

EXTERNALITIES. IMPACT ON ENTERPRISES' ACTIVITY

Nicoleta Mihăilă, PhD, Scientific Resercher, Centre for Financial and Monetary Research „Victor Slăvescu”

Abstract: The externalities express the difference between costs or economic benefits registered by the economic agent and costs or social benefits manifested in society. The enterprise, when aims at ensuring sustainable development, will "invoke" the internalization of externalities, which will produce either an increase in the cost of that activity, when it has negative externalities, or these costs decrease when there is no externality or they are minimal. These methods to internalize externalities have an educational role on the firm, as this may change its attitude towards environmental conservation and thus towards the negative externalities, in the sense of minimizing them. Therefore, to withstand on the market, the enterprise is forced to act towards environmental protection, being occupied with activities and competitive technologies. Otherwise, the market price will include the cost of economic activity and social costs and the negative externality will be in fact internalized, thus resulting in reconciling the collective interest of society and the interests of the entrepreneur.

In this paper we propose to define the concept of externality and to draw up a typology of them, to talk about the internalization of externalities, methods to internalize them and control them and propose some methods for firms to adapt in the context of the internalization of the externalities. Basically, our purpose is to analyze the influence of externalities on economic activity of the enterprise.

Keywords: *enterprise, externality, externalities internalization, externalities control, cost*

Introduction

Economic agents make the decision to produce and engage in market exchanges when anticipate that following these operations their profit (welfare) will grow up. Due to these exchanges, productive resources will get to be held by those who appreciate them the most. When they are not exploited, all the gains from trade appear what the theory called market failure. Market fails because it does not produce optimal results to the whole society level.

Due to externalities, it is said that markets fail. Production moves away from the optimal level and inefficiency occurs. The production of too fewer goods or too little information is considered a market failure if the total production cost is lower than the benefit of all those who consume them. The classic case of negative externality is pollution.

1. The externality concept. Typology

Externalities are known as external effects, savings or external losses, local or general effects. It is often used the term technological external effects in order to differentiate the content of externality from cash savings or economic losses.

The externality is a cost or benefit that is not transmitted through prices, supported by a party which was not involved and did not consent to the action that causes costs or benefits.

A benefit in this case is called a positive externality or external benefit, while the cost is called a negative externality or external cost.

The economic theory identifies positive and negative externalities as marginal or inframarginal externalities. Marginal externalities occur when a change of generating externality activity affects production or utility felt by affected agents. Instead, inframarginal externalities are those to which a change of the generating externality activity does not influence in any way the production or the utility felt by affected agents.

Externalities occur due to market failures. These, in their turn, can be explained by market's inability to respect the property rights. Ownership of resources refers to the capacity of resource utilization, goods and services. Ownership of an asset leads to the manifestation of the following rights: use of the asset; amending goods form and substance; the transfer of all rights through sale.

Externalities express the difference between the costs or economic benefits recorded at economic agent level and costs or social benefits manifested in society. Thus, they appear due to the lack on competitive market of goods or services desired by consumers. In other words, externalities occur when an economic agent's actions affect the environment in which other economic agent operates, without affecting the price system.

The appearance of externalities often corresponds with an inefficient allocation of resources. To correct this market deficiency, three ways can be used:

a) taxes and subventions system - implies adjustment of prices determined by economic grounds of products from activities that induce externalities, with corresponding cost of produced effect. The result is a lower or higher price than the calculated economic price, depending on the costs, namely social benefits that were generated.

b) non existent market system. The issue of activities that produce externalities is that their double result – economic good and externality - finds no trading space, only partially, namely for economic good. In other words, there are no markets for externalities. Imagining a market externality would be possible by assimilating it with an economic good and the determination of optimal externality quantity would be similar to determining the optimal production.

c) the system of property rights. Avoiding externalities, in this case, starts from the premise that if a firm generates externalities and affects the work of another one, then these two should become one single economic agent aimed at possession the overall maximum profit.

It follows that the competitive market has limits, in terms of resource allocation, imposed by market structure or the price mechanism. When market failure can be explained by this second case, positive or negative externalities occur. Avoiding their manifestation is a complex and expensive process, but a necessary one. Market correction of deficiencies can be done like this, by avoiding externalities corresponding to a better allocation of resources.

2. The internalization of externalities

Any economic activity has a cost, set of costs imposed by a community activity representing the social cost. Part of this cost is offset by payments made by economic agents

at the beginning of the activity; for example, the cost of raw materials or of labor factor, representing the private cost of operators.

Methods of internalizing externalities

We present some ways through which can be internalized externalities concerning the market.

a) vertical or horizontal integration. That means firms should join (either through purchase or fusion) and the resulting firm will seek the "cumulative" profit maximization, which is the equivalent of Pareto optimum for the two companies. In these circumstances, in the market space will disappear "the externality", as it was previously described.

b) negotiations. Another way to internalize externalities is to call the parties to negotiate the effects of these externalities and how they can be reduced - if they are negative.

c) the public authority intervention to internalize externalities when firms fail to reach an optimal solution. In this regard, the modalities of intervention are:

- Regulation, namely the State imposes each polluter to reduce the pollution to a certain level, otherwise he will be legally sanctioned in various ways. Through regulation are established different maximum allowable levels in pollutant emissions (pollution standards).

- Corrective charges, namely taxes collected by the State and are equal to marginal losses due to external effects associated to optimal level of production. They are applied to each unit of pollutant emitted; the State also collects the amounts necessary for correcting deficiencies caused by external effects caused by pollution, even if production is at optimum level in social terms.

Using one or other of methods depends on the type of pollution and polluter, of the importance of environmental degradation, or the importance of that area. For the firm, both pollutants fee and the fines are external data, as they are established by the public authorities. What the firm can choose is the production level, respectively technology and raw materials that can be bought.

Most of times, on short term, technology is determined and can not be changed, therefore only raw materials and production level can be chosen. Obviously, choosing more expensive raw materials, pollution levels will be lower. So, on the one hand, expenses related to payment of taxes and fines will reduce, and on the other variable costs will increase.

The firm will choose the level that allows it to obtain additional profit, namely it will compare the gain from reducing taxes with the resulting loss from rising costs and will adopt the option that ensures its profitable growth. For this, in terms of high fees and fines, the producer will be tempted to choose the solution to improving the quality of raw materials or invest in clean technologies.

The reverse of this problem is that new investments or taxes too high would lead to increased costs, what could cause those companies to become uncompetitive in market, so to be "forced" by the public authorities to go into bankruptcy.

From the social point of view, such a measure is not desirable (leading to increase in unemployment, the decline in production) and it is therefore necessary to limit this charges or determining a maximum level that would not be exceeded, in order not to generate negative social influences (another type of externality).

3. Externalities control

Externalities control actions take the form of prohibitions, isolations and government regulations. These actions vary from economy to economy, and, within the same country, from an externality to another, because the legislation is different and moreover, varies the location and type of externality producers, as well as the groups affected by this.

The control externalities are based on several criteria, allowing the micro or macroeconomic intervention into externalities manifestation:

- The efficiency – is the essential criterion of economic activity, is based on maximizing social effects.
- The costs of public agencies – including the operating costs of public agencies administering control actions, as well as the costs of coercion, meaning the police and justice ones.
- Flexibility - refers to the ability of economic agents to adapt to changing market conditions and technological environment.
- Ethics - is closely linked to distributive shares of income or wealth in society and refers to the concern of policy makers to identify the effects of externalities on those who generate them.

The forms of control are:

a. Prohibition. This, combined with coercion, when there is a legislative basis, takes the form of externality producer's obligation to mitigate its negative effects. In this sense, is determined the marginal cost and marginal benefit at different levels of externality and is found the best solution practicable in market conditions.

b. Isolation, as separation of groups with conflicting interests and generally manifests itself in two ways:

- Delimitation of neighborhood area for manifestation of conflicting interest groups. It is a necessary practice that generates externality toleration of those affected who feel protected and less expensive and easy to administer;
- The conversion or transfer the group which produces externality. It is about moving a firm that pollutes in a sparsely populated area, which means reducing the number of those influenced by the externality. It is a practice that sometimes leads to an effective solution, as in the situation of noise pollution, in which the long distance diminishes the negative effect on individuals. But sometimes there are disadvantages because it entails high social costs and inequalities of wealth.

c. Government regulations, that materialized into two strategic options:

- intervention by the regulations, it is a government policy which requires all generators of negative externalities to act for reducing pollution in a certain percentage, which all are required the same effort.
- intervention by monitoring and controlling production. In this case, the cost is high because of the need for specific information on economic activity, which requires inspection programs, often costly. In addition, this method applies when the transfer location polluting firm is not possible or efficient.

Induction of incentives for reducing the externalities is a way to encourage businesses to be concerned with reducing pollution. This is achieved through positive incentives, as

subventions, or negative ones, as penalty or charge. The subsidies are intended to reduce the level of externality by the financial benefits received by economic agents. Taxation or penalty is manifested by making payments by individuals or companies that emit pollutants. Through these taxes, pollutants become motivated to reduce pollution because their own costs are increased by the inclusion of these social costs of pollution; economic agents are concerned about minimizing the cost of reducing externality generated, which means even reduce pollution.

The essential problem in practicing this form of externalities control is that the level of fees must be rigorously determined. If it is too low, companies do not give importance and accept the penalty easily, as they produce a sufficient amount that compensates this charge, but it can reach dangerous levels of externalities. If it is too high, there is the risk of forced diminishing production, up to economic readjustment. The practiced fee induced for polluting should reflect the real social cost, which depends on the output produced and its features, company location, season and even time period in which the production cycle is made.

Therefore, controlling the externalities it is a complex concern of public authorities in a market economy. Effective control does not exist for all types of externality. But in each case, it may turn to a form of control which has most advantages.

4. Perspectives of firm's adaptation in the context of externalities internalization

If the internalization of externalities is achieved through regulations imposed by public authorities, companies will have to comply with rapidly changing of legislation and enforcement of regimes for new laws on standardization of products, environment, health and labor protection, consumer protection, customs, excise, VAT, etc. All of these require changes in the behavior, business practices and procedures of Romanian companies.

Compliance with this legislation will lead, on long term, to improve the quality and competitiveness of firms, but for small firms, on short term, there will be problems in attracting the necessary investment, especially since these companies are less informed about changes that will affect them, making them more inflexible in adapting to these changes. Large firms will be less exposed to situations brought about by full compliance with European legislation, some of them being already with a strong presence in the EU market, thus being able to attract technological and organizational innovation through foreign direct investment.

Areas that will affect most powerfully the firms, requiring significant adjustments to their activity will be, in our opinion, those related to environment, health and safety, the problem being translated through increasing information, education and training managers in order to make them understand the meaning and content of the new laws and regulations, thus minimizing the risks of misapplication of law, including assumption of the financial consequences of non-compliance with this legislation.

At general management level of the any economic entity, the problem of implementing the new regulations can be seen in a more pessimistic manner, in which the uses of attracted funds, in order to comply with the legislation imposed, will mainly represent the costs, or in a more optimistic manner, in which the focus will be on future benefits when the firm, especially if it is nationally competitive, will benefit from trade liberalization, will be able to attract better qualified staff and generally be able to extend so that current costs,

including the environmental ones, will be recovered through the benefits and positive externalities on long term.

The companies will incur additional costs pressure, due to the implementation of new regulations, either directly, by implementing environmental directives and labor protection, or indirectly, through the tax system, by increasing indirect taxes such as excise duty on some products, but these costs will be into a secondary place to those from normal activity, meaning those designed to increase the competitiveness of the firm. Companies should therefore find ways to increase productivity and internal efficiency to cope with competitive pressures, the solution being the synchronization of cost with benefits and finding sources of co-financing to cover costs, particularly those involving external benefits on long term and above other firms.

Costs that may affect the competitiveness of companies in fields of the economy in which they operate are influenced by the present situation of the activity sector, by the degree of economic openness and implementing legislation for that sector. These may be:

- the costs of adapting market regulations and standards,
- the costs required to maintain or increase market position in the context of increasing competitiveness,
- variations of labor costs (those related to real wage growth and labor productivity changes),
- variations in the cost structure due to changes made in the tax system etc.

The financial decision as fundamental element in the firm's decision will have to find the financial resources necessary to support future increases in costs to substantiate a strategy conferring an optimal allocation of use, according to priority destinations of entrepreneurship, so that its activity to develop in the best market conditions.

One aspect to be integrated in costs of technology and adapting the constructions for productive purpose is the one about environmental problems, related to climate change and variations in temperature, to negative externalities, so that enterprises could adapt in time to these exceptional conditions.

Therefore, the perspectives for change in companies, in the context of externalities internalization, concern the great ability to adapt of firms that might be synthesized by the ability to reduce variations in costs, so therefore the necessity of low cost adjustment, so as to exploit better the single market opportunities. The companies with problems, as a result of adopting new regulations, will be those that have low abilities to adapt to new market conditions, correlated with the need to make massive adjustments costs.

5. Conclusions

An externality exists when an economic agent's activity A influences, negatively or positively, an economic agent B, and when the agent A does not take into consideration the impact on agent B in his decision to perform or not the mentioned activity.

Existence of a strong strategy to internalize the externalities caused by social and environmental impact of the company, leads to economic and environmental benefits for both enterprises (direct interest) and for the other interested parties - shareholders (indirect interest). Internalization of environmental costs directly affects the current result (economic, social or the environmental one) by determining some new present costs and future obligations.

Looking for a direct and immediate benefit, it often overlooks the future result of the business and its economic, social and environmental sustainability. Current techniques of organizational governance tend to solve the problem of building a medium and long term strategy for the enterprise. Tools, such as environmental management accounting, are useful in this regard to identify the externalities that are to be treated as part of the current result, through the internalization, or opposable to future results, through their transformation into future liabilities. With this, by the cost - benefit analysis, are also determined the social and environmental performance indicators, parameters requested by financial interested parties (creditors) and by the company's good relationship with civil society.

The enterprise, when aims a tending sustainable development, will "invoke" the internalization of externalities, which will produce either an increase in the cost of that activity, when it has negative externalities, or these costs decrease when there is no externality or they are minimal. These methods to internalize externalities have an educational role on the firm, as this may change its attitude towards environmental conservation and thus towards the negative externalities, in the sense of minimizing them. Therefore, to withstand on the market, the enterprise is forced to act towards environmental protection, being occupied with activities and competitive technologies. Otherwise, the market price will include the cost of economic activity and social costs and the negative externality will be in fact internalized, thus resulting in reconciling the collective interest of society and the interests of the entrepreneur.

Methods to internalize the externalities are designed to discourage activities that damage the environment and to encourage those that have a smaller fence action. In this context, the authorities intervene through a price that is not effective enough for the producer. It also produces an incentive for the consumer towards the increased price of a product that is a result of a malicious activity.

In terms of competitiveness among enterprises, it is affected when product prices are modified a lot due to the application of environmental policies compared to products from countries that do not charge such fees. Thus, enterprises also pay other taxes in addition to the environment ones, so they need to correct by reducing other taxes, remaining as the environmental tax to achieve the incentive objective for environmental protection. For highly polluting enterprises, innovation, technology improvement by modernizing for environmental purposes may reduce the taxation rate and increasing competitiveness.

Therefore, internalization of negative externalities have a negative effect in the firm's fiscal plan, leading to increased taxes, implicitly the profitability will be affected by diminishing it. Basically, the perspectives for change for enterprises, in the context of externalities internalization, concern the great adaptation abilities of them that can be synthesized by the ability to reduce variations incosts, so therefore the necessity to low adjustment of costs, so as to better exploit opportunities on single market. The firms with problems, as a result of adopting new regulations, will be those that have low abilities to adapt to new market conditions correlated with the need to make massive adjustments costs.

REFERENCES:

1. Antonelli, C. (2008) - *Pecuniary knowledge externalities: The convergence of directed technological change and the emergence of innovation systems*, Industrial and Corporate Change
2. Labbat, S& White, R.(2002)- *Environmental finance*, JohnWiley ans Sons, Inc., Hoboken, New Jersey
3. Lipsey, R., G.& Chrystal, K. A. (1999) - *Pozitive Economy*, Economic Publishing House, Bucharest
4. Maddala, G.S.& Miller, E. (1989)- *Microeconomics: Theory and Applications*, The McGraw-Hill Companies, Inc., USA
5. Meade, J.E. (1952) - *External economies and diseconomies in a competitive situation*”, Economic Journal, no 62
6. Roman, M. - *A model for externalities internalization*
7. Scitovsky, T. (1954) - *Two concepts of external economies*, Journal of Political Economy, no 62
8. Trică, C. (2008) - *Environmental Economics. Theory and Practice*, ESA course on Internet
9. Zaman Gh., Geamănu M. (2006) -*Economic Efficiency*, „România de Măine” Fundation Publishing House, Bucharest