INCUMBENT RESPONSE TO DISRUPTIVE INNOVATION: THE CASE OF THE SWEDISH-FINNISH TELECOM OPERATOR TELIASONERA AB

Matti Kaulio
KTH Royal Institute of Technology
Dept. of Industrial Economics and Management,
Lindstedtsvägen 30
114 28 Stockholm
Sweden
matti.kaulio@indek.kth.se

Kent Thorén
KTH Royal Institute of Technology
Dept. of Industrial Economics and Management,
Lindstedtsvägen 30
114 28 Stockholm
Sweden
kthoren@kth.se

René Rohrbeck
Aarhus University
School of Business and Social Sciences,
Bartholins Allé 14,
8000 Aarhus C
Denmark
rrohr@mgmt.au.dk

ABSTRACT

This article presents a preliminary analysis of a retrospective longitudinal case study of an incumbent, the Swedish-Finnish Telecom operator TeliaSonera AB, with focus on its responses to technical and business model change. Findings nuance the general understanding of Telco's as passive actors in relation to disruptive change. In relation to technical change the case company has successfully in transferred its technology from one generation to the next during more than 20 years. In relation to business model change the case company has been proactive but not successful in major business model changes, however successful in minor business model adaptions. An implication hereof is that the business model concept as such has low predictive power in explaining success and failure and is in the need of an operationalization. In addition, the article discusses the relationship between technological innovation and business innovation.

INTRODUCTION

Business Model Change is an area that currently has gained extensive attention among both practitioners and management scholars (Afuah, 2014; Amit and Zott, 2012; Kim and Mauborgne, 2005). The reason for this is that new entrants such as: Amazon, Google, Ryan Air, Skype, Spotify and Apple have successfully invaded mature markets with new and different offerings and thereby change the rules of these markets causing discontinuous change, or "disruption" (Berggren and Bergkvist, 2006). However, the empirical investigation of business model change has a few limitations: they are mainly made from the new entrant's perspective where the novelty of the business model is the explanation of the success, they do mainly

include successful cases and they assume that the existing players in the industry are rather passive. Furthermore, they seldom include the interaction between business model change and technological innovation.

One industry that recently has faced a continuous stream of both technical and business model discontinuities, as well as many new entrants, is the Telecom industry. As industry Telecommunication is paradoxical. On the one hand it can be regarded as mature (i.e. a fierce competition among existing players mainly based on price and performance). On the other hand, it can be seen as an emerging industry where new technologies and new business logics converge. For example, Skype has re-defined the long-distance and video call market. Apple has, through the introduction of the iPhone in 2007, created an enlacement of content and handset; thereby taken a position as a key player in the industry. Google can be assumed to have plans given their successfully introduction of the Android operating system, which already has a 75% market share, and subsequent acquisition of Motorola. Moreover, former market leaders have suffered severely. Incumbent national operators have had their margins deteriorated despite massive cost-cutting efforts and the leading terminal manufacturer Nokia has been nearly wiped out.

This article deals with incumbents' proposed inability to respond to disruptive change, particularly if challenged by new entrants (Chandy & Tellis, 2000). More specifically it analyses the case of the Swedish-Finnish telecom operator TeliaSonera's activities and responses to both technical and business model changes. By doing this the article reflects, from an external perspective, how an incumbent manoeuvre in a fast changing business landscapes. Thereby it contributes to a more nuanced picture of incumbents' successful and unsuccessful responses to disruption, and determines what mechanisms that govern the outcome.

TECHNOLOGICAL DISCONTINUITIES AND BUSINESS MODEL CHANGE

To frame our research topic, we start to investigate the literature on technological discontinuities and then turn to business model change.

Technological Discontinuities

Technological discontinuities have been identified as major triggers of change in fast-evolving industries and their effects have been well documented by industry life cycle theorists such as Utterback and Abernathy (1975). Synthesizing contributions from technology management literature, evolutionary economics and organization ecology, Agarwal and Tripsas (2008) distinguish three stages of evolution – emergence/growth, shake out and maturity. The mature industry stage is characterized by competition between incumbents, incremental innovations, and low firm entry and exit rates. The advent of technological discontinuities – like the introduction of the Internet – at the mature industry stage may either speed up the transition from maturity towards decline, or it may fuel a new and reinvigorating cycle, taking the industry back to an emergent stage (Afuah & Utterback, 1997; Agarwal & Tripsas, 2008). At such times, when new entrants are trying to create and dominate nascent markets incumbents must avoid resource and routine rigidities (Gilbert, 2005). Instead, internal discontinuous and dramatic change, driven by top management, may be necessary (Huy and Mintzberg, 2003). In addition, it can be expected that capabilities need to be renewed and that many (if not all) elements of the incumbent's business model have to be overhauled in order successfully adapt to the disruption. For long time technical discontinuities has been an explanation for why firms fail (or survive). However, recently the focus has shifted, from the technical innovation or discontinuity to the business model.

Business Model Change

Business model innovation has been proposed as one, if not the, explanation for the success of the new entrants (Osterwalder and Pigneur, 2010). Conceptually business model innovation refers to a type of organizational innovation in which firms identify and adopt novel opportunity portfolios (Teece, 2010). Exactly what constitutes a business model is still under debate, for a review see for example Morris, et al (2006) or Klang, et al (2014). Osterwalder and Pigneur (2010) suggest a nine component model summarized in the business model canvas. Others such as Tongur and Engwall (2014), represents a more minimalistic approach and is satisfied with only three main components (value proposition, value delivery and value capture). In this article we take a middle approach suggesting that a business model in composed of customers, value proposition, delivery system and a financial system. The financial system is the business cost structure and revenue model. Given that, a business model change does not need to include changes in all components. In this article, a business model change refers to when at least one component is altered.

Incumbent Response

While it may seem natural to expect incumbents to respond to disruptions by business model adaptations, it appears that except from the notable exceptions of Dell and IBM, it has rarely been observed. In fact, some researcher even argue that incumbents are more or less unable to respond (Chandy & Tellis, 2000). Christensen (1997) attributes this inability to the asymmetries of skills and motivation vis-a-vi new entrants, occurring due to the processes, resources, and values typically developed in incumbents through years of successfully growing and managing current business. These asymmetries make incumbents less likely to pay early attention to emerging disruptions and even if they do notice them, they are reluctant to invest aggressively in them as they tend to target the industry's least profitable costumers. Incumbents would in effect have to risk cannibalizing their premium business for the purpose of getting a position in the low end of the market, which tends to be very difficult to commensurate with the internal values and KPIs of mature firms. Instead, incumbents can be expected to follow certain response patterns (Christensen, et al, 2004). Incumbents might:

- *Cede* market segments to the new entrant and try to focus on the more profitable customers.
- *Cram* the new technology into their existing business model, which is highly unlikely to succeed, because it will take too long to make it perform at the level required by the high-end customers.
- *Co-opt for growth*, by targeting the new entrants' customers with a scaled down version of their core product.
- *Co-opt for survival*, by bringing the new technology or business model into the lower-end of the existing customer base and try to increase entry barriers around core segments.

Only the two last options involve business model change. They are the least common responses and also proposed to be the only viable choices for meeting disruption (Christensen, et al., 2004). While Christensen has been criticized for cherry-picking cases that supports his thesis and also misrepresenting them (Lepore, 2014), there still appears to be convincing indirect support. Organizations do become more and more inert over time (Carroll and Barnett, 1995) and the life span of firms in general appears to be decreasing dramatically (Foster and Kaplan, 2001; Louca and Mendonca, 2002)

METHOD

In this article we investigate TeliaSonera AB (TS), the Scandinavian and Eurasian Telecom Operator and examine how it has managed the adaption to disruption. In focus of our investigation is how the incumbent firm has adapted, what measures and actions that has been taken and what effect it has had on the firm's position. Accordingly, with this focus we applied a retrospective longitudinal case study approach (Yin, 1994; Åhlström and Karlsson, 2009).

As time frame, we have focused upon 1992-2015. The reason for this selection is that it includes: the introduction of mobile telephony, the peak of the Internet bubble (a period characterized of the birth of the Internet industry) the introduction of smartphones and tables (i.e. the introduction of Apple's IPhone), and the introduction streamed services (i.e. Spotify and Netflix). However, to fully understand the incumbent's response, it is also necessary to cover the antecedents leading up to the introduction of fixed and mobile Internet, and the corresponding position of the firm.

Giving this scope we faced some methodological challenges. One such challenge in this investigation has been to disentangle the complexity of the firm's operations and change, both in terms of technology, organization and diminishing industry boarders. Telecommunication is particularly difficult industry to demarcate and therefore the scoping of the investigation has been challenging. Looking at the firm TS, it is a multi-business firm. During the investigation period the firm has change organizational form, as well as expanded and withdrawn geographically. Identifying competitors in a converging industry is yet another challenge. While the direct competitors such as other Telcos are easy to identify, they do not pose the major disruptive threat. Instead it is new entrants, in particular Over-The-Top (OTTs) players such as Skype, Spotify and Netflix as well as Apple that introduced the major disruptions to the industry.

In our study we have approached this methodological challenge by taking the incumbent's internal perspective. In line with Åhlström and Karlsson (2009) we have focused on critical events. We have utilized a snowball sampling approach (Biernacki and Waldorf, 1981) where we have successively created a timeline, which has been refined iteratively with every new interview. With this approach we could utilize the uniqueness of each disruption as an event that deviates from the expected (Flanagan, 1954, Kaulio, 2003; 2008). The case can thus be described as a set of timely related critical events placed in an organizational context. The strength of this approach is that it is resource effective for creating qualitative timelines of organizational evolution. The weakness is that it is not complete. By focusing on events other organizational processes, such as processes considered as routine by the respondents could be left out in the analysis.

The overall data collection process consists of three types of data: (i) interviews with internal "carriers of the history" respondents inside TS, (ii) interviews with external Telcom experts and (iii) secondary material such as annual reports, presentations, white papers and company training specifications ranging from 2002-2015. At this point of the study 12 respondents has been interviewed, see **Table 1.**

Table 1: Overview of respondents

Role	**#Respondents**
CTO	1
VP	3
Managing directors	5
Industry Experts	3
Total:	**12**

The interviews followed a semi-structured format. An interview guideline as used and structured around three main areas: background questions about the respondent's professional experience and tenure at TS, questions related to past and present roles at TS, and questions related to identify critical events and create the timeline. While the first two areas were straight forward descriptive questions, the third area was the one that took most time during the interviews (approx. 1,5 hours each). The interviewing approach used in this last section was to let the respondent draw a timeline of the firm's evolution. Thereafter, starting from today, go backwards and describe critical changes the firm has faced and the responses taken.

TECHNICAL AND BUSINESS MODEL CHANGE, INCUMBENT REACTIONS – FINDINGS FROM AN TELECOM OPERATOR

The Telecom industry has undergone a number of radical changes where deregulation, mergers, increased internationalization and technological shifts. In short, one can describe this market change in three main phases. The initial phase was characterized by a static monopolist market, proprietary technology and public service responsibilities. The second phase was characterized by deregulation which led to competition and increased internationalization. During this phase also started technology shift, from the rotation-based (copper) networks towards IP-based technology and the basis for the convergence of telecom and data fields began. The third phase, now underway, was introduced by smart phones entering the mass market and being enabled by mobile internet services capable of reasonable surfing speeds. Apple's launch of the iPhone can be said to mark the start of this phase. For the former national monopolies, this shift has demanded changes in both organizational culture (from the managing organization for market-oriented actor) as the underlying technical competence (the internet protocol as a base technology).

In this contextTeliaSonerahas gone from a former national and government-controlled telecom operator to a public company, met the challenge of a de-regulated market, has expanded greatly internationally by building up a Eurasian organization, and now try to improve growth through innovation and new business development.

To further investigate the disruption in more detail by studying the interplay between environmental and corporate changes, each of the most important discontinuities will be examined in isolation. We will discuss the Swedish market unless stated otherwise. Please note that for consistency we use the corporate name "TeliaSonera" in the case description, regardless of the actual name at each time.

GSM Mobile Telephony Price Pressure

When GSM replaced the previous NMT analogue mobile network in the Nordics starting in 1992 it made mobile telephony accessible for the broad public. The NMT challenger AB Företagstelefon i Stockholm, lead by the entrepreneur Jan Stenbeck, changed its name to Comviq and started to offer GSM subscriptions promising lower prices. In 1994 they even introduced a semi-free subscription called "Comviq Compis". In paralell, a new entrant, Europolitan (acquired by Vodafone in 2002), added to the emerging price pressure, but also competed with innovative value added services. For instance, Europolitan introduced the SMS and voice mail to the Swedish market. Comviq, on the other hand, introduced the market's first pre-paid card in 1997. These entrants had a regulatory advantage against TeliaSonera as the fees for them terminating calls in TeliaSoneras net was lower than for TeliaSonera to terminate calls in their net.

TeliaSonera's main response to this challenge was to compete with a premium offer with better coverage and customer support, while attempting to minimize churn to the extent possible. But respondents also reveal that it was also important not to have too

high margins, as executives worried that it could contribute to further unfavorable regulations.
With the increasing coverage of rivals' network, competition on the home market was intense for TeliaSonera. Another drawback came in September 2001 when a regulation enforced number portability for mobile subscriptions, lowering the switching cost for customers even further. The same year, TeliaSonera acquired all remaining shares of a mobile portal collaboration project with Oracle, Halebop, which was later turned into a freestanding brand for mobile subscriptions in the low price segment.
Loosing market shares in Sweden, TeliaSonera started buying stakes of both mobile and Internet operators in other countries in 1994 (Baltic states and in Eurasia). Many of the deals were unprofitable or otherwise improper for the corporate portfolio, so while the geographic presence increased, it also shifted substantially over the years.
Over time mobile telephony caused cumulative losses and cannibalization of revenues from fixed voice. More and more users cancelled their fixed voice subscriptions with their high monthly fees and relied on cell connection only. A turning point occurred in 2010, when Swedish consumers made more voice calls on cell phones than fixed phones for the first time.
In perspective, this period can be seen as a classical market competition between similar (and large) firms within an industry. Market shares and customers are won and lost in relation to churn of existing customer stock and price/performance trade-offs of offerings.

Internet

From the mid 1990ties, Internet started to become mainstream in Scandinavia. The access to this new generic digital infrastructure led to large changes in the handling and transaction of information. The impact on business, science, and society in general has been enormous. The technology enabled new channels for business between businesses (B2B), between business to customer (B2C), and customer to customer (C2C). Several spectacular ventures for exploiting new business models attracted large amounts of capital in the late 1990ties. Some failed, but more often they had investor expectations that were unrealistic, or changed faster than the firms could build their market position. Consequently, when financial markets became more strained, investors became unwilling to wait for profits and the "Internet bubble" burst in 2001, sending shock waves through the whole digital industry. But the new ways for individuals and businesses to collect, create and distribute information prevailed and e-business has had a steady growth since (much in the same pace as pre-bubble predictions).
Several telecom companies, but also other types of firms, became Internet Service Providers (ISP) to exploit the strong demand for fixed Internet access. TeliaSonera was pressured to allow for other operators to use their infrastructure, in particular the copper access net, which was considered a natural monopoly. In 2008 the access net was finally put in the separate network infrastructure company, Scanova, for the purpose of operator access equality as demanded by the regulator. Nevertheless, TeliaSonera was successful in offering fixed broadband services, by ADSL and fiber technology, into its product portfolio and has had a steady market share of just under 40%.
Realizing that the company's traditional markets were so mature that there was little room for growth, TeliaSonera made a number of efforts to launch new services. From 1997 and onwards many services, like video conferencing, virtual call centers, TV through Internet, and consumer Internet portals, was developed to generate more revenues from the fixed networks. In 2000, a number of freestanding broadband and

dial-up Internet services were centralized to a freestanding company called e-Bolaget. In addition to the subscription services, the associated business development initiatives like portals and on-demand services were gathered in the unit, which was given substantial freedom to try new business models and ways to operate. After about two and a half years the unit was absorbed in the consumer segment division.
With multiple networks available over the world through acquisitions and investments in fibre, TeliaSonera established International Carrier in 2003 to offer B2B wholesale of telecommunications services and infrastructure. International Carrier is a tier 1 network provider which in 2014 was the second largest carrier in the word. International Carrier operates a 43000km fibre network in 59 countries of Europe, North America and Asia. It has been internationally praised and supports noteworthy customers such as ViaSat, Facebook, TwitchTV, and Activision Blizzard.

IP telephony, an additional challenge for fixed voice

The increasing connecting of computers to adequate Internet services (i.e. the convergence of telecom and computers) let to growth in all sectors of the IT industry. Some users started to take advantage of the IP protocol for connecting voice calls with zero marginal cost all over the globe. However, when TeliaSonera was forced to open the copper access net for rivals, people could start using IP-telephony with their regular phone, paying only for a local call (and a small profit to the service provider) regardless of where they called. Firms like Glocalnet and others thrived, and increasingly so from 1999 when number portability was enforced for fixed telephony.
In 2003, Skype launched its easy to use IP telephony PC client with the advantage of simple search and contact organization functions, with free calls between computers all over the world. Despite inferior quality and reliability IP-telephony delivered a hard blow to the telecom business. It took important long distance revenues away from the fixed network operators, lowering their margins further. The analysis firm Ovum estimates that the industry lost 386 billion USD in revenues between 2012 and 2016 due to Skype, Lync and other VOIP services.
With price pressure on both fixed and mobile voice services Telia merged with the Finnish ex-monopolist Sonera in 2003, after long negotiations but nevertheless failed merger with Telenor of Norway. CEO Anders Igel got the difficult task of realizing the synergies of the two large companies, which involved much internal friction and massive downsizing (Almgren). But, the merger also brought a wider set of international activities into the corporate portfolio due to Sonera's stakes in the east together with Turkcell. These became the main area for business growth for some time, primarily by providing mobile voice services in Eurasia.

Mobile Internet

With the GSM networks at the end of the century it was possible to transmit digital signals allowing for transfer of data, which was incorporated in cell phones as so called WAP services. Many of these phones were rather complex. Handset competition was primarily based on smaller size and longer battery time, with Nokia emerging as the market leader. The operator's prevalent business model was subsidized terminals with lock-in subscriptions and complicated price structures. TeliaSonera had an early version of an app-store with about 80 applications. App development at this time was a closed activity controlled by few actors. With low bandwidth, limited app service range, and low user friendliness, WAP never became a success. But the basic digital infrastructure and the idea of freestanding downloadable applications was established.
The first technology that was called "broadband" on the mobile side was 3G, launched in 2002. With download speeds up towards 40 times faster than GSM, it

became possible to use the web, download music and use social media on the phone. 3G also led to a large increase in broadband connectivity for computers, both laptops and stationary PCs, as it was aggressively promoted as a fixed connection substitute by several operators. After a few years the networks became quite congested due to the large number of simultaneous connections, making them barley accessible from time to time.
The technology shift to 3G did not start well for TeliaSonera. When the 3G spectrum licenses were allocated (year 2000), the regulator awarded them to Europolitan, Hi3G, Orange, Tele2, while TeliaSonera was left without. This was somewhat of a chock to the executives at the incumbent former monopolist, whose leadership in telecom had been taken for granted.

"It was a real awakening. A chock almost. And it led to a noticeable change in attitudes. And we had to realize that we were just a company like all the others"
- Head of Corporate Strategy.

Luckily TeliaSonera was approached by Jan Stenbeck who offered to share the license acquired for Netcom, and they built a joint network together.
The rivalry among operations kept decreasing minute prices making it less and less common with completely subsidized terminals. Eventually the phone purchase got separated from subscription choice, and only occasional discounts from promoting operators remained.
To handle, and profit from, the new mobile Internet capabilities TeliaSonera invested heavily in getting an early solid position. The strategic logic was to acquire a critical mass of users so that other businesses would benefit from buying access to them through TeliaSonera rather than gathering traffic on their own (Paulsen, 2000). To attract users, the portal business model was borrowed from the fixed Internet. The most notable initiative was probably Speedy Tomato, a heavily marketed WAP portal in which 2 billion SEK was invested. Speedy Tomato was the Pan-European portal brand corresponding to Halebop in Sweden. The spectacular launch and subsequent lack of success has made the initiative a well-known failure. A later attempt, Surf Port, was launched in 2005. It was the first mobile portal that was launched on all TeliaSonera's main countries: Scandinavia, the Baltic states and Spain. It also enabled users to access both the regular WWW and WAP, which until then had been two separate Internets in practice.
TeliaSonera had a different strategy for the launch of 4G. Rather than being passive, they took the initiative and was the first operator in the world to open 4G networks, which happened simultaneously in Norway (in collaboration with Huawei) and Sweden (in collaboration with Ericsson). 4G, or LTE, offered substantial improvements in capacity promising 100 Mbit/s for mobile users and 1 Gbit/s for stationary users as top possible speed. As the 4G systems only provide packet-based infrastructure, all its voice communication is now in practice IP-telephony. The Swedish licenses were awarded to TeliaSonera, Hi3G, Intel Capital Cooperation, Tele2, and Telenor in 2008, but the first consumer usable networks were accessible in December 2009.

Smart phones and tablets

While the former CEO of TeliaSonera, Anders Igel, was rather reluctant to expand the company at the expense of profitability, his successor Lars Nyberg had a stronger growth mandate from the board. Anticipating the major transformation towards digital business and a merge in usage of fixed and mobile internet, TeliaSonera initiated negotiations and development of a combined technology and business development

training program with KTH Professional Education in 2006. The program brought internal key people from over the world to Stockholm for intense training, starting in 2007 and still ongoing. It supported a much needed competence and culture shift, towards stronger business and customer orientation, and away from remains of the old institutional thinking of the monopoly days.

It was IPhone, released by Apple in 2007, with people in que outside the New York Apple store one week ahead, that released the convenient use of Internet in handheld devices through user friendly browsers, services and apps. The first version that came to Sweden was the iPhone 3G, in 2008. The iPhone completely changed the terminal industry, by successfully combining elegant design, a user friendly interface, well-functioning touch screen (attempted of this was made by some earlier products from e.g. Neonode, Palm, and Nokia) with the possibility for the user to custom the functions by downloading chosen apps from an open app environment. Apples app-store, once they were opened for developers, quickly accumulated tens and hundreds of thousands of applications, many harboring a creativity never seen before.

Google, and later Microsoft and some other IT giants, followed and launched their own smart phone operating systems, with Google's Android emerging as the global leader (but not in Sweden where iOS still is the leading platform). Smartphones, and their larger cousin tablets, changed the power balance in the industry, taking control and revenues for services out of the operators' hands, while leaving them responsible for network connectivity that was rapidly becoming commoditized and leaving diminishing returns.

TeliaSonera had negotiated exclusive rights for iPhone 3G in Sweden and the cost was between 8000 and 21500 SEK depending on model, lock-in time and subscription (Lindkvist, 2014). However, the combination of lack of high value services but increasing demand for capex hungry bandwith, caused operators to face an increasing revenue gap (Markendahl, et al, 2009). For instance, the profit of TeliaSonera's broadband division decreased with 1 billion SEK per year in average after 2010. The combined economic pressure on TeliaSonera's Nordic businesses led to two major cost-cutting initiatives in 2009 and 2014.

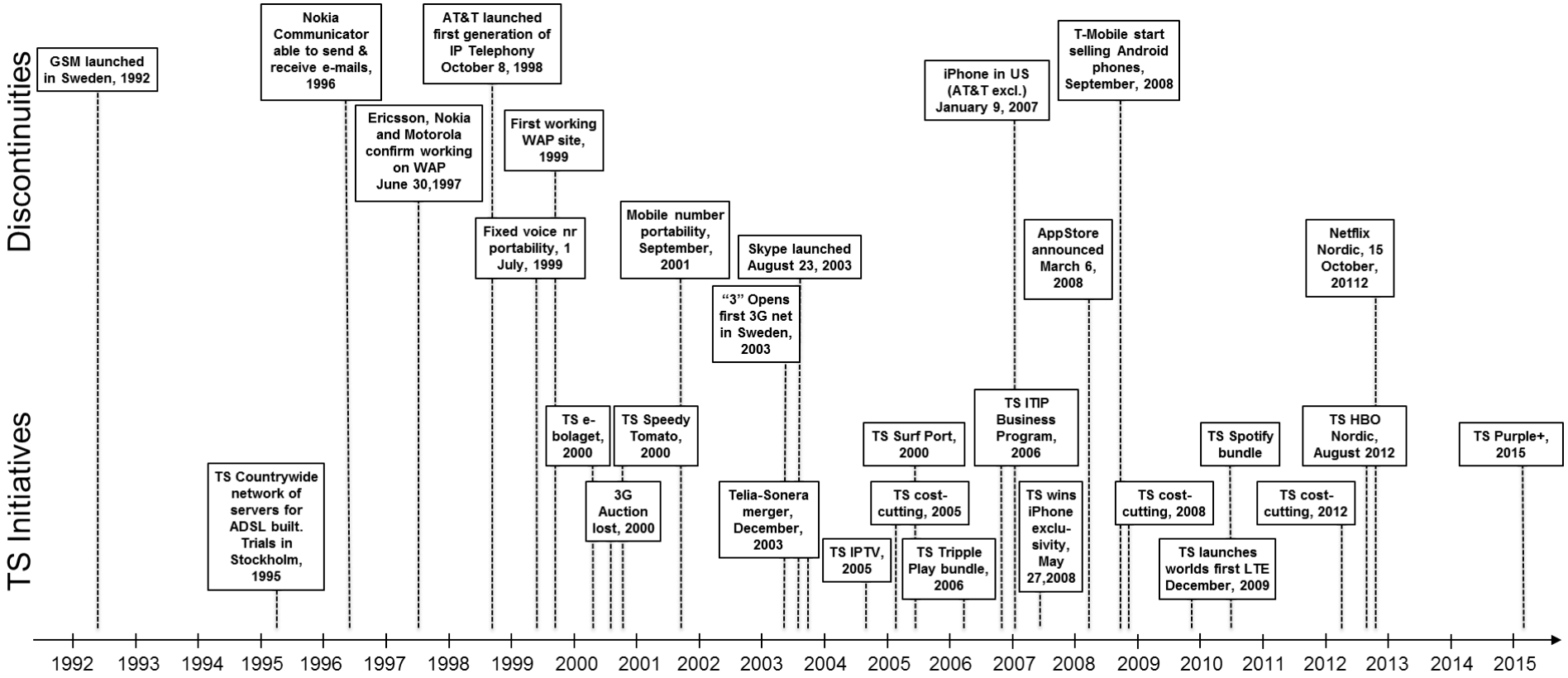
The long stretch of cost-saving focus continued. In parallel with general rationalization efforts, major cost-cutting initiatives were announced in 2005, 2008 and 2012. In 2009, two thirds of the original company headcount was eliminated and unions criticized top management for trying to polish financial indicators with the hope of attracting a buyer, rather than making sound long term decisions (GP, 8 Feb 2008).

Streaming services

Another driver of capacity demand was emerging streaming services, most notably Spotify (2006) and Netflix (in Sweden 2012). Instead of downloading and storing data locally, streaming involves customers downloading content for each single consumption. When Netflix launched in Sweden, TeliaSonera's network traffic almost doubled more or less overnight. This increase also spilled over on the mobile side as many customers started to stream video to their handheld terminals, using this "second screen" as a first screen.

The consumers, on the other hand, appear less and less interest in who their operator is, and the operators in turn try to compete by capital demanding coverage and bandwith performance. Many operators tried to offer bundled packages, with phone, internet and TV (called triple play) subscriptions with large amounts of free SMS and call minutes.

Figure 1: Timeline


Discontinuities
TS Initiatives
GSM launched in Sweden, 1992
Nokia Communicator able to send & receive e-mails, 1996
AT&T launched first generation of IP Telephony October 8, 1998
Ericsson, Nokia and Motorola confirm working on WAP June 30,1997
First working WAP site, 1999
Fixed voice nr portability, 1 July, 1999
Mobile number portability, September, 2001
Skype launched August 23, 2003
"3" Opens first 3G net in Sweden, 2003
iPhone in US (AT&T excl.) January 9, 2007
T-Mobile start selling Android phones, September, 2008
AppStore announced March 6, 2008
Netflix Nordic, 15 October, 20112
TS Countrywide network of servers for ADSL built. Trials in Stockholm, 1995
TS e-bolaget, 2000
TS Speedy Tomato, 2000
3G Auction lost, 2000
Telia-Sonera merger, December, 2003
TS IPTV, 2005
TS Surf Port, 2000
TS cost-cutting, 2005
TS Tripple Play bundle, 2006
TS ITIP Business Program, 2006
TS wins iPhone exclu-sivity, May 27,2008
TS cost-cutting, 2008
TS launches worlds first LTE December, 2009
TS Spotify bundle
TS cost-cutting, 2012
TS HBO Nordic, August 2012
TS Purple+, 2015
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When Lars Nyberg replaced Anders Igel as CEO there was hope to get growth in Scandinavia rekindled. However, the constant cost cutting and focus areas such as "quality of service" and "world class networks", typical defensive differentiators in the end of a technology cycle, brought a culture and sentiment that was hardly favorable for innovating and taking risks. However, there was a gradual improvement, which was further supported by Johan Dennelind's leadership starting in 2013. But recently, TeliaSonera responds by partnering whit leading actors rather than building proprietary consumer solutions from scratch, like in this case with Spotify in 2010 and HBO Nordic in 2012, bundling their music and video services with broadband subscriptions. The aim was to differentiate from low price competitors, while giving partners access to the large customer base. In 2015 TeliaSonera deepened their commitment in Spotify by buying a 1,4% share.
To support innovation and growth further, an innovation initiative, called Purple plus, was commenced in 2015, supported by further innovation training initiatives targeting managers.

CONCLUDING DISCUSSION AND IMPLICATIONS

This article has dealt with incumbents' proposed inability to respond to disruptive change with a specific focus on responses to technical and business model changes. A case study of TeliaSonera AB, the Swedish-Finnish telecom operator, has been used as empirical base on which we make the following conclusions and contributions.
In literature there exists a general perception of incumbent in general (Chandy & Tellis, 2000), and Telco's in particular (Rohrbeck et. al., 2009) as "dinosaurs" i.e. as reactive *inert firms unable to adapt* to changing conditions. Like Lepore (2014) this article questions this perception and argues that the concept of incumbent reactions needs to be nuanced. In the studied case company, change in relation to technology could be claimed to have been successfully managed. TeliaSonera succeeded to transfer its technology base from one generation to the next during more than 20 years. Thus, in relation to technical change the case company was both proactive and successful. It can be noted however, that the company was more proactive in response to opportunities launching many early initiatives, although not always successful, than to threats. In response the threats, the overall pattern is instead reactive or nearly passive, trying to extend service life cycles while slowly ceding market share to new entrants and competitors.
In relation to *business model change* the case company made several minor and two major innovations. The WAP store in the year 2000 was more or less an early prototype for the Appstore which Apple launched seven years later. The WAP store, however, failed due to several factors such as a limited number of services, a closed store concept, a complicated programming language and an inconvenient user interface. A business innovation that became successful, at least for a short period of time, was the introduction of IPTV. During a short time TeliaSonera was Sweden's largest video renter. However, Netflix and HBO disrupted the market with its streamed service, which was based on the connection capacity provided by for example TeliaSonera. In that sense, TeliaSonera was proactive, but unsuccessful. In relation to other areas of minor business model innovation TeliaSonera has been successful. For example, the company had an early bundled offering of selling a handset and a subscription as one package. This was later separated. Another example is the successful transfer of what to charge. Early subscriptions were charged based on minutes' voice calls and SMS (data downloading was for free in some offerings). Within very short time TeliaSonera succeeded to switch this offering and today charge for data having voce calls and sms for free. These revenue modes changes have been successful.

From a *theoretical perspective* this observation of successful and unsuccessful initiatives raises interesting issues. Past literature on business model innovation implicitly assume a radical disruption as consequence of a business model innovation (i.e. Skype disrupts voice calls). However, findings from this case study highlights the existence of incremental and/or modular changes of the business model.

It may be, as proposed by O'Reilly and Tushman (2008), that TeliaSonera was better equipped to adapt to important changes when they were able to leverage operational capabilities, and less successful when attempting business models far from established ways of working despite the availability of financial resources. It remains clear, however, that rather than going under due to disruption by not disrupting themselves as proposed by Christensen (1997) the company have survived and is still profitable (cf. Lepore, 2014).

In light of this case we can also raise the question of what actually should be accounted as a business innovation. In relation to Osterwalder and Pigneur's (2010) framework, also minor changes in one of their nine components could be argued to be a business innovation. Accordingly, in line with Klang, et.al. (2014) we argue for a need for a more systematic, cumulative and critical approach to the concept of business model research. Another topic related to business innovation research is the relation between technical innovation/discontinuities and business innovations. This topic is not new, however, our case study reviles the link between these two concepts and specifically the complexity associated with this link.

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