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B.A. Markhayeva¹, D.L.Kozbakhova²¹Almaty Management University, Almaty, Kazakhstan;²South-Kazakhstan Gumanitarian Institute named after M.Saparbaev, Shymkent, KazakhstanE-mail: markhaeva@mail.ru, dkozbakhova@mail.ru**A RESPONSIBILITY CENTER AND TRANSFER PRICING**

Abstract. In a divisional organization structure of any kind, if one division (responsibility center) does work that is used by another division, transfer pricing may be required. In general, a divisional structure will lead to decentralization of the decision-making process. In this case the divisional managers may have the freedom to set selling prices, choose suppliers and so on. The creation divisions allows for the operating a system of responsibility accounting. Transfer pricing is used when a company's divisions need to charge other divisions of the same organization for goods and services they provide to them. There are some general rules of transfer pricing. The main purpose of the paper is to consider the methods of transfer pricing in a divisional company. The comparative analysis includes three groups of methods such as market-based, cost-based and negotiation-based approaches. Analysis, classification, generalization and analogy are widely used during the scientific research. The results of the work can be used within a decentralized company's transfer pricing policy. The main conclusion is that the effectiveness of the transfer price depends on the correctness of its calculation. The chosen method depends on the degree of autonomy of the responsibility center in decision-making and the state of the intermediate products market. Nevertheless, it is generally accepted that in conditions of availability of information, the optimal method is the uncontrollable market-based price method.

Key words: responsibility center, division, transfer price, market-based price, cost-based price.

INTRODUCTION

The company's organizational structure, which consists of several independent divisions, can be considered as a set of different responsibility centers, connected by responsibility branches. From this point of view, in the company's accounting, there was formed such term as *a responsibility accounting*. Such accounting system ensures the registration, reflection, accumulation, analysis and information provision on costs and revenues of the responsibility centers, and also helps to assess and monitor the activity of a particular manager [1, 2, 3, 4].

Table 1 - Classification of responsibility centers [5-9]

Type of responsibility center	Manager has control over...	Principal performance measure
Cost center	Controllable costs	Variance analysis Efficiency measures
Revenue center	Revenues only	Revenues
Profit center	Controllable costs Sales prices (including transfer prices)	Profit
Contribution center	As for profit center except that expenditure is reports as a marginal cost basis	Contribution
Investment center	Controllable costs Sales prices (including transfer prices) Output volumes Investment in non-current and working capital	Return On Investment Residual Income Other financial ratios

Thus, the main feature of the responsibility accounting is that it allows you to determine costs and revenues not only within the company, but also in view of their origin and responsibility centers. A responsibility center is a structural unit or a company's division, with a manager in charge having certain delegated powers. At the same time, the manager's area of responsibility includes only those items of costs and revenues, to which he can influence. Further, the terms *a responsibility center* and *a division* are considered as synonyms.

As a rule, in accounting which depends on delegated powers and responsibility area five types of responsibility centers are distinguished such as a cost center, a revenue center, a profit center, a contribution center, an investment center (Table 1).

In other words, the higher the company's degree of decentralization, the more in its structure of profit centers and investment centers, rather than cost centers.

Due to the division into responsibility centers, business transactions between the centers are called *transfers*, and the prices that result from these operations become *transfer prices*. On the other hand, transfer prices established within the company are costs for the receiving (selling or consuming) division and revenues for the supplying (transferring or manufacturing) division. This means that internal transfer pricing influences the profitability of each center and based on this it becomes possible to manage the activities of the responsibility centers. Transfer prices allow you to optimize costs and internal financial flows of the company and can significantly enhance its competitiveness. Therefore, the financial manager of the company should pay special attention to the study of transfer pricing methods.

METHODS

During this research such methods of scientific knowledge as analysis and synthesis, classification, generalization and analogy are widely used.

RESULTS

From the view of the company's management, transfer prices are conditional-calculated domestic prices, under which the responsibility centers transfer products or services to each other. As mentioned above, a company here refers to a large centralized enterprise that is structurally divided into responsibility centers with a sufficient degree of their autonomy in decision making. No real payments are made. The cost of intra-company supplies is entered in the accounting records and is subsequently reflected in the company's financial statements. The main purpose of transfer pricing is to influence the performance of each responsibility center and to promote the increase in the profit of each center, which should lead to an increase in the company's overall profit.

Factors affecting transfer pricing can be conditionally combined into the following groups:

- presence or absence of a competitive market for an intermediate product. The basic principle of transfer pricing is that the transfer price should be as close as possible to the market price, at which the product can be sold to the external buyers or purchased from the external suppliers. In this case, the responsibility center is autonomous in decision-making, and its activities can be objectively evaluated;
- presence or absence of free capacities in the manufacturing division. If the responsibility center has free production capacities, then for the company as a whole, the purchase of products within the group is more preferable. As a result, the company's profit will increase, as additional production will cover part of the fixed costs that are associated with idle capacities;
- degree of managers qualification: the transfer pricing system requires high qualification of the corporate center's managers. They face the challenge of balancing various conflicting goals in order to achieve an optimal result for the company;
- the bargaining (or negotiation) power of the responsibility centers. Transfer prices between the two centers provoke a conflict between them. The manufacturing division is interested in ensuring that prices are as high as possible, the consuming division, on the contrary, is interested in the lowest possible prices.

There are general rules for transfer pricing. The minimum and the maximum limits of the transfer price can be determined as follows [5, 6, 7].

The minimum is the sum of the supplying division's marginal cost and opportunity cost of item transferred. *The maximum* is the lowest market price at which the receiving division could purchase goods or services externally, less any internal cost savings in packaging and delivery.

The opportunity cost included in determining the lower limit will be one of the following:

- the maximum contribution forgone by the supplying division in transferring internally rather than selling goods externally;
- the contribution forgone by not using the same facilities in the producing division for their next best alternative use.

If there is no external market for the items being transferred, and no alternative uses for the division's facilities, the transfer price equals standard variable cost of production. If there is an external market for the items being transferred and no alternative, more profitable use for the facilities in that division, than the transfer price is the market price.

Transfer pricing methods between responsibility centers can be combined into three large groups such as approaches based on the market price, costs and negotiation [5, 6, 10-13].

If there is a perfect competitive market for the intermediate product, then it is optimal to establish *a market-based transfer price* for making decisions and evaluating the divisions' activities. Such price will reflect the real economic contribution of the responsibility center to the profit of the whole company. The division's activity is regulated by the market, and the corporate center does not affect its financial results. It may be affirmed that with this pricing method the responsibility center operates autonomously therefore its activity can be evaluated objectively.

The negotiated transfer pricing is acceptable in situations where there are several market prices or selling costs in the internal and external markets are different. This method can be used in the three following conditions:

- 1) the manufacturing division has the ability to sell products on the side, and the consuming division can purchase products externally in unlimited quantities;
- 2) the divisions have the same negotiating power;
- 3) there is a difference between the sales costs while selling products to the external market or within the group.

If at least one of the conditions is not met, there may be a situation, in which managers do not agree on the transfer price. Then the corporate center will have to participate in the establishment of optimal transfer prices which will violate the autonomy of the responsibility centers.

Cost-based approaches to transfer pricing are often used in practice because today the absence of an external market for intermediate products or the fact that the market is imperfect is typical. Depending on completeness of the considered cost price, there are transfer prices based on full or marginal costs distinguished.

Under the *transfer prices based on full cost* method, full costs (including fixed overheads) incurred by the manufacturing division in the production of the intermediate product are charged to the consuming division. Hence, the obvious disadvantage of this method is that the manufacturing division does not get profit from its work, so it has no motivation for internal supply. Moreover, the price level depends on how the fixed costs are included in the cost price. One of the alternative ways is to establish the planned volume of the delivered products between divisions, before setting the transfer price for the planning period. If the actual volume will differ from the planned one, the manufacturing division will receive profit or incur losses at the end of the period. For example, if the effective capacity is less than planned, then the manufacturing division will show a loss based on the results of the work for the period.

With *variable or marginal cost based transfer pricing*, marginal costs are usually understood as the short-term variable costs. This method allows, according to the economics, to maximize the company's profit as a whole. However, in this case, the manufacturing division works with a negative financial result which equals to fixed costs. This negatively affects the motivation of the division's employees. Therefore in practice this method is used rarely.

Alternatives to the cost-based methods are *a full cost plus* and *a variable or a marginal cost plus* approaches. Common to alternatives is the additional charge to costs. In the first case, the additional charge covers fixed costs and profit, in the second case covers only profit. In practice, determination of the additional charge's amount raises a lot of disputes. The best solution is to establish the additional charge which equals to the industry average profitability provided that the latter can be reasonably calculated.

DISCUSSION

The main purpose of the Law of the Republic of Kazakhstan «On Transfer Pricing» is to prevent loss of government revenue in international business operations and transactions [14]. In other words, it regulates the public relations arising from the external transfer pricing in terms of taxation. The basic concepts of these public relations are *arm's length principle* and *market price*. Article 12 of this Law specifies five methods for determining the market price such as the method of comparable uncontrolled price, the *cost plus* method, the resale price method, the profit split method and net margin method. According to the provisions of the Law, if it is not possible to use comparable uncontrolled price method, one of the listed methods is used consistently. The comparable uncontrolled price method is used by comparing the transaction price for products with a market price taking into account the price range for identical products in comparable economic conditions.

The choice of the transfer pricing method also depends on the manager's willingness to take risks. With certainty a firm's profit under full-cost transfer pricing is greater than that under variable-cost transfer pricing. Contrary to this benchmark result, variable-cost pricing becomes more profitable than full-cost pricing when the risk-averse manager bears relatively high risk [15]. This finding is correct for the risk-averse production-division manager who faces uncertainty on the outcomes from R&D investment.

If managers are compensated solely on the basis of their divisional profits, they invest less than the first-best amounts. While compensation contracts based on firm-wide profits alone can induce first-best investments, they impose extra risk on risk-averse managers. In order to stimulate the interdivisional transfers it is recommended using managerial compensation contracts which are linear functions both of divisional profit and firm-wide profit. The terms of trade are determined through negotiations between the two managers. In this case negotiated transfer pricing allows you to share interdivisional risks and characterize its impact on the design of optimal contracts [16].

Comparison of the actual-cost transfer prices with standard-cost transfer prices shows the following results [17]. Firstly, centralized standard-cost transfer pricing dominates the other methods if the central office and the divisions face low cost uncertainty. Secondly, the actual-cost methods dominate the other methods if the central office and the divisions face high cost uncertainty and later, at the trading stage, the buying division receives sufficient cost information. Thirdly, reported standard-cost transfer pricing dominates the other methods if the central office and the divisions face high cost uncertainty, and the buyer has insufficient cost information at the trading stage.

In a tax-free world the internal transfer price is set equal to the marginal cost of the supplying division. Extending this solution, it is argued that the optimal internal transfer price should be a weighted average of the pre-tax marginal cost and the most favorable arm's length price [18]. Nevertheless, for internal performance evaluation purposes firms should generally not value internal transactions at the prevailing market price if the supplying division has monopoly power in the external market.

Information technology development also affects transfer pricing. With coarse information technology, negotiated transfer pricing has an informational advantage: managers agree to prices that approximate the firm's cost of internal trade more precisely than cost-based transfer prices. With sufficiently rapid offers, this advantage outweighs opportunity costs of managers' bargaining time, and negotiated transfer pricing generates higher profits than the cost-based method [19]. However, as information technology improves, the informational advantage diminishes. The opportunity costs of managers' bargaining eventually dominate, and cost-based methods generate higher profits.

CONCLUSION

About 40 percent of all the United States' international trades occurs between related parties, or intra-firm, such as trades between a parent and subsidiary of the same multinational corporation [20]. This information once more draws attention to the relevance of the transfer pricing problem.

If the product (service) of the responsibility center is consumed entirely within the company, the value of the transfer price is accountable and does not affect the financial state of the company as a whole. The problem is only to establish a «fair» price, which will be used for reporting, so that the results of the activity were correctly measured and evaluated. If, however, the responsibility center has the right to

independently enter the external market, then this circumstance makes it absolutely different to look at the character and content of the transfer price. It is important to note, that, if the responsibility center has the freedom to buy and sell on the external market and there are idle capacities, the transfer price stops to be a purely accounting instrument. It acquires a real economic meaning and expresses the attitude of the divisions not only among themselves, but also with the company as a whole.

The ideal transfer price should encourage the responsibility center manager to accept the best solutions for the company as a whole. As an indicator of optimality, the maximized total marginal profit of the company is widely used. In other words, the company as a whole should win at most and lose at least into the market transactions of the responsibility center. It is this criterion that should be used as the basis for evaluating the manager's activity of the responsibility center.

The application efficiency of the transfer price depends on its calculation accuracy. Nevertheless, in spite of many different methods of pricing in related party transactions, the generally accepted rule is that, in the presence of reliable and sufficient information, the method of comparable uncontrolled (market) price is considered to be the optimal method.

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ЖАУАПКЕРШІЛІК ОРТАЛЫҚ ЖӘНЕ ТРАНСФЕРТТІК БАҒА БЕЛГІЛЕУ

Аннотация. Жұмыстың негізгі мақсаты ол жауапкершілік орталықтардан тұратын компанияның деңгейінде трансферттік баға белгілеудің әдістерін қарастыру болып табылады. Салыстырмалы талдау өзіне үш топ әдістерді қамтыды, олар нарықтық бағаға, шығындарға немесе келіссөздерге негізделген тәсілдер. Жұмысты орындау барысында талдау, жіктеу, қорытындылау және ұқсастық сияқты тәсілдер кеңінен қолданылды. Жұмыстың нәтижелерін орталықсыздандырылған компанияның баға белгілеу саясатын жүргізуде қолдануға болады. Негізгі қорытынды трансферттік бағаның тиімділігі оны дұрыс белгілеуге тәуелді екенін көрсетті. Ал таңдалған әдіс жауапкершілік орталықтың дербестік деңгейіне және аралық өнім нарығының жағдайына тығыз байланысты болады. Дегенмен, сенімді және жеткілікті ақпараттың бар болуы кезінде нарықтық бағаға негізделген әдіс оңтайлы болып табылады.

Түйін сөздер: жауапкершілік орталық, бөлімше, трансферттік баға, нарықтық баға, шығынға негізделген баға.

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ЦЕНТР ОТВЕТСТВЕННОСТИ И ТРАНСФЕРТНОЕ ЦЕНООБРАЗОВАНИЕ

Аннотация. Основная цель работы заключается в рассмотрении методов трансфертного ценообразования в компании, структурно разделенной на центры ответственности. Сравнительный анализ включает в себя три группы методов, среди них подходы, основанные на рыночной цене, затратах или договорных отношениях. В ходе выполнения работы широко используются такие способы научного познания, как анализ, классификация, обобщение и аналогия. Результаты работы можно использовать при реализации политики трансфертного ценообразования в децентрализованной компании.

Основной вывод заключается в том, что эффективность трансфертной цены зависит от правильности ее исчисления. Выбранный метод зависит от степени автономности центров ответственности в принятии решений и состояния рынка промежуточных продуктов. Тем не менее является общепризнанным, что в условиях доступности информации оптимальным является метод неконтролируемой рыночной цены.

Ключевые слова: центр ответственности, подразделение, трансфертная цена, рыночная цена, затратная цена

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