

## **POSSIBLE IMPACTS OF INFORMATION ASYMMETRY IN THE MOBILE PHONE ACCESSORY MARKET**

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### **Abstract**

Since the mid-nineties of the 20th century, the dynamic development of Internet information technology together with the liberalization of markets and the weak protection of trademark have been leading to an increasing rise in counterfeits in the markets with growing potential profit. The large scale of Internet sales channels and hardly recognizable appearance of counterfeit from original have supported the existence of asymmetric information, which is often negatively understood as a market failure associated with the adverse selection. This paper tries to describe the time evolution of information asymmetry in the mobile phones accessory market in the Czech Republic during the last decade and also to detect possible positive effects of its existence.

**Key words:** adverse selection, counterfeit, fake, information asymmetry, mobile phone

**JEL Code:** D40, D82

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### **Introduction**

Asymmetric information is considered one possible example of market failure, which often results in "moral hazard" and "adverse selection." In general, this situation is defined as a situation where one side of the market is better informed than the other. There is nothing exceptional when the doctor has more information about the health condition of a patient than the patient himself, the manager knows better the company than its owner, or sellers in the consumer goods market are better informed about the products than consumers. For example, Akerlof (1970) describes the effects of asymmetric information in the used car market where due to low awareness on the buyers' side there is a gradual loss of confidence in the quality of these cars. It leads to persistent downward pressure on price that doesn't correspond to the normal technical condition and age of the cars. The resulting situation is that the cars of worse technical condition will be sold in the market because the owners of functional cars prefer to retain and use them, rather than sell them at a lower price.

While according to Akerlof the asymmetric information may have the negative impact on the market, Spence (1974) in his theory of signalling developed the idea that the better informed side of the market transfers part of its information to the other side in its own interest in order to avoid the deterioration of quality and falling prices associated with adverse selection. On the contrary, market signalling is supposed to evoke a sense of confidence among buyers and to help create an appearance of standards in terms of quality and price.

From another point of view, a lack of information can result from “rational ignorance”. Information is not for free as to be better informed requires both explicit and implicit costs, which often disproportionately exceed the additional benefits obtained. So why should customers want to know everything about purchased hot dogs, a camera or a car? And even if re-purchases of similar products reduce the additional costs of information, thanks to the decline in the value of additional benefits gained, the lack of awareness persists.

In today’s world of mass media and IT, customers’ level of information is affected by advertising paid by the manufacturer as well as various personal experiences of other customers that can be shared with others via social networks. Da Graca and Masson (2013) however conclude that information which is beneficial for one consumer can be unprofitable and detrimental to consumers as a whole.

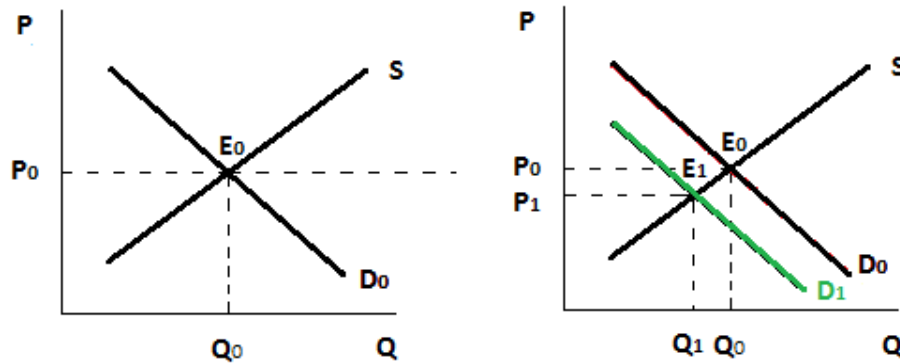
## **1. Asymmetric information and the market effects**

In spite of the debate about whether asymmetric information is a market failure that needs to be addressed by state intervention, or if it’s a consequence of economic rationality and is therefore meaningless to be addressed by the state, in comparison with Marshall’s concept of perfect competition as the condition of efficiency in allocation, it can be stated that the imbalance in information between the market sides of supply and demand is inefficient in allocation because different quantities of product are sold at a different prices than in the case of perfect competition. There is a common situation in a real life, when sellers have known positive and even some negative features of a product and may have tried to hide them from customers for purely business reasons<sup>1</sup>. If customers would be as well informed as the retailers, and if they knew all aspects of the products, including negative ones, their demand would be probably different.

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<sup>1</sup> The asymmetric information can certainly exist among the distribution cells on the supply side of the market, e.g. between the manufacturer and the distributor, and subsequently between the distributor and the end-retailer. This situation will be not considered further.

**Fig. 1: Equilibrium in a perfectly competitive market and in a market with asymmetric information**

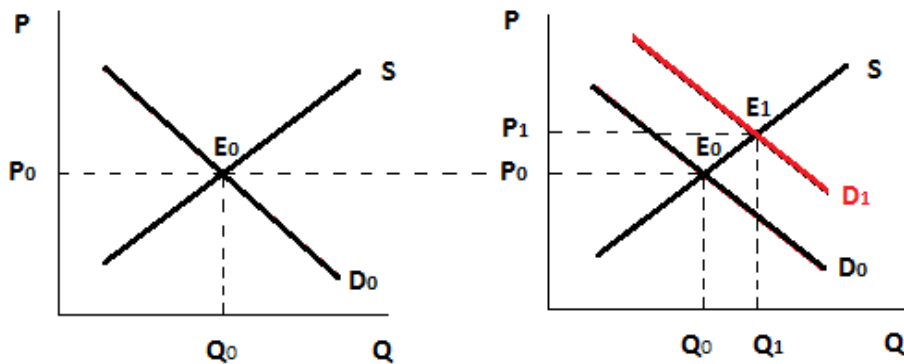


Source: own construction

The left side of Figure 1 shows the market equilibrium with perfect awareness, or better to say, with the same information on the both sides of the trade. The right side of Figure 1 illustrates one possible equilibrium situation with incomplete information on the demand side, *ceteris paribus*. Equilibrium E1 would correspond to the situation described by Akerlof (1970) in the above mentioned article.

Another possible situation of market impact of asymmetric information is shown in Figure 2.

**Fig. 2: Equilibrium in a perfectly competitive market and in a market with asymmetric information – another situation**



Source: own construction

For comparison, the left part of Figure 2 again shows the market balance with the same information on both the demand side and the supply side. In contrast, on the right there is another possible equilibrium situation (E1) with incomplete information on the demand side,

ceteris paribus. For example, let's consider the market of various medications. If customers knew all the negative secondary effects associated with their frequent use, their demand probably wouldn't be as high. Similar situations can be found in other markets, and it is possible to detect them even in the mobile phone accessory market.

## **2. Mobile phone accessory market in the Czech Republic**

Mobile communications in the Czech Republic has been developing dynamically since the mid-nineties of the twentieth century. Compared with Germany, England or Spain there is a relatively small market, but we can generally speak about the publicly popular matter. Of course, it is not just about the services provided by existing mobile operators or sales of mobile phones and data devices, but an integral part of the market includes accessories for mobile phones. From the position of the retailer the sales of accessories are even more interesting than sales of mobile phones themselves with regard to the purchase price, the amount of margin and the complexity of complaints processes. And not just for the retailer, but also for producers and other distribution links in the form of wholesalers, they are an attractive commodity, although even in this area it is possible to observe certain trends.

Mobile phone accessories can be divided into three groups, or better to say into three submarkets: the market for original products; the market for non-genuine products in the form of visually differentiated copies; and the third is the market for counterfeits, which are usually presented as original goods and, without some comparison with the originals, are almost indistinguishable.

The market for original accessories can be considered the smallest in comparison with the other two mentioned markets. On the supply side, there are renowned manufacturers, and on the demand side, there are customers who are willing to pay relatively high amounts for chargers, new housings or new batteries because they don't want to buy non-genuine goods. In other words, there are the customers with a low elasticity of demand. Original products are distributed in so called blisters often marked with a hologram with the manufacturer's logo to guarantee the product's originality.

The non-genuine accessories market had been developing since the very beginning. Mobile phones were becoming cheaper and became a more desirable commodity despite the relatively high prices of services associated with their use. It was gradually created a space for goods that were either significantly cheaper than the original or were not produced in the

original form. In addition, dealers welcomed the goods in its product range according to margin, which was not only in percentage but also in absolute terms higher than by original accessories at substantially lower selling price. It can be considered higher elasticity of supply and demand. The products are at first sight recognizable in design as well as in design of packaging, which are usually a cheap plastic or cellophane package or cardboard box (for batteries), marked with the importer logo.

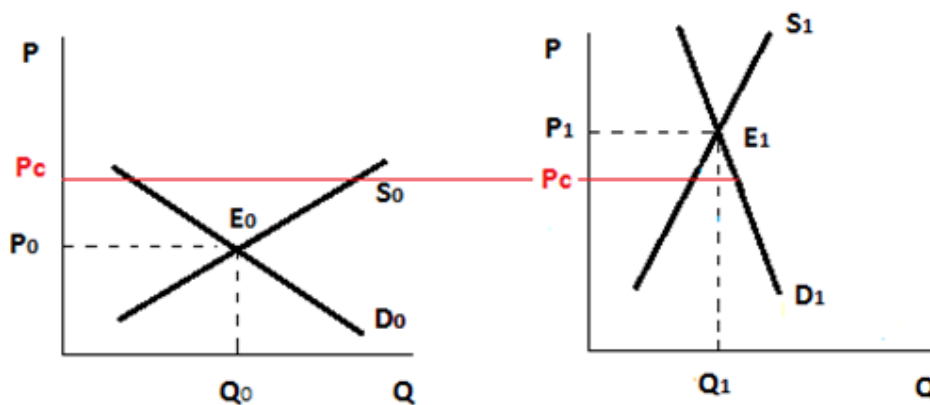
Especially in the last few years there can be seen rising sales of counterfeits sustained by the development of Internet sales channels, which presenting the product as an original one with the supplement "bulk". One possible interpretation of the "bulk" is that it is a genuine product produced over the planned capacity, and therefore is only in a plastic bag without any further marking. Almost always it is a counterfeit, which can customer detect by comparison with the original product in details of the process, in different fonts of writing etc. At first sight, however, the product is unrecognizable. There is therefore obvious information asymmetry, which has an impact on the other two sub-markets and on the market as a whole.

## **2.1 Sub-markets for non-genuine and for original accessories**

As it was written, in comparison with the original accessories, the prices of non-genuine accessories are considerably lower, regardless of the fact, whether it is the wholesale price excluding VAT, or retail price with VAT.

So let's consider a model situation where the selling commodity is a mobile phone charger with a unified micro-USB connector. Furthermore, we consider the retail price with VAT, which is half in the case of non-genuine charger than original. For simplicity no inflation it's considered, respectively, it's assumed zero inflation and the both markets are in equilibrium. Subsequently, let's suppose the third market for a charger that looks like the original one and even so is offered to customers, but it is a counterfeit. The market price of this charger is between the price of original and the price of non-original charger, see Figure 3.

Fig. 3: The non-genuine charger market and the original charger market - equilibrium and changes



Source: own construction

The left side of the Figure 3 illustrates non-genuine charger market, the right side shows the original charger market and  $P_c$  is the price of counterfeit. Although it is a basic and very simplified model situation, it is possible to comment some tendencies. Out of any comments, it is clear that mobile phone accessories market as a whole has been facing to the consequences associated with a gradual decrease in the average selling price of mobile phones.

In the non-genuine charger trade some existing or potential customers can prefer the purchase of original charger due decreasing price difference and their belief in product originality. But because of lack of information they can buy a counterfeit. Some other customers will still buy non-genuine charger as a second or third charger for using in offices, cottage etc. At the same time it can be expected that some retailers leave the market with respect to downward pressure on demand. It will be usually retailers that sell the lowest quality goods. The price of non-genuine charger remains approximately the same in time and the market will be probably smaller in terms of quantity of sold chargers.

In the original charger trade customers will prefer to purchase a counterfeit as well. Thanks to asymmetric information they believe, that it's possible to buy original charger for a lower price. In the short run some decrease in demand can be expected and in the long run as well, thanks to negative experiences with counterfeit looking as the original one. The opposite effect on the demand side can lie in arrival of new customers who have a negative experience

with non-genuine charger and want to buy a quality product at a higher price. But because they can't distinguish the original charger and the counterfeit, the impact on demand for original charger will be only partial. The price of original charger will tend to decline in time and the size of the market will be probably smaller, despite the fact that on the supply side appears more genuine goods in connection with the entry of new Chinese mobile phone manufacturers.

## Conclusion

The proportion of sold counterfeits is becoming higher in the mobile phone accessory market in the Czech Republic. The asymmetric information on the customer's side is the key reason. From the customer's perspective, a positive effect of asymmetric information can be seen in downward pressure on prices of the original products or in exit of non-genuine sellers offering the lowest quality goods. Negative effects can be seen in increase of counterfeits sales, which adversely affect the reputation of the original goods.

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