..Oru rural municipality	962
..Ridala rural municipality	3033
..Risti rural municipality	910
..Taebala rural municipality	2849
..Vormsi rural municipality	239
..Lääne county small towns	4556
..Lääne county villages	10326
..Lääne county settlement of rural municipality unknown	48
VALGA COUNTY	35738
Valga county cities	17468
..Tõrva city	3183
..Valga city	14285
Valga county rural municipalities	18270
..Helme rural municipality	2621
..Hummuli rural municipality	1031
..Karula rural municipality	1118
..Otepää rural municipality	4318
....Otepää city without municipal status	2282
..Palupera rural municipality	1209
..Puka rural municipality	1986
..Põdrala rural municipality	959
..Sangaste rural municipality	1473
..Taheva rural municipality	1021
..Tõlliste rural municipality	1956
..Õru rural municipality	578
..Valga county small towns	2893
..Valga county villages	13063
..Valga county settlement of rural municipality unknown	32
LÄÄNE-VIRU COUNTY	67341
Lääne-Viru county cities	30251
..Kunda city	3831
..Rakvere city	16961
..Tamsalu city	2572
..Tapa city	6887
Lääne-Viru county rural municipalities	37090
..Avanduse rural municipality	997
..Haljala rural municipality	2800
..Kadrina rural municipality	5110
..Laekvere rural municipality	1892
..Rakke rural municipality	2037
..Rakvere rural municipality	2268
..Rägavere rural municipality	1005
..Saksi rural municipality	1167
..Sõmeru rural municipality	3949

..Tamsalu rural municipality	2121
..Vihula rural municipality	2121
..Vinni rural municipality	5633
..Viru-Nigula rural municipality	1403
..Väike-Maarja rural municipality	4587
..Lääne-Viru county small towns	14770
..Lääne-Viru county villages	22298
..Lääne-Viru county settlement of rural municipality unknown	22
VILJANDI COUNTY	57316
Viljandi county cities	24438
..Mõisaküla city	1119
..Suure-Jaani city	1320
..Viljandi city	20444
..Võhma city	1555
Viljandi county rural municipalities	32878
..Abja rural municipality	2852
....Abja-Paluoja city without municipal status	1417
..Halliste rural municipality	1840
..Karksi rural municipality	4111
....Karksi-Nuia city without municipal status	1963
..Kolga-Jaani rural municipality	1771
..Kõo rural municipality	1235
..Kõpu rural municipality	830
..Olstvere rural municipality	1531
..Paistu rural municipality	1619
..Pärsti rural municipality	4093
..Saarepeedi rural municipality	1323
..Suure-Jaani rural municipality	2346
..Tavastu rural municipality	4385
..Vastemõisa rural municipality	1134
..Viiratsi rural municipality	3808
..Viljandi county small towns	5034
..Viljandi county villages	24369
..Viljandi county settlement of rural municipality unknown	95
PÕLVA COUNTY	32600
Põlva county cities	9506
..Põlva city	6561
..Räpina city	2945
Põlva county rural municipalities	23094
..Ahja rural municipality	1192
..Kanepi rural municipality	2727
..Kõlleste rural municipality	1074
..Laheda rural municipality	1388
..Mikitamäe rural municipality	1163
..Mooste rural municipality	1586
..Orava rural municipality	910
..Põlva rural municipality	3991
..Räpina rural municipality	2859
..Valgjärve rural municipality	1659
..Vastse-Kuuste rural municipality	1272

..Veriora rural municipality	1724
..Värskä rural municipality	1549
..Põlva county small towns	3634
..Põlva county villages	19414
..Põlva county settlement of rural municipality unknown	46
VÕRU COUNTY	40244
Võru county cities	14969
..Võru city	14969
Võru county rural municipalities	25275
..Antsla rural municipality	4409
....Antsla city without municipal status	1557
..Haanja rural municipality	1271
..Lasva rural municipality	1784
..Meremäe rural municipality	1304
..Misso rural municipality	906
..Mõniste rural municipality	1051
..Rõuge rural municipality	2173
..Sõmerpalu rural municipality	1974
..Urvaste rural municipality	1519
..Varstu rural municipality	1355
..Vastseliina rural municipality	2307
..Võru rural municipality	5222
..Võru county small towns	5403
..Võru county villages	18247
..Võru county settlement of rural municipality unknown	68

Source: ESTAT (2006c) De Facto Population and Usual Resident Population in Administrative Units. Statistical Database, Population Census 2000, Distribution of the Population. Temporary Presence and Absence. Statistical Office of Estonia, www.stat.ee [Accessed 11th March 2006]

Population density, number and area by counties on the 1st of January 2005.

County	Density, inhabitants per km ²	Population number	Area, km ²
Harju	120.2	521 038	4333.13
Hiiu	10.0	10 246	1023.26
Ida-Viru	51.7	173 777	3364.05
Jõgeva	14.4	37 473	2603.83
Järva	14.5	38 141	2622.79
Lääne	11.8	27 990	2383.12
Lääne-Viru	19.2	66 464	3464.58
Põlva	14.7	31 752	2164.77
Pärnu	18.6	89 343	4806.68
Rapla	12.4	37 032	2979.71
Saare	12.0	35 208	2922.19
Tartu	49.7	148 886	2992.74
Valga	17.1	34 867	2043.53
Viljandi	16.5	56 616	3422.49
Võru	16.8	38 677	2305.44
ESTONIA	31.0	1 347 510	43432.31

Source: ESTAT (2006h) Population Density, Number and Area by Counties. Statistics, Maps, Fields of Statistics, Population. Statistical Office of Estonia, www.stat.ee Available Internet: <http://www.stat.ee/139131> [Accessed 11th March 2006]

APPENDIX XIII: Internet Pricelist of STV

TALLINN - Kaabelmodemi püsühendus				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
MICRO STV**	128 / 32	141.00	Ühe järgmise kuu teenustasu	
MICRO STV+	128 / 32	99.00	Uue kaabelmodemi ostmine STV-lt	Esimene poolaasta peale liitumist – 99 kr/kuus. Edaspidi abonenttasu sama kui MICRO STV paketil.
STV KODU**	1024 / 256	241.00	Ühe järgmise kuu teenustasu	
STV KODU+***	1536 / 256	341.00	Ühe järgmise kuu teenustasu	3 IP, dynamic
STV NET**	2048 / 512	491.00	285.00 eek.	1 staatiline IP
STV PRO**	3072 / 640	941.00	1650.00 eek	
STV 4M**	4096 / 640	1400.00	1500.00 eek	1 staatiline IP, 10 e-posti aadressid, liitumine on võimalik ainult tehnilise võimaluse juhul
STV 8M**	8192 / 768	3200.00	1500.00 eek	1 staatiline IP, 10 e-posti aadressid, liitumine on võimalik ainult tehnilise võimaluse juhul
STV Shared****	3072 / 256	149.00	Ühe järgmise kuu teenustasu	Kliendi ühendamine modemiga toimub Etherneti võrgu kaudu. Tarnija määrab kindlaks teenuse osutamise otstarbekuse konkreetsel aadressil. Soovitatakse kasutada tule müüri (fire-wall).
TALLINN - SATURN püsühendus				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
SATURN MICRO	128 / 128	99.00	Ühe järgmise kuu teenustasu	Kliendi ühendamine modemiga toimub Etherneti võrgu kaudu. Kasutatakse PPPoE protokoll. On võimalik kasutada ülikiiret anonüümset ftp-serverit. Soovitatakse kasutada tule müüri (fire-wall).
SATURN KODU	1024 / 1024	149.00	Ühe järgmise kuu teenustasu	
SATURN KODU+	1536 / 1536	341.00	Ühe järgmise kuu teenustasu	
SATURN NET	2048 / 2048	590.00	450.00 eek	
SATURN PRO	2560 / 2560	999.00	1500.00 eek	
MAARDU				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
STV MAARDU**	512 / 96	92.00	Ühe järgmise kuu teenustasu	
STV KODU**	1024 / 256	241.00	Ühe järgmise kuu teenustasu	
MAARDU - SATURN				
Paketi nimetus	Ühenduse kiirus (KBit/sek)	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused

SATURN Micro	128 / 128	99.00	Ühe järgmise kuu teenustasu	
SATURN KODU	1024 / 1024	149.00	Ühe järgmise kuu teenustasu	
NARVA				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
PERSONAL**	2048	150.00	Ühe järgmise kuu teenustasu	
SHARED ACCESS	2048	150.00	Ühe järgmise kuu teenustasu	
SATURN	2048	150.00	Ühe järgmise kuu teenustasu	
Info tel. 3 572 811				
TARTU				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
STV LAN	1536	250.00	Ühe järgmise kuu teenustasu	
STV PERSON**	1536	200.00	Ühe järgmise kuu teenustasu	
Kaabelmodemi rent		60.00	Ühe järgmise kuu teenustasu	
Info: http://tartu.stv.ee/ või tel. 7 407 111				
RAKVERE				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
STV Micro**	128 / 32	92.00	Ühe järgmise kuu teenustasu	
STV Mini**	512 / 64	141.00	Ühe järgmise kuu teenustasu	
STV Kodu**	1024 / 256	241.00	Ühe järgmise kuu teenustasu	
Info: tel. 3 242 450 või e-mail: rakvere@stv.ee				
PÄRNU				
Paketi nimetus	Ühenduse kiirus (KBit/sek)*	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused
DEMO**	64 / 32	30.00	Ühe järgmise kuu teenustasu	
BASIC**	512 / 128	97.00	Ühe järgmise kuu teenustasu	
KODU**	1536	160.00	Ühe järgmise kuu teenustasu	
SUPER ADSL	2048	285.00	Ühe järgmise kuu teenustasu	Eramaa Raekula
LAN	WAN - 1536 LAN - 100 Mbit	160.00	Ühe järgmise kuu teenustasu	
SHARED ACCESS	WAN - 1536 LAN - 4096	160.00	Ühe järgmise kuu teenustasu	
Info: tel. 4 430 711				
PALDISKI				
Paketi nimetus	Ühenduse kiirus	Abonentmaks.(kr.)**	Liitumistingimused***	Märkused

	(KBit/sek)*			
SATURN Paldiski	1024 / 1024	165.00	Ühe järgmise kuu teenustasu	AS STV Täispakett abonentidele 15 kr. soodsam
Info: tel. 6 880 000				
Muud teenused				
Teenuse nimetus	hind (kr)	Tingimused		
Kaabelmodemi renditasu	58.00	Rendisuhteid reguleeritakse reglemendiga		
IT-spetsialisti väljakutse	175.00			
OS MS Windows ümberseadistamine*****	500.00			
Spetsialisti 1 töötund*****	200.00			
Uus DOCSIS kaabelmodem	750.00			
Renditud modemi väljaostmine.	600.00	Te peate 6. kuu jooksul kasutama kas STV KODU, STV Simple, STV Net paketti ja selle aja jooksul rentima modemi.		

* - Kaabelmodemi kaudu ühendamiseks näidatakse kiirus Downstream (Tarnijast Abonentini) ja Upstream (Abonentist Tarnijani).
 ** - Kaabelmodemi kaudu ühendamine ei sisalda nimetatud modemi renditasu.
 *** - Kaabelmodemi kaudu ühendamiseks arvestatakse liitumiseks 5 meetrit RF kaablit. Kahe väljundiga TAP või 4F- ühenduse vastava nominaaliga splitter. Ühendusteks, mis nõuavad UTP kaabli paigaldamist Abonendi arvutini, kuulub liitumistasu hulka vajaliku koguse kaabli ja ühenduspistiku maksumus.
 **** - see ühendus kujutab endast paljukorterilise elamu mitmele kasutajale "jaotatud" modemit Hinnakirjas on näidatud selle "ühise" modemi töökiirus. Hind sisaldab ühe töökoha liitumine. Lisa IP-aadress maksab 50.- krooni.
 ***** - klient vastutab installeeritud tarkvara legaalsuse eest
 ***** - tööaja arvestuse aluseks on pool tundi

TÄHELEPANU!!!

Liitumiseks MICRO STV, MICRO STV+, STV KODU, STV Simple, STV Net pakettidega, abonent peab olema liitunud vähemalt STV kaabelvõrgu põhikavetiga.

Liitumistasu hulka ei arvestata kaabli paigaldustöid Abonendi ruumides.

Kõik hinnad sisaldavad käibemaksu.

Table Appendix XIII.1: The Internet pricelist of STV (source <http://www.stv.ee>, internet, hinnad).