

PRICING FOR NON-FUEL GOODS IN STORES AT FILLING STATIONS

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***Abstract:** The article considers the authors' algorithm for formation of a marketing development program for retail sales of non-fuel goods and services in stores at filling stations (FS stores). This algorithm includes the peculiarities of pricing for non-fuel goods and provides specific recommendations to be taken into account by pricing, such as the FS location, the number of cars stopping at FSs in question, types of FS stores, customers' demand and competitors' influence. It also includes some validation calculations showing that setting differentiated prices for geographic market segments within a development program will allow the subsidiary in question to increase the sales volume for non-fuel goods and earn extra revenue.*

***Keywords:** prices for non-fuel goods, oil products supply, marketing program, filling stations*

1. INTRODUCTION

The restriction on competition in the oil products supply (OPM) market has pre-determined the need for price-irrelevant competition techniques and, in particular, a product differentiation strategy which implies a greater supply of non-fuels or related goods at filling stations (FSs). Abroad, the majority of filling stations have on-site stores and provide extra services which currently bring their owners a profit of up to 60 % (fuel sales - only 40 %). Thus, a problem regarding the determination of appropriate competitive prices for such goods arises. Obviously, the price reasonability principles for non-fuel goods differ a lot from the price reasonability principles for fuel goods. The determination of a range of non-fuel goods and appropriate pricing must be done based on some specific features, such as the FS location, purchase type (planned or impulse), etc. Currently, there is a wide range of methodological tools for strategic management and marketing aiming at solving the set problem. However, they are not adapted to solving the problem well enough, and require certain adjustments taking into account the industry's peculiarities and units in question.

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2. METHODS

The systematization of the existing theoretical and methodological basis and generalization of the practical experience in the formation of a development program for retail sales of non-fuel goods and services in FS stores allowed to form the following algorithm (Figure 1).

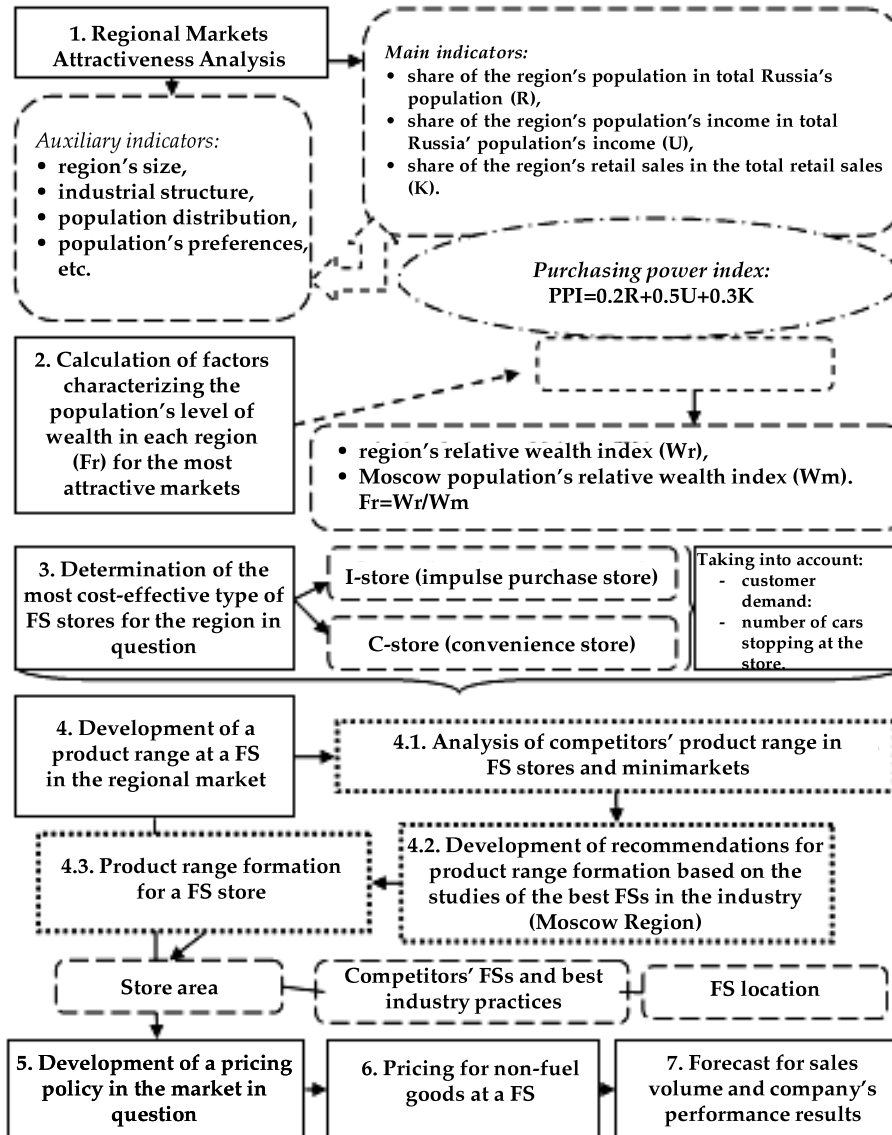


Figure 1: Algorithm for formation of a development marketing program for retail sales of non-fuel goods and services in stores at FSs

Obviously, the formation of a set of additional goods and services must take into account the FS type, which is to be chosen based on the size and type of customers coming to the store. Based on these criteria, small, medium and large filling stations are generally distinguished. FSs of the first type usually do not have any stores for related goods.

One of the steps in the algorithm mentioned above is the development of a rational pricing mechanism for non-fuel goods in order to provide the efficient performance of the set of additional services at a FS and achieve the planned indicators regarding the sales of non-fuel goods and services at the FS. It must be noted that the prices in FS stores are usually higher than those in super- and hypermarkets, as customers are ready to pay for the convenience of quick and impulse purchases. In Russia, markups in stores are about 50 to 70%. Moreover, it is known that only retail networks are successful at FSs.

The research shows that the main factors influencing the pricing for non-fuel goods and services at FSs are as follows:

- purchase price (production cost);
- price elasticity;
- competition level and conditions.

According to the best world and Russian practices, FS stores stand out for their higher prices as compared to enterprises selling the same non-fuel products (the prices at FSs are 15 to 20% higher, on average). Moreover, the highest prices are usually found at FSs located on central town roads. There is also a difference in prices for various product groups in FS stores. The figure below shows the difference between the average markup as compared to the purchase price in a FS store and the markups for different product categories (Fig. 2).

As one can see, the highest markup is mainly typical of impulse product groups. A lower markup is set for additional or main product groups typical of large stores, since the prices for most impulse goods, as a rule, are not very high and do not play any significant role in decision-making, and the prices for main and additional goods are higher.

The markup for FS stores should vary based on their location. A higher price should be characteristic of FS stores located on highways (a markup of to 100%) and central town roads (a 50 to 60% markup). A lower price should be used in FS stores located in residential districts (a 35 to 50% markup) with a higher competition.

To implement an effective pricing policy, it is necessary to monitor competitors from time to time and collect information about retail prices set by main retailers, analyze their pricing principles and follow the changes in the way various product categories in consumer segments must be dealt with. Main information to be collected as part of regular monitoring is the following: the price level, a discount system, a

range of non-fuel goods in competitors' FS stores. To do so, it is recommended to develop a form sheet containing a small list (10 to 20 items) of the most popular goods in different product categories, and in that form sheet one must write down the prices for the stated items in competitors' stores. After that, based on these observations, it is possible to divide FSs into several price groups in order to have an opportunity to conduct a differential price policy.

Another important factor, determining the feasibility of a pricing policy, is the price sensitivity indicator (demand elasticity). When determining the price sensitivity indicators, one must distinguish them based on the following aspects:

- type of an additional service;
- territorial segment (city, road, another territory);
- consumer's segment.

To assess the demand elasticity for individual categories, it is necessary to carry out occasional marketing research in regions. It is possible to study the price elasticity of demand by gradually increasing the prices for various product groups and subsequently analyzing the sales volume dynamics. However, it is not quite reasonable, since if a consumer perceives a LUKOIL FS store as an "expensive store" or a "store with unreasonably high prices", it will be hard to change this impression in the future.

During the research carried out by the authors, the price elasticity of demand was analyzed based on the FS location, as well as based on consumer' segments. It is necessary to note, though, that the research assessed the demand elasticity for products in a store in general, while the price elasticity of demand for individual product categories can vary.

The demand elasticity for products was determined based on the analysis of consumers' sensitivity to the markup value in FS stores in relation to the average market price level in stores (including supermarkets and department stores) - at enterprises selling the same non-fuel products. Figure 3 shows the detected dependence of the change in the number of the FS store's customers as compared with their actual number in case of an increase of the average markup to 10%, 15%, and 20%, respectively. As one can see, representatives of the "economy" and "express" classes are the most sensitive to changes in the markup in FS stores, and those of the "exclusive" and "indifferent" classes are the least sensitive.

Moreover, there is a difference in pricing for various product groups in FS stores. The highest markup is, as a rule, mainly typical of impulse product groups. The lowest markup - additional or main product groups typical of large stores. Moreover, FS stores have to compete with traditional retail stores regarding these product categories. The markup for goods in FS stores should vary based on their location. A higher price should be characteristic of FS stores located on highways (a markup of to 100%) and central town roads (a 50 to 60% markup). A lower price should be characteristic of FS stores located in residential districts (a 35 to 50% markup) with a higher competition.

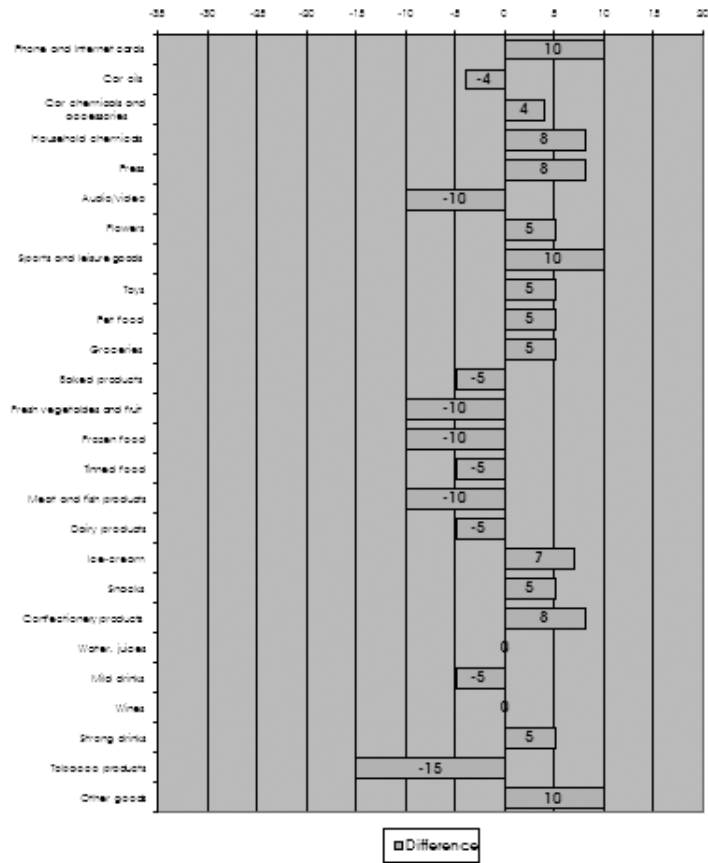


Figure 2: Difference between an average markup in a FS store and markup for various product categories

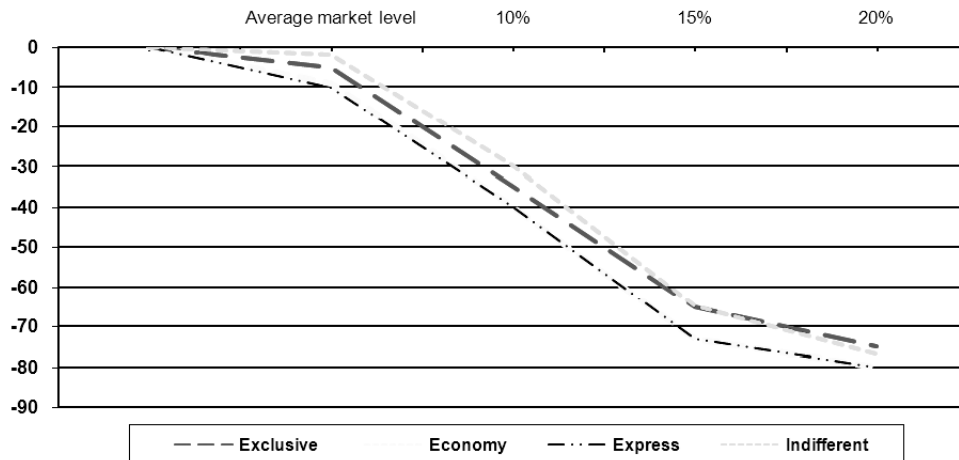


Figure 3. Demand elasticity for FS store services based on consumers' segments

In case the markup for goods sold in a FS store increases by over 10% as compared with traditional stores, a significant consumer outflow can occur. However, it is also necessary to take into account that, since most of the product range in an FS store is made up of impulse purchases, the prices for which do not really bother the customer, in an actual case a customer would not see the 10% difference.

Thus, pricing in a FS store must be based on the cost principle due to a large number of products in a store, taking into account the purchase price and standard margin.

To resume the mentioned above, one can distinguish the following pricing peculiarities for goods in an FS store:

1. In case the markup for goods in a FS store increases by over 10% as compared to substitute enterprises, a significant consumer outflow can occur. However, it is also necessary to take into account that, since most of the product range in an FS store is made up of impulse purchases, the prices for which do not really bother the customer, in an actual case a customer would not see the 10% difference.
2. Among the target consumer segments, the lower price elasticity is characteristic of "exclusive" consumers who are wealthier than "economy" consumers.
3. The highest markup is characteristic of goods which a consumer may need "right now" (sports and leisure goods, car accessories, etc.).
4. A high markup is characteristic of impulse product categories, such as sweets, snacks, ice-cream, press; the same markup level is characteristic of some additional goods, such as groceries, pet food.
5. A medium markup is characteristic of beverages and wines.
6. A lower markup is set for mild drinks, dairy products, tinned food, baked products.

The suggested pricing technique for an FS store is a recommendation and can be adjusted to any regional peculiarities. In particular, Table 1 represents a suggested markup level for non-fuel goods in a Russian region.

By forecasting the revenue for non-fuel goods sales at the existing FSs of the studied oil and gas company, it was assumed that the gross income for one liter of petrol remains on the current level. Table 2 represents data on the average gross income from selling non-fuel goods and services for one liter of petrol for the studied oil supply enterprise.

Afterwards, the revenue from selling non-fuel goods and services at FSs was forecast taking into account the new FS stores which were about to open (Table 3).

As one can see, after the suggested price adjustment using the algorithm for formation of a retail sales program for non-fuel goods in FS stores has been performed, the revenue at the studied enterprise is expected to go up. Moreover, the revenue

Table 1
Recommended markup level for individual groups of non-fuel goods in FS stores

<i>Category of non-fuel goods</i>	<i>Markup, %</i>
Tobacco products	15% lower than the average markup
Strong drinks	5% higher than the average markup in the store
Wines	Average
Mild drinks	5% lower than the average markup
Water, juices	Average
Confectionery products	8-10% higher
Snacks	5% higher
Ice-cream	7% lower than the average markup
Dairy products	5% lower than the average markup
Meat and fish products	5-10% lower
Tinned food	5% lower
Frozen food	10% lower
Fresh vegetables and fruit	10% lower
Baked products	5% lower
Groceries	5% higher
Pet food	5% higher
Toys	5% higher
Sports and leisure goods	10% higher
Flowers	5% higher
Audio (video)	10% lower
Press	8-10% higher
Household chemicals	7-10% higher
Car chemicals and accessories	4% higher
Car oils	4% lower
Car care products and car products	10% higher
Other goods	10% higher
Phone and Internet cards	The lowest markup

Table 2
Gross income from selling non-fuel goods and services for one liter of petrol sold

<i>Item</i>	<i>Value, rub. / liter</i>
Consumer goods	0.01
Related goods	0.21
Packed goods	0.16
Services	0.02

Table 3
Revenue forecast for non-fuel goods and services sold at FSs opened before the financial year, thousand rubles

<i>Year</i>	<i>Revenue from selling non-fuel goods, thousand rubles</i>	
	<i>not following recommendations</i>	<i>following recommendations</i>
1	5,984	6,218
2	6,476	6,810
3	6,987	7,402

increase is expected not only because there are more stores to open, but also thanks to the differentiation approach to markup setting taking into account the above mentioned multiple factors.

The validation conclusions and results obtained with the research allowed developing average indicators for FS stores' performance based on their location, which can then be used by oil companies for forming a development program for non-fuel business (Table 4).

Table 4
Performance indicators for FS stores based on their location

<i>Indicator</i>	<i>Location</i>		
	<i>City</i>	<i>Highway</i>	<i>Another territory</i>
<i>Type of store</i>	<i>CTN</i>	<i>CTN</i>	<i>I-store</i>
Store area, sq. m. (number of cars stopping)	60 (250)	50 (240)	100 (400)
Number of product categories	12	12	17
Number of product items	1000	840	1640
Annual revenue for one refill, thousand rubles	2,555	2,102	2,920
Revenue for 1 sq.m. of retail area	42.6	42.1	29.2
Return on sales, %	17	22	20

3. RESULTS

Thus, the research resulted in an algorithm for the formation of a development program for retail sales of non-fuel goods and services in FS stores, which takes into account multiple factors determining the performance efficiency of the organization in question. These factors include the FS location, number of cars stopping at FSs, types of FS stores, customer demand and competitors' influence. As the validation calculations show, setting differentiated prices for geographic market segments within a development program will allow the subsidiary of the oil supply organization in question to increase the sales volume for non-fuel goods and earn extra revenue.

These recommendations and their consistent fulfillment aim at forming an optimal market pricing mechanism which will allow the company to improve its financial performance in its main activity and gain extra revenue from stores; it will increase the number of loyal customers, increase the sales volumes by attracting new customers from peripheral markets, reduce the circulation costs for a product item, and thus improve the organization's stability level.

4. DISCUSSION

Currently, there are a great number of works of Russian and foreign scientists dedicated to the formation of a marketing program, in general, and products (services) price reasonability, in particular. As a rule, the majority of works consider the general issues of market economy (Golova, 2015), marketing and marketing analysis (research) (Ambler, 2000; Kotler, 2009; Stone and Hitching, 2008; Kapon, 2010). A significant

number of works are dedicated to pricing issues (Abryutina, 2002; Bernstein, 2008; Danchenko, 2003; Tarasevich, 2003). In this case, strategic management approaches may also be interesting (Guzinets, 2013; Plenkina et al., 2010; Thompson, 2009).

Industry-specific management is also developing dynamically, and it includes a great variety of approaches to solving the stated problem. Some research works consider the development of the oil and oil products market (Ageev, 2015; Mikhailova, 2008; Rikoshinskiy, 2002; Fomichev, 2008; Tchizhevskiy, 2007; Yurga, 2007). Many research works encompass research and pricing in these markets (Braverman, 2006; Gavrilova, 2012, Pospelov, 2000).

However, the applied question stated in this article is peculiar and requires simultaneous consideration through the prism of market economy, strategic management, and marketing.

5. CONCLUSION

This work presents the authors' technique implying the adaptation of the existing theoretical and methodological tools in market economy, pricing, and marketing to the specific conditions under which oil supply companies perform. Validation calculations based on the data provided by a large Russian oil and gas company have shown the economic feasibility of the authors' recommendations. The suggestions presented in the research are to be completed, and the pricing issue is to be considered from the point of view of management (internal) accounting. In particular, it is considered possible to use various methods of cost distribution and accounting based on types of products and services (fuel and non-fuel ones, based on product line groups, etc.). This, in our opinion, will allow managing the average portfolio profit and developing product strategies based on the price factor in order to manage the demand for products which are highly price-elastic. Besides, it seems possible to use the value-added chain concept as one of the tools for selecting products (services) to be added to the corporate portfolio and deciding on their share in the portfolio. In order to go into the issue deeper, it is suggested to carry out marketing research to study consumers' grounds and preferences.

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