# Bundling of Handset and Subscription

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## Abstract

Bundling of handset and subscription is already a widely used concept. This is being done by the mobile operators because they believe that it increase the appeal to the potential end-users. Another concept that is closely related to bundling of handset and subscription is the subsidization of handsets. A handset subsidy allows the end-users to get their handsets at deep discount, or even for free. These two concepts go hand in hand, if you stumble on one of these you can almost be certain that you also stumble on the other.

This paper concentrates on describing the current situation in bundling of mobile handset and subscription. It starts by introducing the concepts of bundling and handset subsidies and goes on by studying some regulatory frameworks and how this bundling has been used. This is done on a global scale by studying the European, Japanese and South Korean markets. This paper also describes how the concepts of bundling and handset subsidies are being implemented. At the end of the paper you can find a small case study about the situation in Finland.

**Key Words:** Bundling, handset subsidy, regulation

# 1 Introduction

## 1.1 Terminology

We will begin the Introduction chapter by explaining the main concepts in this paper.

**Bundling:**

> *"Bundling means grouping of various telecommunications services, in this paper the subscription and the handset, as a package to increase the appeal to potential customers and reduce advertising, marketing and other expenses associated with delivering multiple services." [1]*

**Handset subsidy:**

> *"A mobile handset subsidy offered by mobile operators can be defined as a monetary value, which is given to a customer during the subscription process. The amount of the handset subsidy is the difference between the mobile operator's purchase price of a handset from a manufacturer and the sale price of the handset to a customer. By subsidizing the cost of the handset for new subscribers, carriers can lower the cost of customer entry to the mobile communication service market." [2]*

## 1.2 Why Handset Bundling?

Bundling is the practice of assembling multiple products or services together in an integrated offer. Bundling is widely used in the telecommunications industry. One reason behind bundling is to respond to consumer preferences or convenience. Another reason might be to cut down on the number of bills the end-user has to pay. Because of the nature of bundling, regulators have been asked to deal with different kinds of anti-competitive aspects of bundling in various markets. Dealing more generally with the issue of bundling, a number of regulatory approaches are possible to prevent anti-competitive conduct, the outright prohibition should generally be seen as a last resort only. [3]

There are some indications that the usage of mobile services has been delayed by the fact that many end-users do not know how to configure their devices for using these services. The mobile operators have tried to make the configuration of handsets easier. But, in countries where bundling of handset and subscription is not possible this has been quite difficult. In countries where the bundling is allowed the operators can preconfigure the handsets before they are sold to the end-users. This makes it easier for the end-users to start using the services. At the same time the operators can subsidize the handsets that they feel are most appropriate for mobile service and content usage. In this way they may be able to raise the penetration of these devices to a targeted level. Because of this the countries that allow bundling have more opportunities to influence the usage of mobile services. According to an analysis of the European population above the age of 15, it appears that only 36% are likely to know how to use their handsets for the use of mobile content services [4]. This is why bundling of handset and subscription might be a necessity if the the European operators want to be able to compete at the same level as their Japanese and South Korean counterparts as described later in this paper.

Next two models that describe how bundling is being implemented is explained. The first one is the "no bundling" case that can be seen on the Finnish market.

The other one is the “strong bundling” case as seen on the Japanese market by e.g. The Japanese mobile operator DoCoMo. [5]

**“No bundling” case (e.g. Finland) as in Figure 1:**

- The handset vendor manages multiple retail channels
- The mobile operator focuses on basic services
- Unclear who orchestrates the user experience

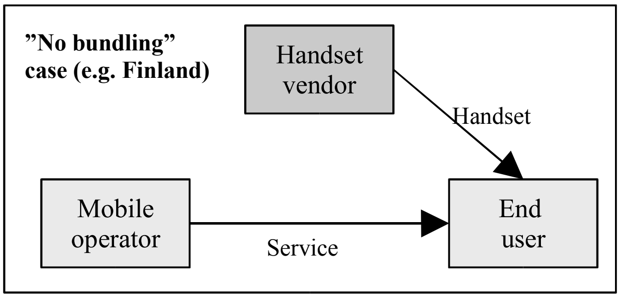


**Figure 1: The no bundling case (e.g. Finland).**

**“Strong bundling” case (e.g. Japan) as in Figure 2:**

- The operator manages services and handsets
- The operator exploits buying power for
  - brand visibility
  - handset volume discounts
  - handset features and configurations
  - managing content providers
  - pushing from prepaid to postpaid

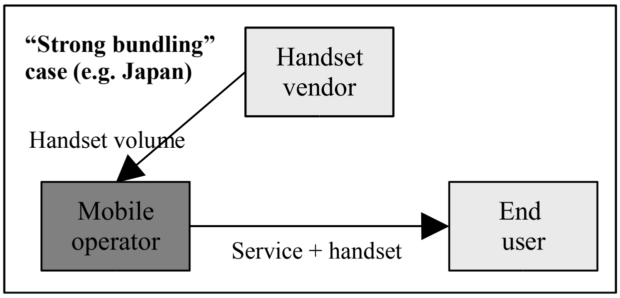


**Figure 2: The strong bundling case (e.g. Japan).**

A concept that is nearly related to the bundling described above is handset subsidies. The handset subsidy increases the cost of winning a subscriber (deeply discounted or free handset), but on the other hand the handset subsidy might also be considered to decrease the cost of keeping a subscriber (low churn) [5]. But, there are other studies that have reached somewhat opposite conclusions, e.g. [6].

## 1.3 About Handset Subsidies

In the mobile communication service industry, a mobile handset subsidy is used as a key marketing strategy to attract subscribers and to promote market penetration. A handset subsidy for a new subscriber is essentially a means of lowering the cost of the subscriber’s entry to the mobile service market. [3][7]

Bundling of handsets and subscriptions involves subsidies which appear to consumers as: [5]

- Commitment to subscription for a fixed period of time (usually 12-24 months)
- Handsets locked to the operator (SIM-lock, although not recommended)
- Reduced handset price
- Increased tariffs in service plans (due to cost recovery for the handsets)

Handset prices may vary depending on e.g. mobile operator preferences, the competitive situation and/or national regulations. Handset subsidies allow end-users to get their handsets at deep discount, or even for free. These subsidies may be considered as one reason for the rapid growth in the mobile handset industry, and the mobile communications industry as a whole. The reason behind mobile operators subsidizing handsets has been to boost their sales. This was at least the case in the beginning when the industry was still quite young. But, are these subsidies needed also in the future? As the penetration rate has risen to over 80% in several European countries, and the markets have started to saturate, we are in a situation where new subscribers of one operator already are ex-subscribers of another and these subscribers usually already own a handset.

During the recent years the mobile operators have raised their number of subscribers quite quickly, partly because of subsidized handsets. Today many are wondering whether the subsidization of handsets is commercially desirable and economically viable. One could argue that the money a mobile operator is spending on handset subsidies is money away from e.g. developing new mobile services and content. A problem with handset subsidies is that it can be extremely difficult for a mobile operator to stop subsidizing handsets once they have started the practice. It needs to be noted that there are some markets that have managed to do very well without handset subsidies. Two of these markets are the Finnish and the Italian markets.

In order for the mobile services and content market to take off, the availability of devices that are able to use these services is of course a must. In Finland, where handsets are not subsidized, some feel that also bundling of handset and subscription must be allowed. It's seen as something that would be needed if the mobile service and content usage is to really start growing.

The relationship between subsidization and the level of handset sales is not proved though. In e.g. Finland and Italy, the absence of subsidization through prohibitory regulation has not prevented the mobile market from taking off. According to [4] a more relevant analysis would be to look at the total customer acquisition costs, rather than considering the handset subsidy alone. Indeed, the prohibition of subsidization does not prevent operators from providing packs with free airtime. Customer acquisition costs in Finland and Italy are no different from those in other countries where subsidization is permitted. One thing that is certain, at least in most cases, is that spending on customer acquisition is clearly a driver of handset penetration.

Handset vendors do not like the subsidies because consumers do not realize the real value of their product. They regard mobiles as disposable when in fact they are based on very expensive, sophisticated technology. But, for the operators the price of the device is not related to the hardware, but to how much revenue it can generate for the mobile operator. Much of the cost is passed on to mobile operators and retailers, which in turn have to find ways to recoup their losses. So, just as there is no such thing as a free lunch, there is no such thing as a free phone. If the phone is cheap, chances are you will pay more for services.

Next some pros and cons about handset subsidies are listed:

**Pros:**

- Because of the handset subsidies the mobile operators have been able to raise their number of subscriptions quite rapidly during the last years. Many see that the subsidies were necessary to kick start the mobile market, at least in some parts of the world
- Subsidization of handsets might be considered as a good tool to, in short to medium term, help stimulate the adoption of next generation services, e.g. 3G.
- If the handset subsidies are well planned, they can lead to more usage of mobile data services and hence more revenues for the operators.
- Mobile operators can use handset subsidies for postpaid plans as a way to get their own subscribers to switch from prepaid plans to postpaid plans. Postpaid plans can be considered as better in that sense that the subscribers are usually paying a fixed charge for a certain amount of time.

**Cons:**

- Subsidized handsets require a longer contract with the mobile operator (usually 1-2 years). This prevents the subscriber from switching to another operator.
- It can be extremely difficult for the mobile operator to stop subsidizing handsets after they have started the practice.
- The consumers do not realize the real value of the mobile phone. They regard the handsets as disposable goods, when in fact the handsets are based on expensive and sophisticated technology.
- The mobile operators who subsidize handsets need to find ways to recoup the losses from the subsidies. This usually leads to higher prices for services. There are no free lunches!

Figure 3 show some other views about the role of mobile handset subsidies. According to [6] handset subsidies are intended to induce new subscriptions from potential users, churn from other carriers' subscribers, and help a subscriber replace his/her old handset with a new one. [2]

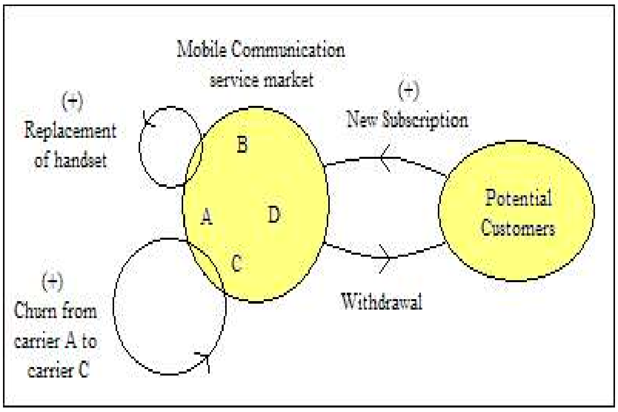


**Figure 3: The role of the mobile handset subsidy according to [6].**

# 2 Implementation

Mobile operators usually attempt to capture their new subscribers through agreements that make if difficult or practically impossible for a customer to move to another operator. Examples include long-term contracts and agreements that tie a customer for a certain amount of time, penalties if the contract is broken, and different locks e.g. a SIM-lock. These are all measures that leads to a so called lock-in effect. For example in the absence of number portability, there is a lock-in effect on the subscriber to mobile communication services [6].

The SIM Lock feature have at least two main characteristics: [3]

- It can be used as a theft deterrent (since the SIM card may have been uniquely associated with a particular handset); and
- It effectively locks a particular handset and subscriber to a single mobile operator. The SIM card authorizes a particular handset and subscriber to use a particular mobile operator's network. Locking the SIM card and preventing its replacement in the handset prevents subscribers from changing their service provider. The SIM-lock feature can usually be unlocked, however, some mobile operators tend to impose significant charges for overriding the SIM-lock feature.

The SIM-lock feature may have anti-competitive effects. It is used because the mobile operators want to protect the handset subsidy that they have paid to dealers for selling the handsets to customers at low prices. SIM-locking a phone is a good means of retaining customers and effectively preventing the handset from being in operator's networks. Soon after SIM-locked phones appeared in Europe the European Commission ruled that such handsets would be harmful to competition and would prevent the establishment of a common market for goods [8]. The commission recommends that SIM-locked handsets should not be used. It seems that this recommendation only has served and will serve as the name suggests though, i.e. as a recommendation.

In most countries, the mobile operators subsidizes the handsets as part of a subscription contract that includes an obligatory subscription period. The operators then recover the subsidy through the subscription fee, the monthly charge and/or usage during the customer's obligatory subscription period.

# 3 Market Status

This chapter studies the situation on some specific markets which either have some special characteristics or are generally important from this papers point of view. The chosen markets are Europe, Japan and South Korea.

## 3.1 Europe

An important principle in existing EU communications regulation is technology neutrality, meaning that all electronic communication technology solutions in principle should be treated uniformly. [9]

Although mobile phone penetration has reached the level of 90% of the population in some European countries, the mobile data services penetration is still very low. A challenge in doing research on the European level is the fact that Europe is not a single market but over 20 different markets, based on e.g. geography and language, and cultural and regulatory differences. The structure of mobile data services industry in Europe is almost exactly the opposite of the Japanese ecosystem-driven model that will be described later in this paper. The industry structure in Europe is market-driven, i.e. the competition is taking place on the horizontal level, that is, operators are competing against each other, handset manufacturers are competing against each other etc. According to the European way of thinking, any company complying with the open standards must be able to offer mobile data services to the open market. The dominant design of European mobile data services is based on modular product structure. [9]

Bundling of handset and subscription is a widely used concept, as is SIM-locking and the other measures as mentioned in the Implementations chapter. Only in Finland and in Italy there is no bundling of handset with subscription, and because of this also no handset subsidies.

## 3.2 Japan

In general the Japanese telecommunication market can be characterized as deregulated, which to a huge extent is based on a one-go reform from 1985 and that formally almost is completed. However some aspects still need to be further perused, for instance an independent regulator authority, which is free from political pressure and capable of enforcing actions against abuse, which is very important in order to ensure among other things competitive market conditions. [9]

The industry structure in Japan is vertically integrated. In a vertically integrated industry the mobile operators control all different levels of the value chain. The Japanese operators control almost everything from the handsets to the content. The handset, the mobile network, and the mobile portal are all closely integrated. The handsets are also strongly branded and each of them can only be used in one specific operators network, i.e. in that operators network that has sold the handset, and the three main operators have all their own mobile portals.

Many studies have been made on the Japanese market and its vertically integrated industry structure. But, there are also disadvantages in the vertically integrated industry structure and its integrated product architecture. The biggest disadvantage is that operators must heavily subsidize the price of the handset. The subsidy may be as high as 90% of the handset price. Another disadvantage is that the handset manufacturers are forced to develop and manufacture models that a suitable only for one specific operator's network which might increase the R&D and manufacturing costs. A representative of one Japanese mobile operator once stated that the handset subsidy on the Japanese market is the price the operator need to pay if they wish to orchestrate the ecosystem. [10]

## 3.3 South Korea

South Korea has the fastest growing mobile penetration rates in the Asia-Pacific region. It also has the largest penetration of mobile Internet users in the world according to [9]. What's interesting is that South Korea has achieved all this without having to offer any forms of handset subsidy. The handset subsidy ban started in June 2000.

South Korea, similarly to Japan, has shown remarkable advancements in new mobile systems. The South Korean operators have managed to encourage the development and the marketing of high quality services that are embraced by the users. The high quality and quantity of services has, in turn, been very attractive to users and has encouraged them to make the switch to the more expensive handsets and to subscribe to the new services. It is interesting to note that due to government regulation, the handsets offered to mobile subscribers are not subsidized by the operators, and consumers are paying the full prices. Yet, this has not stopped consumers from purchasing these new handsets. The close co-operation between different players in the value chain/network has also been the recipe for success in South Korea. [9]

The historical development of the South Korean handset subsidy policy from 1997 to 2001 can be divided into three phases, based on the major decisions about the subsidy and the obligatory subscription periods. [2]

**Phase I: Handset subsidy with an obligatory subscription period.**

- From 1997 to April 1999, the mobile communication carriers offered a mobile handset subsidy with an obligatory contractual subscription period.
- In the beginning the subsidy was about 35% of the handset price (subscription period 12 months).
- In early 1998, the subsidy became higher when longer subscription periods were introduced, also free handsets emerged.

**Phase II: Handset subsidy without an obligatory subscription period**

- From April 1999 to May 2000, a handset subsidy was provided without any obligatory subscription period.
- Led to wasteful handset changes and encouraged customers to subscribe to mobile communication services as a mark of conspicuous consumption, even though they did not have the capacity to pay the monthly service charges.

**Phase III: No handset subsidy period**

- Phase III began in June 2000, when the handset subsidy was eventually banned.
- After the ban, demand for mobile handsets shrank rapidly.
- To boost handset sales, the regulator had to announce a plan that included e.g. lowering of mobile communication service charges.

Starting in Spring 2004 the South Korean regulator allowed the handset subsidy for WCDMA with the maximum subsidy of 45%, and for PDA phones with the maximum subsidy of 25%.

# 4 Situation in Finland

## 4.1 Regulation

The handset business in Finland is unique in many ways. Subsidization of handsets is currently not possible due to paragraph 70 of the national Communications Market Act (393/2003) [11]. The paragraph states that the price of a mobile terminal, or an accessory related to that, may not depend on whether the end-user also buys a subscription.

Low usage of mobile data services and slow progress in WCDMA are factors why the handset bundling and subsidy issue has become a widely discussed topic in Finland. Many feel that the low usage of mobile data services comes from the fact that it can be quite hard for an end-user to configure his/her device to use these services. An answer could be to allow bundling of handset and subscription, making it possible for the operator to offer preconfigured handsets to its subscribers.

The Finnish national regulator is currently, because of the industry interest and the reasons mentioned above, considering changes to how bundling of handset and subscription should be regulated in the Finnish Communications Market Act.

## 4.2 Current Status

The absence of handset subsidies has not hurt the Finnish mobile communications market in the long run, but this might not be the case when the operators want to start promoting new next generation services. Currently, due to MVNO's and MNP, the mobile operators are competing fiercely with prices. The price war is focused mainly on voice, leaving the data prices high and untouched.

Subsidies on mobile handsets has in Finland been prohibited since 1997. Instead of handset subsidies Finnish mobile operators attract subscribers by offering packages of “free talk time” or other bundled goods (e.g. digital cameras, backpacks, and DVD players).

## 4.3 Opinions from the Industry

This sub chapter shows what some players in the Finnish mobile communications market feel about the current situation concerning bundling of handset and subscription and paragraph 70 of the national Communications Market Act. [12]

**Elisa:**

- Feels that the regulation should be changed, but only if:
    - Contract at least 24 months
    - SIM-lock allowed
- Needed in the promotion of 3G
- Preconfigured handsets needed

**TeliaSonera:**

- No changes to the regulation needed
- Feels that changes to the regulation could:
    - lead to unpredictable changes in the market dynamics
    - harder for new entrants to enter the market
    - bad for the end-users (even harder to compare prices and also higher tariffs)

**Finnet:**

- No changes to the regulation needed
- No evidence that bundling of handset and subscription would lead to more competitive markets
- If changed, subscriber contracts of up to 2-3 years needed

**Saunalahti:**

- No changes to the regulation needed
- Would lead to a situation where it would become even harder for the end-user to compare prices for mobile communication services
- Even more low-end handsets sold than before

**Consumer Agency:**

- No changes to the regulation needed

- Feels that changes to the regulation:
  - will make it harder to compare prices on subscriptions and handsets
  - harder for the end-users to switch operators
  - MNP has improved the end-users situation in the Finnish market, the allowing of bundling would have the opposite effect
  - might lead to SIM-locked handsets as in e.g. US and Sweden
  - there are already a lot of problems in how operators are marketing their subscriptions, the allowing of bundling would lead to even more problems

# 5 Conclusions

This paper introduced the concepts of bundling of handset and subscription, and handset subsidy. It also introduced some implementation and regulatory issues. It also studied some relevant markets, and concluded with a case concerning the Finnish situation.

The bundling of handset and subscription issue has risen in Finland because Finnish market is seriously lagging behind in usage of mobile data services. Many believe that allowing the bundling will help Finland to once again be in a leading position on the mobile communications market.

The writer believes that allowing bundling of handset and subscription could work as a cure, but only partly. Relying on only one measure is a too narrow approach. The Finnish operators need to start looking into the future and realize that competing only with price cannot be a longtime solution. They could for instance also compete with the price for mobile data. Currently marketing efforts on mobile data and services are almost non-existent. Voice ans SMS goes first!

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