

# MODERN PRICING STRATEGIES IN THE INTERNET MARKET

**Maksim Patshin – Sergey Kulpin**

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## **Abstract**

The article provides an overview of current scientific research in the field of pricing in the Internet market. Price choosing is one of the most important aspects for online businesses. Pricing requires both a scientific approach and intuition that helps to understand how customers perceive a brand and goods.

The Internet has changed the ways of consumer price information analysis which previously have had a disseminated character. A user can compile information about a good price of various retailers in just a few clicks. Increased pricing information transparency causes strong competition among retailers and requires real-time monitoring and rapid response. Many online sellers use the competitive strategy of behaviour. They constantly monitor competitors' prices and on the basis of the obtained data set their own prices. The growth of the Internet commerce has prompted the development of applications for algorithmic pricing when sellers set the price using calculation algorithms.

In addition, the authors offer general pricing model for the Internet market.

The article is conceptual in nature, and will be useful to researchers in the field of online pricing and can be used in further studies.

**Key words:** pricing strategies, the Internet market, pricing problems

**JEL Code:** JEL D40, JEL M31

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## **Introduction**

Pricing is one of the most important aspects for Internet companies. Pricing requires both academic approach and intuition which helps to understand which brand and product will be attractive for customers. As experts say at the very beginning retailer must decide what will help him reach necessary profit level: high prices and low level of sales or lower prices and respectively higher level of sales.

Internet has changed the ways customers analyze pricing information which had disseminated nature before. In several clicks customer can summarize the information about prices from different retailers for this or that product. Higher pricing information transparency causes tough competition among retailers and requires monitoring in real-time and quick response. Many online sellers use competitive behavior strategy constantly monitoring competitors' prices and defining their own prices on the basis of obtained data. The growth of Internet commerce has triggered the growth of applications for algorithm-based pricing: that is when sellers establish prices using calculation algorithms (Chen, 2016). Sites of travel agencies and large well-known Internet retailers have adapted pricing strategies algorithms. Dynamic pricing instruments and technologies are also accessible for smaller companies. (Fisher, 2017).

The article has two main parts. The first part presents the study background. In the second part readers can find description of pricing model for the Internet market.

## **1 Study background**

In the context of low information asymmetry created as a result of product Internet aggregators researchers analyse many pricing problems in the Internet. Pricing depends on many factors. In the research (Liu, 2012) authors identify 3 factors influencing Internet company pricing strategy: reputation of online seller, customer awareness level and competition. Researchers have found that due to the presence of less and more informed customers at the market companies with higher reputation declare lower prices than companies with lower reputation. Such a research demonstrated that the stronger the competition at the Internet market is the higher the negative effect of price is: companies with higher reputation often give lower prices as compared to the companies with low reputation.

In the research (Wu, 2014) authors state that online sellers use randomised pricing strategy or in other words, random price strategy. This strategy allows for 30% increase of retailer's income.

Researchers from Xidian University in China study customer behavior and respectively optimal pricing strategy of an Internet company which uses 2 distribution channels: official manufacturer's site and online retailers' sites. Customers using official site tend to compare prices for manufacturer's goods with online retailers' prices. The higher the reputation of manufacturer is, the higher the number of customers purchasing via official site is despite the fact that prices at the official site are higher (Lei, 2015).

In the article (Li, 2013) researchers analysed a model affecting pricing policy, returns policy and internet company quality policy. Within the framework of direct online sales optimal sales price, quality policy and return policy complement each other. When the quality of the product improves, direct distributor must provide comfortable return policy and offer higher prices. When quality level is low, direct distributor should take a place at cheap products market and offer goods with „low quality – low price“.

Russian researchers also look into pricing strategies in the Internet. Researcher Sigarev A.A. singles out the following pricing strategies applicable to Internet market: discounts at secondary market strategy; periodical discounts strategy; random discounts strategy (variable prices sales); segmented market strategy; market penetration strategy; market mastering curve strategy; signaling strategy; elective prices strategy (pricing for a set of benefits); set price strategy (pricing for a product and consumables); „above the nominal“ strategy; image strategy (Sigarev, 2014).

Many researches are devoted to pricing discrimination. The work by M. Fassnacht and S. Unterhuber analyses pricing discrimination influence on key consumer reactions at online and offline markets. In particular they mention that the price difference size at online and offline markets depends on the type of offered product: for goods requiring consumer experience (clothes for example) the difference is more pronounced than for other product types (Fassnacht, 2016).

The researchers pay attention to other pricing strategies at the Internet market that have overlaps with traditional market: pricing strategies for discounts (Ma, 2016), „pay as much as you want“ pricing strategy (Dorn, 2016), pricing strategies for Internet services with network effect (Pang, 2012), pricing strategies at peak sales seasons (Zhang, 2015), and etc.

## 2 Pricing model for Internet market

As mentioned by Litvin any customer irrespective of which channel (traditional or electronic) he uses to make a purchase asks himself how valuable this product is for him and how this value coincides with the price (Litvin, 2003).

His article contains basic decisionmaking model for making purchases in the form of a formula:

$$P \leq V_i, \quad (1)$$

where  $P$  – a product price,  $i$  – consumer index,  $V_i$  – value of the product for the consumer.

This model is far away from real life. There are many positive and negative factors influencing purchase decisions at the Internet market.

In the article (Kulpin, 2013) proves that purchasing this or that product in the Internet shop implies certain transaction costs for the customer, such as: search costs, deal costs, delivery costs. These costs can be described in a set of formulas.

### 2.1 Search costs

Such costs can include costs for searching for information, comparing products, detailed analysis of the product, product trial, etc. In general these costs are mainly related to time costs and can be presented in a formula:

$$SC_i = sc_i \cdot tsc_i, \quad (2)$$

where  $SC_i$  – search costs,  $sc_i$  – value of time unit for an individual  $i$ ,  $tsc_i$  – an amount of time spent.

### 2.2 Deal costs

These costs include costs related to negotiating the purchase (e.g. waiting for manager's reply after the order is placed), payment procedure (online or offline), etc. These costs can be presented in the following form:

$$DC_i = dc_i \cdot tdc_i + CF, \quad (3)$$

where  $DC_i$  – deal costs,  $dc_i$  – value of time unit for an individual  $i$ ,  $tdc_i$  – amount of time spent,  $CF$  – commissions related to bank transfers, for example.

### 2.3 Receiving costs

These costs include waiting period until the product is delivered. These costs can be demonstrated by the formula:

$$RC_i = DLC + rc_i \cdot trc_i, \quad (4)$$

where  $RC_i$  – receiving costs,  $DLC$  – delivery costs,  $rc_i$  – value of time unit for an individual  $i$ ,  $trc_i$  – amount of time spent.

According to the previous research covering product policy at the Internet market (Kulpin, 2015) Internet goods can be subdivided into the following groups: ideal (information), demand stimulating and non-stimulating ones. According to that one must mention that for ideal (information) Internet product  $DLC_i > 0$ , for other products  $DLC_i = 0$ .

## 2.4 Overall pricing model for the Internet market

Besides costs Internet consumer receives certain benefits from making purchases via the Internet.

First of all it is expected value of the product for the customer which is a function of the real product value. We shall mark it as  $E(V_i)$ . When purchasing at the Internet market consumer always takes a risk of obtaining the product real value of which does not coincide with its expected value.

Secondly, when an individual purchases information benefit in the Internet the does not need to leave the house, travel by metro, waste time in a traffic jam or money for the ticket. Each of these factors can be singled out but for the sake of model optimization we suggest to unite their joint influence and mark it as  $G_i$  gain for individual  $i$ .

Therefore preliminary pricing model for the Internet market looks as follows:

$$E(V_i) + G_i \geq P + SC_i + DC_i + RC_i. \quad (5)$$

One must also consider other negative  $NPF_i$  and positive  $OPF_i$  factors, which can not be identified during the initial analysis as well as the attitude of the consumer to the risk and other consumer psychological factors influencing expected value of the product for the consumer (variable  $r$ ). Complete pricing model at the Internet market looks as follows:

$$P \leq \frac{E(V_i)}{1-r} + G_i + OPF_i - SC_i - DC_i - RC_i - NPF_i. \quad (6)$$

Therefore the consumer is likely to purchase a product is the sum of its expected value (considering the risk and other positive factors) expressed in price units is higher (or equals) the sum of negative factors and costs characteristic of Internet market.

## Conclusion

The article gives a brief review of modern research in the field of Internet market pricing strategies. In the second part of the article the authors present overall pricing model at the Internet market considering positive and negative factors influencing decision making process of a consumer willing to make a purchase via Internet.

As a conclusion one must say that nowadays the problem of pricing at the Internet market is relevant and widely discussed which is proven by multiple research in this area. The Internet has created new conditions for conducting economic exchange between companies and customers generating new area for researchers all over the world.

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### Contact

Maksim Patshin

Saint Petersburg State University

7/9 Universitetskaya emb., St. Petersburg, 199034, Russia

andomiel-x@ya.ru

Sergey Kulpin

Ural Federal University

13b Lenina Str., Ekaterinburg, 620014, Russia

s.v.kulpin@urfu.ru