

## GREEN ACCOUNTING FOR THE DEVELOPMENT AND MANAGEMENT OF SUSTAINABLE BUSINESSES IN MULTINATIONAL COMPANIES

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**ABSTRACT:** *In the current context of globalization, there is an interdependent relationship between performance, expressed in value, and social responsibility as a factor of sustainable development. New questions have arisen for the accounting, namely how the environmental and social problems can be quantified and reflected by accounting. The multinationals were also forced to comply with the regulatory requirements regarding environmental issues, which required profound accounting changes. The paper presents in summary the defining characteristics of multinational accounting, and especially green accounting.*

**Keywords:** *green accounting, sustainable development, environment, multinational companies, performance.*

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### INTRODUCTION

As a consequence of increasing environmental concerns at the international level, the multinationals companies (MNC) were forced to comply with the regulatory environmental requirements, which required profound accounting changes (Kareiva, McNally, McCormick, Miller and Ruckelshaus, 2015). Questions such as how the environmental and social problems can be quantified and reflected by accounting required the emergence of new accounting, the non-financial one, which combines the economy, the environment, and the society, having as objective the quantification of the patrimonial operations that are related to them, their recording and reporting (Deegan, 2017). Thus, it has appeared the environmental accounting (green accounting), and the accounting of human resources, generically united under the title of social accounting.

At first glance, it can be assumed that multinationals have voluntarily chosen the path of sustainable development, but in reality, in its adoption they have been forced by: environmental changes, depletion of resources, lately even by limited human resources, poverty, the problem waste, etc. Thus, the need to reflect in accounting and implicitly in the financial reports of the three essential pillars of sustainable development appeared: economic, social and environmental (Ionescu, Coman, Paschia, Gudanescu Nicolau, and Stanescu, 2020; Purvis, Mao, & Robinson, 2019). If the performance in terms of financial accounting is measured by the profit resulting as the difference between revenues and expenses, in non-financial accounting, the performance has the social and environmental benefits that will be distributed to the stakeholders of the multinationals: shareholders, employees, institutions, authorities, citizens (Fontaine, 2013).

Regarding the formalization and regulation of this aspect, at the global level, initiatives have been expressed by GRI, OECD, ONU, and at European Union level by Directive 2014/95/EU, initiatives that have materialized in attitudes, conferences, regulations, draft proposals, etc (DIRECTIVE 2014/95/EU; Global Reporting Initiative, 2015). The establishment of relevant indicators regarding the natural environment was also the object of GRI which recommended the following 3 categories of indicators to be included in the financial statements: expenditure on material resources, water, energy; the impact of the activity on nature: emissions that affect the environment, waste, etc; measures that are taken to mitigate this impact (Cernusca, 2008; Ionescu, 2017; Wilburn & Wilburn, 2013). According to social accounting, the "green" indicators in the financial statements must present the performance of the companies' vis-à-vis the natural environment, facilitate the forecast calculation of the financial performances and allow the best decisions by multinationals regarding the protection of this environment (Jones, 2010).

According to research conducted based on published information, it turned out that social responsibility is a feature of multinationals operating in Romania, which are the most performing in this respect, they are developing CSR reports that meet international standards, from which Global Reporting Initiatives is the most used. The historical evolution of the multinationals reveals that they represent a group of companies, with their existence and diverse, specific links, but common interests that require a concentration of individual information at a level that ensures the real performance desired by the internal users (shareholders/associates, management, employees, etc.) and/or external (clients, suppliers, creditors, institutions, etc.), information that is offered by accounting in all its forms of manifestation.

## 1. THE ACCOUNTING OF MULTINATIONAL COMPANIES

Classically, the financial accounting information is monetary expressions of the patrimonial elements and the economic operations, non-homogeneous, which reflect their movement, and ensures their reunification as a homogeneous whole (Abdallah, 2001). The classic accounting for multinational companies comprises the two important branches: management accounting and financial accounting.

Management accounting generally has the following characteristics: does not have a mandatory character and a regulated fixed standard, is the subject of the specialized literature that offers various methodologies, the managers choosing discretely the presentation format, ad-hoc, which differs from one company to another, as it regulates the information in the management accounting reports; it is addressed to the internal users of the subsidiaries (managers, directors, employees), of which the managers are most interested in the information because as aid they base their act of management on the flow of management, planning, decision, control, being called the managerial accounting alternatively; the managers of the other subsidiaries in multinationals have an only partial interest and insofar as they are transacted between them, for and depending on the method of determining the transfer price; the managers at the rule group level do not have an exclusive and excessive concern, taking into account the internal kitchen of each branch; as the scope of action, the objective at the branch level is much narrower than the financial accounting because it is focused on certain activities, on departments, sections, cost centers, depending on the interest given to each one, for this reason alternatively called cost accounting; as a subject period, it has a broader horizon on the axis of time, past, present future, more planning; the accounts used are off-balance sheet, not known by external users, the information being quantitative-value.

Financial accounting generally has the following characteristics: has a mandatory character and regulated standards that will be specified below. And it is the subject of the specialized literature but within limits and according to the legal requirements, the managers using the legal format of registration, presentation, and reporting, which is the same for all companies that apply the same standards; it is addressed to the external users of the subsidiaries (shareholders, authorities, creditors, customers, etc.), of which the first interested in the information are the shareholders of the subsidiaries and the group; it is a transparent and public accounting, reflecting the position and financial performance of the subsidiary and the group at certain times and for a certain period; the managers of the other subsidiaries in multinationals know and have an interest in terms of group performance; the managers at the group level have an interest in the financial accounting information that must reflect as accurately as possible the

individual performances of the subsidiaries and centralized at the group level; the scope of financial accounting is at the branch and group level; as a period the financial accounting is assigned to the reporting year which may be the chronological year or another 12 months; the accounts used are balance sheets, reflected and reported in annual financial statements that are published and are known by all internal and external users. The information is valuable, in monetary terms.

The parent company and the component subsidiaries of the multinational group, operating independently, as independent structures, with their own legal personality, organize and maintain their accounting and prepare reports and financial statements according to the practices of the regulated national jurisdiction. In some cases, the individual performance reflected by the own accounting of each company in the group reflects the overall performance of the group. As a result, the assets, the results, the financial position of each one must be concluded, gathered according to clear, transparent and uniform principles and rules, an objective that can only be achieved with the help of consolidated accounting, specific to the multinationals whose final product is the consolidated financial statements. The consolidated accounting is kept for reporting purposes at the level of companies that have sole control, joint control, or significant influence over the component companies.

## 2. NON-FINANCIAL ACCOUNTING OF MULTINATIONAL COMPANIES

According to the ones described above, classically, financial accounting information is monetary expressions of patrimonial elements and non-homogeneous economic transactions, which reflect their movement and ensure their reunification as a homogeneous whole. The present of multinational companies is dominated by the concept of sustainable development represents the whole of the forms and methods of socio-economic development that focus primarily on ensuring a balance between the social, economic and ecological aspects and the elements of natural capital, and expresses, the global performance of human society (Caraiani, Lungu, Dascalu and Colceag, 2015; Hopwood, 2005). In this current context, there is an interdependent relationship between performance, expressed value, and social responsibility as a factor of sustainable development (Schaltegger & Burritt, 2017).

New questions have arisen in front of the accounting, how can the accounting officer quantify and reflect the following elements: environmental problems, managers' competence, the competence of the employees, social climate, creativity, and the relationship with the authorities. These new questions required the emergence of new accounting, the non-financial one, which combines the economy, the environment, and the people, having as objective the quantification of the patrimonial operations related to them, their recording and reporting. As a consequence and a necessity, the multinationals were forced to comply with the regulatory requirements of the developed countries, which required profound accounting changes. Thus, has appeared environmental accounting (green) and human resources accounting, generically united under the title of social accounting (Gray & Laughlin, 2012). Green accounting has emerged as an objective necessity of monetizing and quantifying the value of natural capital, and to highlight first the expenditure on environmental protection and secondly the sources of formation of environmental costs, which may lead to the change of the behavior of the energy consumers affecting the environment.

The accounting system is also related to the price system regarding natural resources. Their non-correlation can lead to self-destructive decisions. It is known that the goal of any multinational is to make a profit, with financial performance being compared to non-financial performance (Joshi & Li, 2016). It's precisely why the interest of multinationals differs from the regional and global interest, with the two actors involved, the state and the multinationals having to reach a consensus.

From an accounting point of view, a value division must be made between the natural environment, the economic environment, and the social environment, which coexist and influence each other. The use of natural assets by the multinationals in their economic activity has a quantitative side regarding their consumption in time, sometimes until exhaustion and a qualitative side regarding the degradation of the environment (Egbunike, Emudainohwo, Gunardi, Kurniasari, and Prihanto, 2018; Jouanjean, Tucker, & te Velde, 2014). As a result, the need to consider natural assets from an accounting point of view as capital goods and the natural resources in the category of stocks emerged. Because in the development and management of the sustainable business, a problem of the present-day concerns the energy sources,

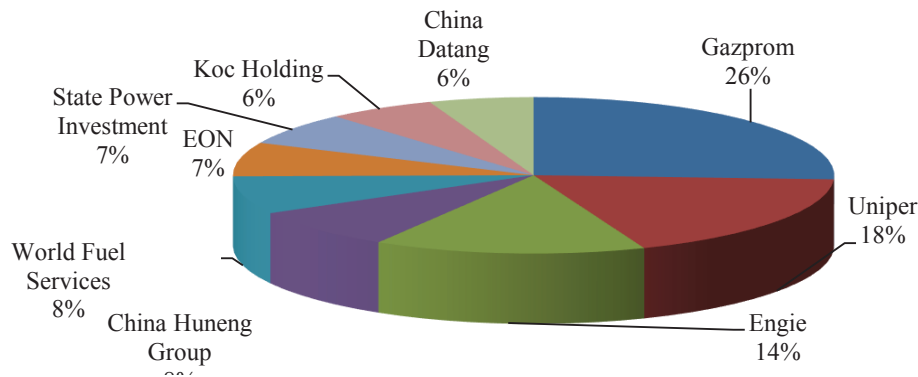
we have made an empirical query of the information published by Forbes magazine (2019) in the top 500, choosing the activity fields that have an environmental impact as a selection criterion. Using the activity filter "energy", in the top 500, we identified only nine companies with income and profit indicators expressed in millions of USD and indicator number of employees that also involves the social aspect (Table 1).

Table 1. Top multinational energy companies

Company	Country	Revenues (\$M)	Profit/Loss (\$M)	Assets (\$M)	Employees
Gazprom	Russia	131,302.0	23,199.1	300,354.8	466,100
Uniper	Germany	92,260.8	-533.4	57,841.5	11,828
Engie	France	74,144.1	1,219.1	175,681.4	160,301
China Huneng Group	China	42,280.9	8.9	156,327.2	136,031
World Fuel Services	US	39,750.3	127.7	5,676.9	5,000
EON	Germany	35,703.6	3,803.7	62,092.3	43,302
State Power Investment	China	34,229.2	170.7	157,347.6	124,678
Koc Holding	Turkey	29,592.3	1,143.8	23,570.7	92,631
China Datang	China	28,654.9	323.4	108,633.2	93,800

(Source: Forbes magazine, 2019)

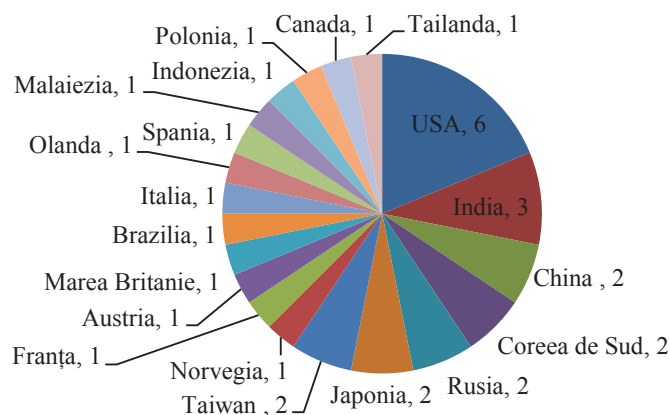
Figure 1. Top multinational energy companies



(Source: own projection)

At first glance, one can conclude that multinationals have voluntarily chosen the path of sustainable development, given that the results are not extraordinary. It would be a nice dream, but they were forced by reality, which, in the not too long term perspective, offers a gloomy horizon: environmental changes, depletion of resources, lately even human resource is declining, poverty, the problem of waste, etc. Another area related to environmental resources is that of oil refining, wherefrom the same query from Forbes magazine, it turned out that in the Top 500, there are 32 multinational companies, out of which six are from the USA.

Figure 2. Top multinational oil refining companies



(Source: own projection)

Interesting is that in the top 10 companies in the top 500 there are five companies with oil refining activity, of which the largest with this object of activity is Sinopec Group from China which is also 2nd in the top 500, followed by Royal Dutch Shell (3rd place in the top 500), China National Petroleum (4th place in the top 500), BP of France (7th in the top 500) and Exxon Mobile (8th in the top 500). The Austrian group OMV also present in Romania is the 31st company with oil refining and the place 459 top 500 with a turnover of 27.061.30 million USD and 20,231 employees. An interesting statistic regarding the human resource used, regarding the social accounting, is the number of employees reported to total income for the first ten companies in this field (Table. 2), whereby far the Chinese companies have an impressive number, which reflects on the one hand, the human-economic relationship and the natural resource, and on the other hand, the excess of personnel of the Chinese companies compared to the other companies. The two Chinese reference companies have 2,001,552 USD higher than the total of the other eight companies in the top oil refinery, which have five times less, respectively, 505,021 employees.

Table no. 2. Top multinational oil refining companies

Company	Country	Revenues (\$M)	Profit/Loss (\$M)	Assets (\$M)	Employees
Sinopec Group	China	414,649.9	5,845.0	329,186.3	619,151
Royal Dutch Shell	Netherlands	396,556.0	23,352.0	399,194.0	81,000
China Natinal Petroleum	China	392,976.6	2,270.5	601,899.9	1,382,401
BP	UK	303,738.0	9,383.0	282,176.0	73,000
Exxon Mobil	US	290,212.0	20,840.0	346,196.0	71,000
Total	France	184,106.0	11,446.0	256,762.0	104,460
Chevron	US	166,339.0	14,824.0	253,863.0	48,600
Lukoil	Russia	119,145.0	9,863.7	82,734.80	102,500
Philips 66	US	114,217.0	5,595.0	54,302.00	14,200
Valero Energy	US	111,407.0	3,122.0	50,155.00	10,261

(Source: Forbes magazine, 2019)

Accounting must provide information for achieving environmental sustainability, reflecting the limits of the expansion of economic activities over those of natural capital through: expressing the natural environment in quantitative terms; monetary expression of flows and stocks related to the environment; measuring and recording the impact of the economic activity of the multinationals on the environment; the quantification of the value of the expenditures from the environment to the economy and vice versa of the residuals, the waste from the economy to the environment. As a result, in the face of accounting and implicitly of financial reporting, the need to reflect as best as possible the three aspects of sustainable development: economic, social, and environmental.

If the performance in terms of financial accounting is measured by the profit resulting as a difference between revenues and expenses, in non-financial accounting, the performance has the social and environmental benefits that will be distributed to the stakeholders of the multinationals: shareholders, employees, institutions, authorities, citizens (Fontaine, 2013; Maama & Appiah, 2019). Regarding the formalization and regulation of this aspect, at the global level, initiatives have been expressed by GRI, OECD, UN, and at European Union level by Directive 2014/95/ EU, initiatives that have materialized in attitudes, conferences, regulations, draft proposals, etc. In April 2002, the European Parliament issued a report with concrete proposals on social accounting (UNCTAD, 2004): supplementing the IV Directive with the obligation of companies to submit periodic, social and ecological reports; the obligation to publish these reports by the companies listed on the stock exchanges; audit of reports; extending these obligations to all companies. In 2004, the UN (UNCTAD, 2004), accessed this position and elaborated, with the help of the specialists in the field, a conceptual framework and established the main methods of evaluation and accounting regarding the consequences resulting from the activities of the companies on nature, following: the congruence of the accounting information with the ecological one; clear communication indicators regarding the information related to the natural environment: classics (water, energy, etc.) and current ones (greenhouse effect, waste, etc.). The declared information is related to several reporting frameworks presented in the preamble of the directive, national (Romania does not have), Union (EMAS) or international (UNGC, OECD Instructions for multinational companies, etc.), in the light of the principles regarding multinational companies and the topics of this Directives are large companies and groups of companies, which are mostly multinationals (DIRECTIVE 2014/95/EU).

By the Directive 2014/95/EU, the legislation of the Union has been regulated as the obligation of certain entities to carry out non-financial reporting referring to environmental, social, and personnel issues, with the related risks and the non-financial performance reflected in a set minimum of indicators. The establishment of relevant indicators regarding the natural environment was also the object of GRI which recommended the following three categories of indicators to be included in the financial statements (Man & Gădău, 2009; Wilburn & Wilburn, 2013): expenditure on material resources, water, energy; the impact of the activity on the nature: emissions that affect the environment, waste, etc.; measures taken to mitigate this impact.

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## CONCLUSIONS

According to social accounting, the "green" indicators in the financial statements must present the performance of the companies' vis-à-vis the natural environment, facilitate the forecast calculation of the financial performances and allow the best decisions by the multinationals regarding the protection of this environment. According to the research conducted we consider that social responsibility is a feature of the multinationals operating in Romania, which are the most performing in this respect, they elaborate CSR reports that meet international standards, of which Global Reporting Initiatives are the most used.

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