

The Impact of Exchange Rate Changes on Industry Competitiveness: Current State of Research

Заявка № 1302708

The influence of the exchange rate level on the competitiveness of industries is manifested in two aspects. Firstly, an increase in the exchange rate of the national currency reduces the cost of the imported component of products, but reduces revenue in national currency per unit of exported goods in foreign currency. Secondly, when the national currency depreciates, the pass-through effect leads to an increase in the cost of the imported component. However, at the same time, exporters receive large revenues in national currency per unit of exported products in foreign currency.

The problem with the current state of research is that, for the most part, these two channels are considered separately. Existing studies focus either on the study of the pass-through effect and the rise in prices of domestic prices, or on the impact of the depreciation of the national currency on the growth of exporters' revenues [1,2,3,4].

In the literature [1,6], the effect of exchange rate pass-through is considered in conditions of imperfect competition, usually through market segmentation or differentiation of goods and services, which allows exporting firms with market power to set export prices for goods and services taking into account their own marginal costs. If we model the pass-through effect under perfect competition, then in this case prices in the market are set at marginal costs:

$$P_i = Ex * MC^{Foreign} \rightarrow \Psi = 1 + cov(mc, e) / (var(e)) = \phi$$

,

where P_i is the price of a good or service, Ex is the exchange rate, $MC^{Foreign}$ is the marginal cost in foreign currency, Ψ is the price elasticity with respect to the exchange rate, ϕ is the share of local intermediate goods.

Firms' costs may be sensitive to exchange rates if the firm purchases some of its intermediate goods on the world market in a foreign currency, such as US dollars. In this case, part of the costs will be tied to the dollar, the other part, for example wages, will be tied to the national currency. When the dollar fluctuates, only a portion of the costs will change due to currency fluctuations. If firms set prices with a share of monopoly power, then the formula will be as follows:

$$P_i = \sigma / (\sigma - 1) * (Ex * MC^{Foreign}) \rightarrow P (1 - 1/\sigma) = MC$$

,

where, $\sigma / (\sigma - 1)$ is the firm's markup, σ is the price elasticity of demand. That is, the firm's task is written in such a way that the firm sets a price, while having some residual demand, and can move along this residual demand. In the case of imperfect competition, the firm's markup will vary. Then the price elasticity with respect to the exchange rate will be as follows:

$$\Psi = \phi / (1 + \xi), \quad \xi = -(\partial \sigma / (\sigma - 1)) / \partial P$$

,

where $[\xi]$ is the sensitivity of the markup to the firm's price. Thus, the larger the parameter $[\xi]$, the lower the price elasticity with respect to the exchange rate.

The literature does not pay due attention to this aspect. Based on the theoretical model, it is assumed that if a firm increases its price by increasing its markup, then its competitiveness decreases along with the firm's market share. Thus, a situation arises in which market share falls, demand becomes more elastic, which in turn means that the price elasticity of demand increases, and if σ increases, then firms will reduce their markup.

How each country's industry structures are differently embedded in global value chains will determine the balance of the effects of these two channels of influence on the competitiveness of industries. In both cases, we are talking about the elasticity of changes in revenue in national currency in relation to changes in the cost of the imported component in national currency.

Prospective research on the impact of changes in exchange rate levels on industry competitiveness should therefore include measurements of the impact of two effects on industry competitiveness at once. Based on this, in the future it is possible to adjust industrial policy, which would either use or neutralize the consequences of changes in the exchange rate on industrial competitiveness by relying on either import or export advantages [4].

References

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