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**SOCIAL RESPONSIBILITY
OF CHEMICAL INDUSTRY ENTERPRISES**

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The paper is dedicated to the problems of corporate social responsibility from the point of view of chemical industry enterprises. Social responsibility of chemical industry enterprises represents, with respect to the specific safety risks of this industry, an important factor of their success, growth and development. The paper aims to identify, on the basis of the theoretical background of corporate social responsibility, the key areas and possible activities of corporate socially responsible behaviour in the chemical industry. The paper defines the term of corporate social responsibility and compares alternative areas and activities of socially responsible behaviour of enterprises. The given problems are then discussed from the point of view of chemical industry enterprises.

Introduction

Chemical industry enterprises in the broader concept include companies dealing with manufacturing of coke and refined petroleum products, manufacturing of chemicals and chemical products (the chemical industry in the narrower concept),

manufacturing of basic pharmaceutical products and pharmaceutical preparations (the pharmaceutical industry) and manufacturing of rubber and plastic products (the rubber and plastics industry) [1].

These enterprises are characterized by a number of specifics. As a rule, there is a large volume of production, heavy feedstock, energy or investment demands, which implies a significant capital demand of these companies. The area of manufacturing is connected with some other specifics of chemical industry enterprises, like the strategic importance of their products, their close technological interconnection or a substantial innovational potential. A special group of specifics is represented by the specifics connected with significant safety risks in these enterprises, be it the risks from the employees' point of view and important requirements concerning protection of health at work, or from the point of view of the company surroundings and requirements concerning accident prevention and readiness or risks from the point of view of safety use of the products or their environment friendly disposal, which lead to a high rate of regulation of chemical industry enterprises and an increased perception of their behaviour by the public.

Particularly the last mentioned group of specifics leads to the necessity for chemical industry enterprises of adopting a so-called concept of corporate social responsibility, which is based on voluntary socially responsible behaviour towards all living and non-living corporate stakeholders.

The paper aims to identify, on the basis of the theoretical background of corporate social responsibility, the key areas and possible activities of corporate socially responsible behaviour in the chemical industry.

The author of the paper used the following research methods: interpretative-theoretical research, descriptive research, correlation research and micro-study.

Corporate Social Responsibility

Definition of Corporate Social Responsibility

Corporate social responsibility (CSR) has been defined in many different ways since the 1950's, which are considered as the period when the modern CSR concept originated.

It is necessary to mention the first definition of CSR by Bowen [2], which says that "It refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society".

Subsequently, this term has been alternatively defined by a number of different authors. Davis and Blomstrom [3], as well as Bowen, define social responsibility in relation to entrepreneurs and state that social responsibility

“refers to a person's obligation to consider the effects of his decisions and actions on the whole social system. Businessmen apply social responsibility when they consider the needs and interest of others who may be affected by business actions. In so doing, they look beyond their firm's narrow economic and technical interests”.

Some other authors do not limit socially responsible behaviour to behaviour of entrepreneurs only, but they relate it to behaviour of corporations, e.g. according to McGuire [4], “The idea of social responsibilities supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations”.

Apart from the extension of the definition of social responsibility to corporations, the authors then focussed their attention on specifying towards whom corporations should be socially responsible. In this context, Jones [5] states that “Corporate social responsibility is the notion that corporations have an obligation to constituent groups in society other than stockholders and beyond that prescribed by law and union contact”. And according to Johnson [6], “A socially responsible firm is one whose managerial staff balances a multiplicity of interests. Instead of striving only for larger profits for its stockholders, a responsible enterprise also takes into account employees, suppliers, dealers, local communities, and the nation”.

The above implies that socially responsible behaviour should be applied towards so-called corporate stakeholders. Stakeholders (interest groups, constituent groups, or constituencies) represent “any group or individual that can affect or is affected by the achievement of a corporation's purpose” [7]. They are “persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity” [8]. The range of stakeholders is very wide. An overview of stakeholders is given by Buchholtz and Carroll [9], who distinguish the following groups of stakeholders: primary social stakeholders (shareholders and investors, employees and managers, customers, local communities, suppliers and other business partners), secondary social stakeholders (government and regulators, civic institutions, social pressure groups, media and academic commentators, trade bodies, and competitors), primary non-social stakeholders (natural environment, future generations, or nonhuman species), and secondary non-social stakeholders (environmental interest groups, or animal welfare organizations). Starik [10] points out that stakeholders could be human or not, alive or not, physical or not, they could include e.g. the Earth's atmosphere, hydrosphere, lithosphere, and biosphere.

The process of defining the term of corporate social responsibility involved not only individual authors, but also some institutions. The definition by the European Commission can be considered as the most important one. In 2001 the European Commission [11] defined corporate social responsibility as “a concept whereby companies integrate social and environmental concerns in their business

operations and in their interaction with their stakeholders on a voluntary basis”. In 2011 the European Commission [12] created a new definition of corporate social responsibility according to which corporate social responsibility is “the responsibility of enterprises for their impacts on society. Respect for applicable legislation, and for collective agreements between social partners, is a prerequisite for meeting that responsibility. To fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders”.

In our opinion, corporate social responsibility represents such behaviour of the company managers and employees that respects not only the economic and technical interests of the company, but also the interests of all the corporate stakeholders, and it is implemented voluntarily beyond the law and contractual stipulations.

Areas and Activities of Corporate Social Responsibility

Not only is it possible to come across a number of definitions of corporate social responsibility, there is also a number of opinions concerning the possible corporate social responsibility areas and activities.

It is possible to say that the basic concept is the concept of three pillars of CSR, so-called three Ps (Profit, People and Planet). Profit represents the economic area of CSR, People the social area, and Planet the environmental area. Activities in the economic area include mainly application of the principles of corporate governance, ensuring product and service quality, sustainability and safety, ethical corporate behaviour and disapproval of bribery, ensuring business transparency or care of good customer, investor, and supplier relations. Activities in the social area are focussed on the employees’ health and safety, a quality employee policy, care of education, equal opportunities (equality of men and women, employing disadvantaged groups), diversity in the workplace (in terms of age, ethnic groups, etc.), observing the human rights, disapproval of child labour, work-life balance, ensuring retraining of the staff being made redundant, or a dialogue with the stakeholders (in this area particularly with the local community and the general public). Activities in the environmental area consist in environment-friendly corporate culture (recycling, energy saving, water saving, etc.), reducing negative impacts of activities on the environment and the community, environment-friendly production, products and services, economical treatment of natural resources and their protection, or investments into the best available technique [13].

As elaboration of the three Ps concept, it is possible to consider the concept of CSR areas by Steinerova [14], who distinguishes four areas: the market (expressing the company’s relation to the market entities), the working

environment (representing the company's relation to its employees), the local community (i.e., the company's relation to the environs), and the environment (i.e. the company's relation to the environment). Among the market environment activities, she counts the corporate policy ensuring ethical behaviour, provision of clear and accurate information concerning the products and services, timely settlement of invoices, registration and settlement of complaints from the side of customers, suppliers and other business contacts, cooperation with other organizations in CSR projects, and marketing and advertising ethic. Among the working environment activities, she then counts involvement of the employees in the processes of decision-making, employee education and development, provision of employee benefits, offer of flexible forms of work, ensuring diversity in the workplace, employees' health and safety care, support of employees being made redundant, or taking measures against any forms of discrimination. Among the activities belonging to the area of the local community, she counts corporate donorship, corporate volunteering, counselling and exchange of know-how, support of social integration, citizen education, support of the citizen quality of life, business cooperation with local suppliers, cooperation with schools, and making use of cause-related marketing. Among the activities of the environmental area, she counts environment-friendly manufacturing, products and services, environment-friendly packaging, environment-friendly way of transport, recycling, utilization of recycled materials, water and energy savings, minimization of waste, compliance with the norms and standards (e.g., ISO, EMAS), protection of natural sources, or provision of exact environmental information concerning the products, services, and activities. The above implies that this CSR concept is based on the concept of three Ps, where the economic pillar (Profit) can be identified with the market, the social pillar (People) then includes both the area of the working environment and the area of the local community, and the environmental pillar (Planet) represents the environmental area.

Alternatively, the CSR areas have been defined by Carroll [15], who states that "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". In this context, Carroll [16] differentiates the following four components of CSR — economic responsibility, legal responsibility, ethical responsibility and discretionary (or philanthropic) responsibility. The essence of this concept is explained in Table I.

In our opinion, in view of the fact that socially responsible behaviour represents behaviour beyond the framework of mandatory obligations, it is not possible to consider legal responsibility as a part of corporate social responsibility. At the same time, within the CSR concept, it is necessary to emphasize the importance of environmental aspects when achieving permanently sustainable development and the employees as a key production factor.

On the basis of the above mentioned, we can define an innovated concept

Table I Components of CSR according to Carroll

Type of responsibility	Main idea	Explanation
<i>Economic</i>	Be profitable	Maximize sales, minimize costs. Make sound strategic decisions. Be attentive to dividend policy. Provide investors with adequate and attractive returns on their investments.
<i>Legal</i>	Obey the law	Obey all laws – environmental and consumer laws, laws protecting employees. Adhere to all regulations. Fulfil all contractual obligations. Honour warranties and guarantees.
Ethical	Be ethical	Avoid questionable practices. Respond to spirit as well as to letter of law. Assume law is a floor on behaviour, operate above minimum required. Do what is right, fair, and just. Assert ethical leadership.
<i>Discretionary (Philanthropic)</i>	Be a good corporate citizen	Give back. Make corporate contributions. Provide programs supporting community - education, health or human services, culture and arts, and civic. Provide for community betterment. Engage in volunteerism.

Source: Modified according to Refs [9,17,18]

of CSR areas consisting of the following five CSR components: economic responsibility (provision of products and services that are useful for the society in the required quantity and quality and for reasonable price, together with generation of an adequate profit for the owners), social responsibility (respecting a wide range of needs and interests of the human resources), environmental responsibility (preventing occurrence of negative externalities and pro-active environmental measures), ethical responsibility (creation, fulfilment and promotion of wide application of ethical standards), and philanthropic responsibility (support of employee volunteering and donorship). See more, e.g., in Refs [19,20].

Activities in the economic area include, above all, application of corporate governance principles and developing positive relationships with relevant stakeholders, and also providing quality and safe products and services. Activities in the social area include application of responsible employee policy, active involvement of the employees in decision-making processes, fair remuneration, and offering employee benefits, education of the employees and care for their qualification growth, creation of adequate working conditions, health care and care for safety at work, ensuring equal opportunities in the workplace, work-life balance, or outplacement. The environmental area activities mainly include the environmental activities and instigation of initiatives promoting responsible

approach to the environment, ensuring environment-friendly production, recycling, resource savings, investments into environmental technologies, environment-friendly transport, or provision of environment-friendly products and services. Activities in the ethical area include application of ethical behaviour and fighting corruption. Philanthropic activities include cultural, education, humanitarian and social sponsorship, investments in the local economy, endowment activities, and cooperation with not-for-profit organizations.

Corporate Social Responsibility from the Point of View of Chemical Industry Enterprises

Key Areas of Corporate Social Responsibility

Any enterprise that aims to be socially responsible, i.e. also any chemical industry enterprise, should be active in all the identified five CSR areas, i.e., economic, social, environmental, ethical, and philanthropic, at the same time. And the key CSR components from the point of view of chemical industry enterprises can be seen in their environmental responsibility and philanthropic responsibility.

Considering the chemical industry specifics, particularly in the form of the environmental risks, the environmental responsibility of these companies (in the wider concept) is that of the fundamental importance, as it is below documented in detail on the example of the worldwide initiative of the Responsible Care. The scope of activities performed in this area is wide and includes such activities as creation and application of the environmental policy and corporate culture, environment-friendly production, products and services, environment-friendly packaging, economical treatment of natural sources and their protection, especially decreasing consumption of water and energy, utilization of renewable sources of energy, or minimization of the traffic load, investments into environmental technologies, as for the area of waste management — minimization of wastes, their separation and recycling, utilization of recycled materials, also application of the system of environmental management, particularly compliance with ISO, EMAS and other norms and standards, monitoring impacts on the environment, evaluation of the environmental performance of the company, provision of accurate environmental information about the products, services and activities (see more, e.g., in Refs [21,22]), creation and observance of safety rules when handling dangerous substances, or implementation of environmental principles in the process of selection of suppliers and subcontractors (see more in Ref. [23]).

Philanthropic responsibility plays an important role especially in the case of pharmaceutical industry companies. It is usually implemented in the form of donor ship or sponsorship, which however does not represent a classical form of philanthropy. The thing is that in the case of sponsorship the company does

expect, differently from donorship, certain consideration. In fact, sponsorship is understood as provision of promotional and advertising services by the recipient to the sponsor, where the sponsor's contribution represents payment for provision of such a service. So it is basically a certain type of business transaction between two partners. The importance of philanthropic responsibility in the case of pharmaceutical industry enterprises is based on the fact that pharmaceutical companies supply their products to final consumers whose shopping behaviour is significantly affected by their knowledge of a brand or by the positive image of a particular enterprise. And it is sponsorship, donorship or other philanthropic activities what contributes to strengthening the brand and image of a company. The role of philanthropic responsibility from the point of view of pharmaceutical industry enterprises can be documented on the results of the TOP Responsible Company 2012 Award, organized in the Czech Republic by the platform of Business for Society. The category of The Most Generous Corporate Donor of 2012 was won by Johnson & Johnson, s.r.o. with the volume of provided funds amounting to CZK25,964,531 (the ratio of the above provided funds to the corporate sales was 0.79 %), and the fourth place out of 15 assessed enterprises was taken by GlaxoSmithKline, s.r.o. with the volume of provided funds amounting to CZK7,313,469. The above category awards companies that donated the biggest part of their profits within the corporate donorship while assessing the following two criteria: the ratio of the volume of the provided means to the earnings before taxes and the ratio of the volume of the provided funds to the sales [24].

Responsible Care

An important initiative in the area of corporate social responsibility is, from the point of view of chemical industry enterprises, a program called Responsible Care. "Responsible Care is the global chemical industry's environmental, health and safety (EHS) initiative to drive continuous improvement in performance. It achieves this objective by meeting and going beyond legislative and regulatory compliance, and by adopting cooperative and voluntary initiatives with government and other stakeholders. Responsible Care is both an ethic and a commitment that seeks to build confidence and trust in an industry that is essential to improving living standards and the quality of life" [25]. It is an international initiative coordinated by the International Council of Chemical Associations (ICCA), in Europe by the European Chemical Industry Council (Cefic). In 2012, this initiative involved 60 countries from all around the world.

In the Czech Republic, the program of Responsible Care is directed by the Association of Chemical Industry of the Czech Republic. Participation in this program is reserved for the member organizations of the association and it is

voluntary. In 2012, the Responsible Care principles were implemented by 71 companies and 3 collective members of the Association of Chemical Industry of the Czech Republic. 43 association members were then allowed, on the basis of passing through the verification process, to use the Responsible Care logo.

The unified international verification process, which all the companies applying for the right to use the Responsible Care logo have to go through, is based on the assessment of the following performance indicators [25]:

- Safety
 - Number of fatalities.
 - Lost time injury rate, expressed as number of lost time accidents with at least one day out of work per million working hours.
- Environment:
 - Emissions to air: sulfur dioxide (SO₂) and nitrogen oxides (NO_x), expressed as metric tons.
 - Discharges to water: chemical oxygen demand (COD), expressed as metric tons of oxygen.
 - Greenhouse gas emissions, expressed as millions of direct and indirect metric tons of CO₂ equivalents emitted.
 - Greenhouse gas intensity, expressed as metric tons of CO₂ equivalents used per million metric tons of production.
- Resources:
 - Energy consumption, expressed as metric tons of fuel oil equivalent used.
 - Energy intensity, expressed as metric tons of fuel oil equivalents used per million metric tons of production.
 - Water consumption, expressed as millions of cubic meters of water consumed, with returns credited.
- Distribution:
 - Number of transport incidents.
- Reference parameters:
 - Number of employees in the chemical industry reporting.
 - Annual turnover and production for the chemical industry reporting.

The Responsible Care initiative aims to make a continuous contribution to enhancement of health, safety and environmental performance, to open and transparent communication with the stakeholders and last but not least to the sustainable development.

Conclusion

Chemical industry enterprises are, in view of the worries about the potential adverse impacts of their production and products on health and the environment,

subject to an increased interest of the general public. As a result of this fact, they are trying hard to pay special attention both to their operational safety and the impacts of chemical production on the surrounding environment, and to the management of the life cycle of chemicals and their impacts on health and the environment, but also to seeking ways to sustainable development. Within the above efforts, the importance of application of the corporate social responsibility concept is rising.

Corporate social responsibility is based on voluntarily applied responsible behaviour of a company towards its stakeholders beyond the framework of the law and contractual agreements with its partners. This behaviour is based on a number of activities in the economic, social, environmental, ethical, and philanthropic areas.

In the case of chemical industry enterprises, the fundamental role is played by the environmental pillar of CSR, which is based on a responsible approach of such enterprises to the environment and on their efforts to diminish the negative impacts on it. And the worldwide initiative of Responsible Care is a testament to the importance of the environmental responsibility of chemical industry enterprises.

Another important area of corporate social responsibility from the point of view of chemical industry enterprises, and particularly of pharmaceutical industry enterprises, is philanthropic responsibility implemented in the form of sponsoring and donorship.

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