

Research Regarding the Integration of the Sustainable Development's Requirements Within the Accounting Model at a Microeconomic Level

Maria-Mădălina Bogueanu-Popa
Mariana Man

University of Petroșani, Faculty of Sciences, Petroșani, Romania

madalinabogeanu@yahoo.com

man_mariana2006@yahoo.com

Abstract

As a follow up to the increased interest regarding the concept of sustainable development, the Romanian economic entities are exposed to a series of challenges regarding the accounting model.

This paper presents an empirical research based on questionnaires, made with the sole purpose of in-depth knowledge of the practitioners' and the specialists' opinion regarding the relationship between the sustainable development's requirements and their integration within the accounting model. The sample is made up of economic entities which develop their activity in various domains at a national level, which have a number of over 500 employees at the date of the balance sheet. The research has as result the fact that a part of the sustainable development's requirements is integrated within the accounting model at a microeconomic level.

Key words: sustainable development, accounting model, non-financial information, integrated reporting

J.E.L. classification: M14, M40, M41

1. Introduction

The sustainable development represents an indispensable element within the activity of economic entities while taking into account the normalizing organisms. The latter came into the support of those interested which have organized, with time, important events on the topic of sustainable development which remained in history.

The topic of sustainable development brought on with time intense debates due to the increased interest of environmental, social and personnel principles. The information sources on this subject are mainly within the category of conferences, congresses and events which take place, as well as within the scientific research which approaches this topic in diverse variants in association with different elements. With time, a growing accession of the sustainable development's principles within the economic entities, investors, clients, the local community, and the organisms of regulation to elements specific to sustainable development, took place. All of these place the subject of sustainable development in a leading position in debates made globally. A set of universally available norms and basic principles which are unanimously recognized by any interested party has been associated to sustainable development. Adopting the principles of sustainable development constitutes an advantage through the fact that it confers credibility to the economic entity as well as a reference point regarding the promotion of pylons specific to the sustainable development (environment, social and personnel).

Nowadays, growing the complexity of the international business environment and implicitly the national one, the introduction of new regulations regarding the reporting of the sustainable development's pylons was necessary. This led to the growth of the information volume the economic entities provide, offering at the same time details and information with a high level of expertise. Even though the awareness of the entities' responsibilities is growing, demonstrations regarding their utility and opportunity of sustainable development practices (GRI, 2022) are offered. The reporting

of the sustainable development's requirements is an essential way the economic entities communicate to the third parties the responsible method of action and the administration of sustainable resources.

With time new ideas have been proposed regarding methods of reporting that the economic entities should adopt so that they keep up with the development of the economic reality in order to respond to the needs of an as large as possible public. The information transmission process from within the entity has a very important role because it must cover a wide range of subjects, to be of interest for investors, to be compliant for the decision factors, to correspond to standards for authorities and to be easy to understand for unspecialized individuals (2014/95/EU Directive).

The quickness that the changes happen with within the business environment make it difficult for the economic entities to establish a model of integrated reporting (financial and non-financial reporting) to benefit the entity's business model and to be compliant to the legislative requirements in place. This approach starts from the idea that by covering a wider range of the public with new elements, it does not mean that an entity will produce different reports but that it will improve its existing ones. Therefore, the entities adopted the integrated reporting which is composed of financial information as well as aspects of sustainable development, to watch out for the needs of the interested large public (2014/95/EU Directive). The interconnection between financial information and the environmental, social and personnel information is more and more recognized and demonstrates the effort of responding to the needs of the interested parties voluntarily or in the situation where the legislative regulations impose it.

Due to the fact that the sustainable development of an entity assumes taking into consideration the performance, balance, risk factors and the rentability of its activity in time, the accounting system is responsible to offer the infrastructure necessary for all of that. With that in mind, the major pursued interest at a European level is headed towards economic entities of high dimensions which fall under the incidence of imposed regulations regarding the practices of sustainable development.

2. Literature review

Regarding the microeconomic dimension of the sustainable development, the efforts of the economic entities to align themselves with the requirements of sustainable development and the integration of its aspects within their accounting model are appreciated. The sustainable development can be looked at from the perspective of environmental costs of the managerial accounting. At a microeconomic level, the entities' trial of implementation of social, environmental and personnel aspects within their activities is considered a commendable approach, especially when considering the context in which they are not covered from a legislative point of view (Bonila-Priego, Font, Rosario Pacheco-Olivares, 2014). The voluntary manner of highlighting the interest for the community can develop within any economic entity no matter the activity it develops and no matter the impact it has on the endangerment of future generations (Frias-Aceituno, Rodríguez-Ariza, García-Sánchez, 2013 and the 2014/95/EU Directive).

Research from the specialty literature about reporting aspects of sustainable development highlight the advantages of reporting environmental, social and personnel situations together with the financial situations. Introducing the elements of sustainable development within the classical approach of financial situations represents a common practice of multiple economic entities which have evolved with time (García-Sánchez, Rodríguez-Ariza, Frías-Aceituno, 2013).

The challenge in the process of sustainable development is given by the integration of the sustainable development's requirements within the accounting model. Through the accounting system, macroeconomic entities are classified and analysed from an analytical as well as synthetic manner. Transposing the macroeconomic indicators in the European and national space is conditioned to aspects regarding a better governance as well as economic prosperity. By implementing the indicators it is considered that the barriers of correspondence between diverse domains which have as common point institutional sustainable development have been surpassed (Dima, Popa, Farcane, 2015).

3. Research methodology

The questionnaire represents an interactive type of instrument specific to the method of investigation, promoting direct information circulation between the research and the subjects. The data and information regarding certain phenomena are grouped in questions which allow diverse ways of answering according to the researched problem.

The method of questionnaire sampling has been based on the Romanian economic entities which registered over 500 employees at the date of the last balance sheet (from 2019. Consulting the list of economic entities in Romania, it has been noticed that there is a number of 185 economic entities for which the questionnaire is available, and from which contact data has been collected. The transmission method consisted of e-mail, and the Google Forms application. From the total of 185 economic entities that received the questionnaires, 154 economic entities have responded but a part of these could not be validated due to the incomplete responses. There were 132 complete responses that could be validated. The target group, composed of 132 responders are economic entities with different domains of activity, the sample that the questionnaire was applied on being representative.

The questionnaire dimension represents one of the main problems, so much so that the whole content of a questionnaire could be separated in dimensions which generate multiple questions. From what was said, it results the relation (1):

$$p_1, p_2 \dots p_k, \text{ each of them generating } q \text{ questions} \quad (1)$$

where: p= approached problems; k= dimensions; q=questions.

To all this, we introduce (r) complex factors A,B,C..., necessary to explain p, or factors which present interest for the research. All these factors have (s) dimensions and present (t) indicators.

To the research questions are added identification questions (v), these being personal variables represented through age, occupation, studies etc. Considering what was presented, we obtain the following relation (2):

$$n = (k \cdot q) + (r \cdot s \cdot t) + v \quad (2)$$

where: n= number of questions; s= complex factor dimension; k= dimensions; t= indicators; q=questions; v= identification questions; r=complex factors;

The questionnaire was shared between the 01.06.2019-01.07.2019 time frame, the answers were received between the 02.07.2019-01.02.2020 time frame and processing the data took approximatively two weeks. The answers were processed, centralized, and interpreted via Microsoft Excel, where a database was created.

The response rate of the economic entities represents in the first stage an element from which one can denote the seriousness of the targeted economic entities, the information provided from a first stage of the investigation being calculated using the formula (3):

$$R_s = C_v / n \quad (3)$$

where: R_s = response rate; C_v = number of valid questionnaires; n= total number of sent questionnaires.

In the case of our questionnaire, the response rate was of 71,35%, detailed as seen in table 1.

Table no. 1 Obtained result of the response rate calculation

Element description	Results
Total number of questionnaires sent out to economic entities	185
Number of valid responses from economic entities	132
Response rate	71,35 %

Source: Author's projection

Through the calculated response rate, it has been proven that the obtained percentage is good for the results to be exploited. The response rate was influenced by the message transmitted in the questionnaire's subject, containing a short description of the research intent, as well as the author's identification data, including the name, field of study and the affiliation with the university. These aspects were appreciated and contributed to offering a growing number of responses. To all of that it is added the time period given to the responders to get through the questionnaire's questions.

In structuring the questionnaire, the abstract and real have been approached, starting from general to particular, from easy to difficult. Closed questions were mainly chosen considering their relevant to the research and the demographic questions have been placed in the first part of the questionnaire.

Through the received responses, it is offered a pertinent solution regarding the validation of the research's hypotheses. The questionnaire is structured in three parts and contains open questions, closed questions with single or multiple responses, as well as questions of control and filter, so that the received answers are as complete as possible and so that they can be valued further on.

3. Research objective and hypothesis

The reason for initiating this research was the identification of certain characteristics and phenomena of reality for predictions to be emitted, to establish relationships between characteristics. The central aspect of the research is the impact of integrating the sustainable development's requirements within the entities' accounting model, and for this a hypothesis that is due for validation or invalidation has been emitted.

The purpose of this research targets finding out the point of view of practitioners regarding the application of practices of sustainable development within the accounting model.

The research objective refers to the knowledge of the measure in which practitioners in the domain know, analyse, and report the information resulted from the integration of the sustainable development's exigencies within the accounting model.

Within this paper the following research hypothesis has been emitted for validation or invalidation: *At a microeconomic level, the sustainable development's requirements have an impact on the accounting model.*

The questionnaire is structured in three parts: the first part contains questions whose answers general information about the interviewed individual as well as the economic entity the individual activates in. The second part contains questions whose answers offer information about the measure in which the practitioners know the definition, particularities and exigencies of the sustainable development concept. The third part has the higher weight and contains answers which offer necessary information for appreciating whether at the entity's level the exigencies of sustainable development have or do not have impact on the accounting model.

4. Centralization and interpretation of results

The first part of the questionnaire presents questions regarding the responders' profile and their identification within the economic entity.

The responders were assured that the data would only be processed statistically, and any information such as the economic entity's name and its dimension is necessary to be confirmed within the sample.

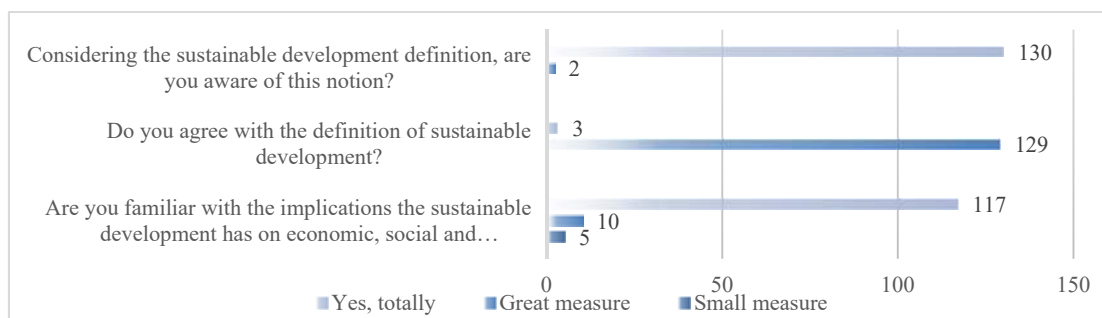
The responding entities have confirmed the fact that they have not registered at their last balance sheet over 500 employees, the branch and activity sector of the entities being a diverse one. According to the centralized data from the responses, we have within the responders, entities dispersed in sectors such as industry (65 entities), services (60 entities), construction (4 entities) and commerce (3 entities). Most of the responding entities are part of the industry and services sector, representing 94.65% of the total entities, fact explained by considering that these domains of activity involve a numerous workforce.

Another important element within this section is the indication of the position within the entity of the individual which drafted the responses to the questionnaire, according to question 4. Therefore, it has been noticed that the responders were part of the hired personnel within the economic department in percentage of 15.15% and part of the entity's managers in percentage of 84.85%,

31.06% of them being males and the rest of 68.94% of them being females, with ages between 20 and 65 years of age. The higher percentage of women that participated in the questionnaire can be due to the fact that within an economic entity they prevail within the administrative personnel. We suppose that the responders are familiarized with the notions of sustainable development, integrated reporting and non-financial information, given the wide range of age they cover. Within the sample, all those that participated to the questionnaire have completed a form of higher education.

The second part of the research revolved around the term of sustainable development. The responders were asked, starting from the given definition, to express the measure in which they are aware of the notion, how much they agree with it and whether they are familiar with the implications the sustainable development has on environmental, social and economic elements. Therefore, the received answers are given in figure 1.

Figure no. 1. Response regarding the knowledge of the notion of sustainable development

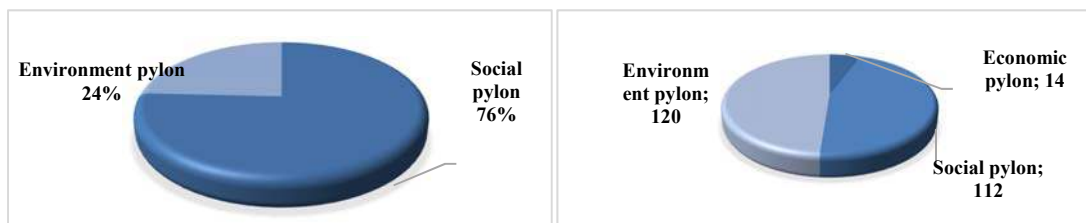


Source: Author's projection

As a follow-up to the received responses, it is appreciated the fact that all responders partially or totally know the definition given to sustainable development. The implications the sustainable development has, registered favourable responses, considering a percentage of 97.73% have answered in great deal. The familiarization in totality or in great measure of the implications of the sustainable development represents a percentage of 96.21% from the responses and a percentage of 3.79% of the responders are familiar in a small measure with the implications of the sustainable development.

The sample composed of those 132 responders, was asked whether it agrees with these exigencies. From a percentage point of view, 99% of responders agree with these exigencies and would not bring additions to them. Though, there are responders who consider that new exigencies could be introduced, and they frame them within the social pylon in percentage of 24% and within the environmental pylon in percentage of 76% according to figure 2.

Figure no. 3. Guiding the economic entities towards the sustainable development's pylons



Source: Author's projection

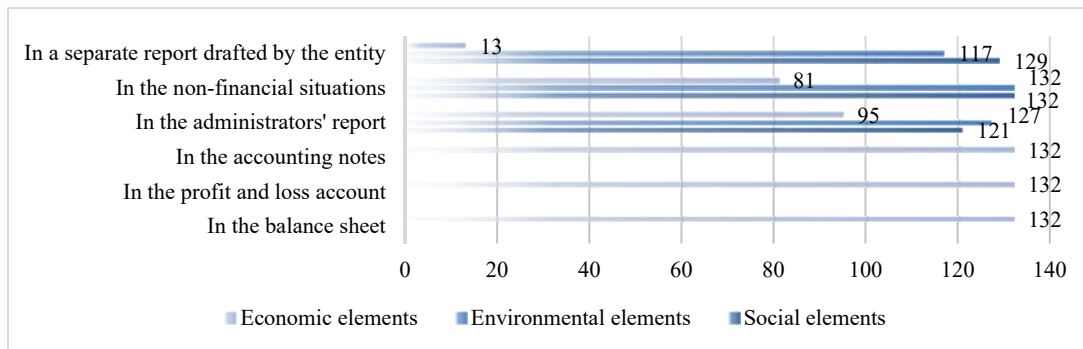
In continuing the questionnaire, the responders were asked whether in the activity developed by their entity are found component elements of the sustainable development's pylons. 90.91% of responders have stated that these elements have priority within the environmental pylon and 84.95% of responders have stated to have priority within the social one. Having the possibility of multiple

response, the following results were registered according to figure 3. It results the fact that the economic entities prefer the social and environmental pylons when it is about implementing the elements specific to the sustainable development. Through the responses received in the questionnaire, it results that within the accounting model of an economic entity one can easily introduce the environmental pylon followed by the social one. We appreciate that the options of the responders are the result of the actions that could be developed for the environment (antipollution measures or waste management) or in the social domain (community support or donations).

The third part of the questionnaire targets the appreciation of the level in which the economic entities have integrated within their accounting model elements which would respond to the sustainable development's requirements.

Through multiple response, the responders have mentioned the place in which the social, environmental and economic requirements of the sustainable development are found within the accounting model of the responders. The information provided by this question is given through multiple response, represented graphically in figure 4.

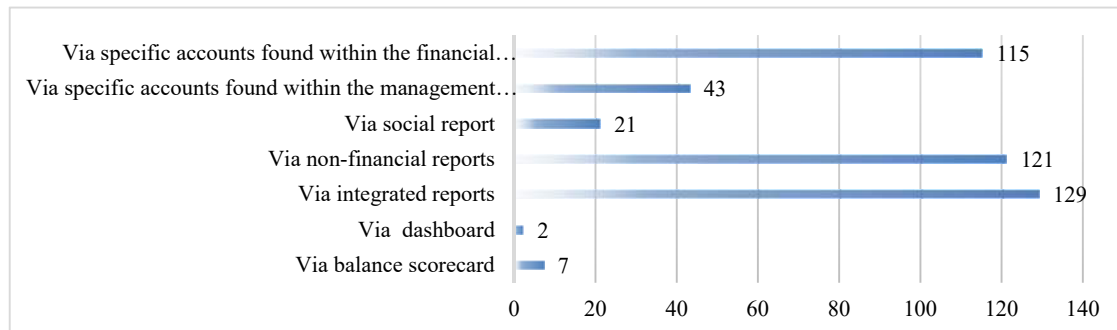
Figure no. 4. Recognizing the social, environmental and economic components of sustainable development within the entity's accounting model



Source: Author's projection

According to figure 4, the economic elements are found within the traditional instruments of reporting (balance sheet, profit and loss account, accounting notes) in percentage of 100%. The requirements specific to sustainable development through elements of environment and social are found separately through a report drafted by the entity (88.64% environment, 97.73% social, 9.85% economic), respectively in non-financial situations (100% environment and social, 61.36% economic) or in the administrators' report (91.67 % social and 96.21% environment, 71.97% economic).

Figure no. 5. Exposing the environmental, social and economic elements of sustainable development



Source: Author's projection

Next up within the questionnaire, the responders have been asked what is the method of giving the environmental, social and economic information specific to sustainable development. The graphical representation of figure 5 is given by the multiple responses of the responders.

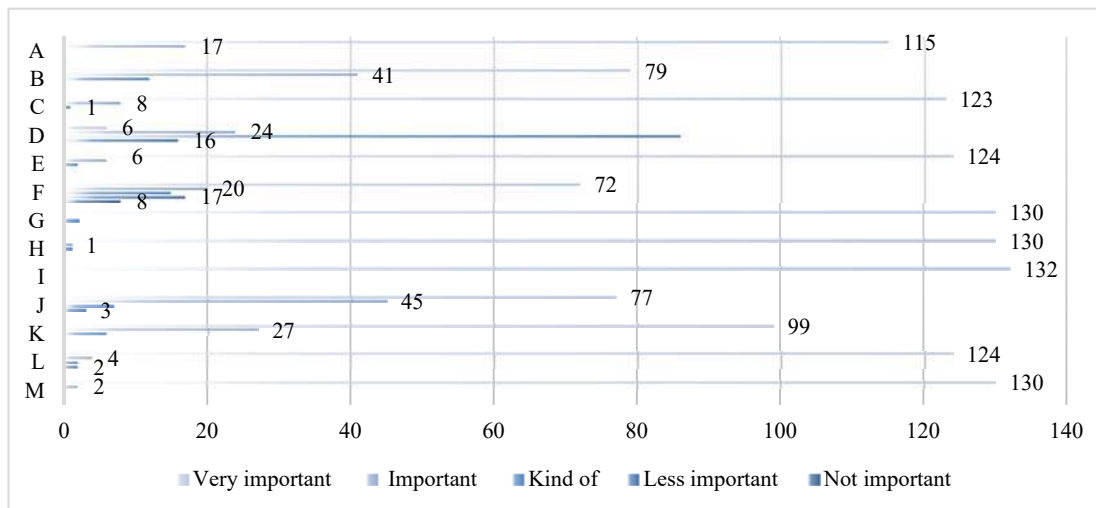
We remark that through the responses given, the tendency of using non-financial reports is in percentage of 91.67% and the integrated reports in percentage of 97.73%, found as self-sufficient instruments. The entities also use accounts from the financial accounting (87.12%) for exposing environmental, social and economic elements of sustainable development. Also, answers such as utilizing the accounts found in the management accounting in percentage of 32.58% and the given social, environmental and economic information through the balance sheet in percentage of 15.91% are also checked. The least number of answers were registered in the case of the dashboard, where the two responders represent a percentage of 1.52% and in the case of the balance scorecard, where the seven responders represent 5.30% of the total.

Tightly related to the anterior question, the responders were asked to give an open answer to the requirements from within the economic, social and environmental pylons found within the accounting model. The economic entities have responded within the social pylon that they are headed in percentage of 72% towards sponsorships and in percentage of 28% towards donations. Within the environmental pylon the highest percentage of responses was towards actions of recycling of 64%, followed by actions of protecting the environment in percentage of 25% as well as forestation in percentage of 11%. We appreciate the fact that the actions developed by the economic entity come in the community's support and contribute on the long term to the sustainable development, accomplishing the principles imposed by it.

In order for actions of sustainable development to be developed, there is a need of drafting a plan, given the entity's strategy. Starting from these considerations within the questionnaire, the responders have been asked whether they have implemented within their activity a strategy regarding the adoption of sustainable development. From the received responses one could note the intention of the economic entities to include within their strategy exigencies of sustainable development. The fact that a percentage of 87.12% of economic entities have implemented a strategy regarding the exigencies of sustainable development only partially and a percentage of 12.88% are totally implemented within the entity using strategy is to be noted. The integration measure in totality of the sustainable development's requirements within the entity's strategy is a requirement imposed by the reporting practice at a European and international level.

Through one of the questions, we wanted to find out the opinion of the responders regarding the association of the sustainable development with a series of terms, noted in an order of given importance. Therefore, in figure 6, the associations between responses are represented graphically.

Figure no. 6. The association of the sustainable development with a series of terms, noted in an order of given importance

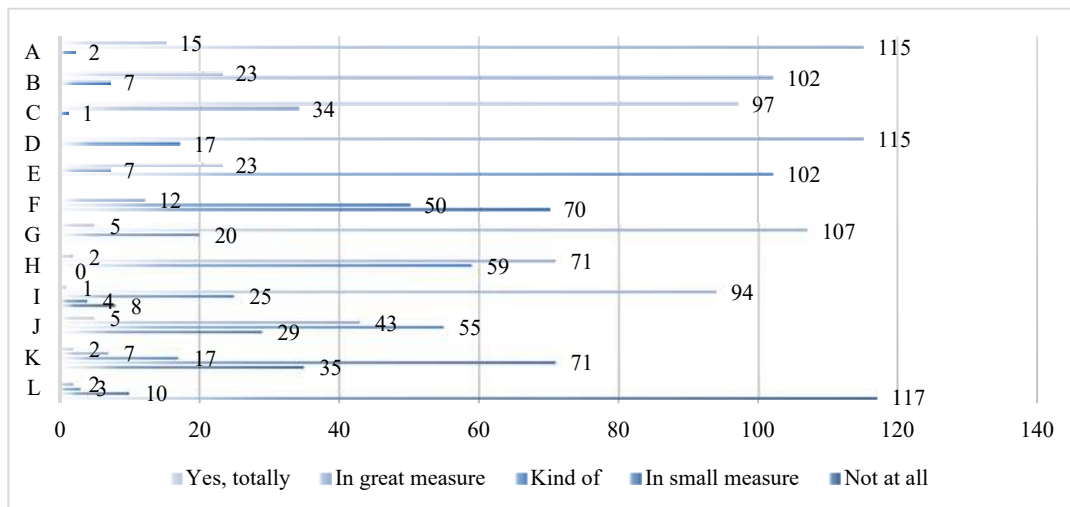


Source: Author's projection

Out of the registered responses, choosing the option *very important* regarding the association of sustainable development results: a percentage of 100% for I. (the positive effects obtained on the long term), a percentage of 98.48% for G. (care for the third parties), H. (correct practices) and M. (improving environmental quality), and the percentage of 93.94% is allocated for the E. response (improving the entity's image in external relationships) and L. (eliminating fraudulent situations). In the C. case (the responsibility towards the environment) it is considered *very important* in a percentage of 93.18% followed by A. (economic responsibility) in percentage of 87.12%. Under 100 responders have considered K. to be *very important* (strengthening the market position) having a percentage of 75%, and B. (social responsibility), F. (marketing practice) and J. (competitive advantage) have represented percentages between 59.85% and 55.55 % from the total of responders to the *very important* section.

In the international context, the sustainable development involves reporting requirements specific to the European Union, where the responders are asked to express their *approval* or *disapproval* regarding the asked questions, their answers being represented graphically through figure 7.

Figure no. 7. The implications of sustainable development in reporting requirements specific to the European Union



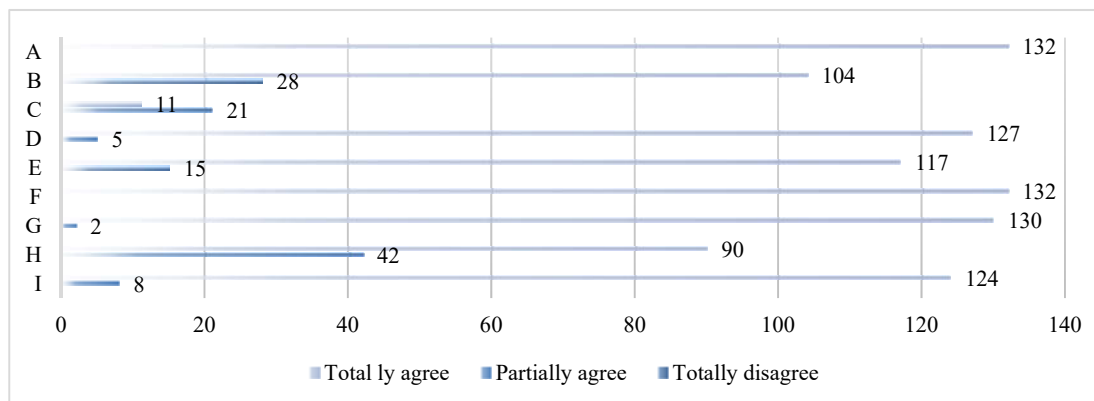
Source: Author's projection

As a follow up to the received responses, one can appreciate the fact that the entities offer a positive response regarding the impact the requirement of the European sustainable development has on the accounting models. Therefore, mostly affirmative answers were received in which the responders were *agreeing* in great measure, the percentage of responses being between 87.12% and 77.27% for questions such as: A. (do you consider that the aspects of the environmental pylon are the most relevant within the accounting model implemented within the economic entity?), B. (do you consider that the aspects of the social pylon are the most relevant within the accounting model implemented within the economic entity?), D. (do you consider that the modification of the accounting model by introducing the elements of sustainable development's elements is exclusively the management's choice?) and G. (do you consider that the introduction within the accounting model of elements specific to the sustainable development influence in a positive manner the future of the economic entity?).

Moreover, one appreciates the responding entities' opinion regarding the fact that there cannot exist any negative effects on the accounting model as a follow up to implementing the sustainable development's exigencies, response offered through L. (do you consider that the adaptation of the existent accounting model to the sustainable development's exigencies could have negative effects on the economic entity?) to which 88.64% responded as *not at all*. Considering the fact that within the content of the questionnaire only aspects regarding sustainable development were presented, one cannot neglect the part within the accounting model which refers to financial information. Therefore,

through the questionnaire, we want to find out the responders' opinion regarding the *agreement* or *disagreement* regarding the financial information from annual reports given by figure 8.

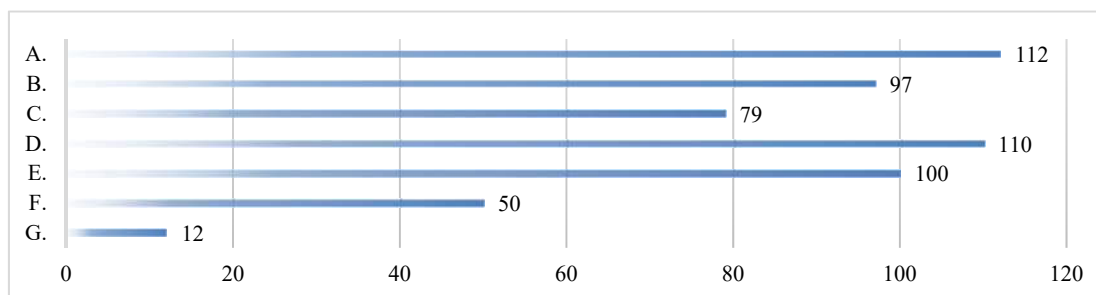
Figure no. 8. The alignment of reports according to the national legislative requirements and the regulations of the European Directives



Source: Author's projection

Judging by the received and synthesized responses in figure 8, it results that the financial information is the main instrument for supplying the economic entities. One can remark for statement E. (an incomplete presentation of the economic entity's performance), 88.64% of responders were in total agreement, fact which signifies the awareness that measuring the performance of the economic entity is not only made through financial information. We mention that the information that the economic entities draft must be adapted and improved in concordance with the national legislative requirements and the European Directive regulations. Through the questionnaire we wanted to find out the obstacles the economic entities encounter on the subject of non-financial information reporting. These are given according to the graphical representation of figure 9.

Figure no. 9. Aspects which prevent non-financial information integration within the accounting model

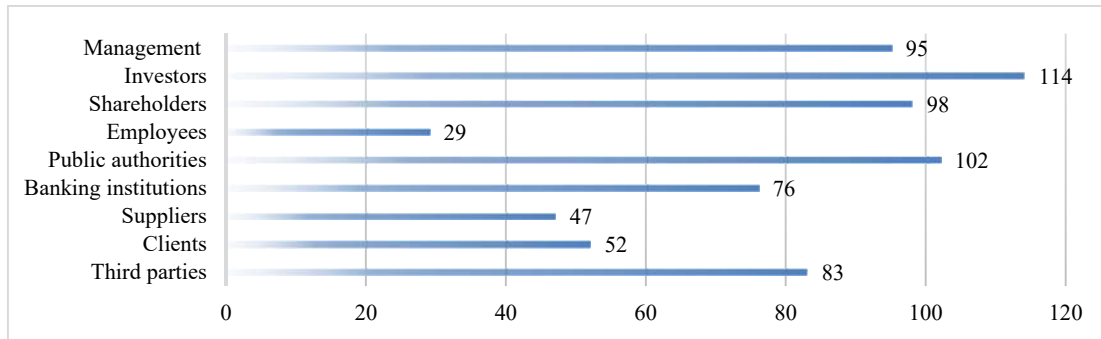


Source: Author's projection

Judging by the responses, one remarks obstacles such as A. (insufficient information) in percentage of 84.85%, D. (lack of good management) in percentage of 83.33% and E. (obstacles of legislative nature) 75.76%. In the background there is B. (lack of financial resources) in percentage of 73.48% and C. (lack of hired personnel trained in this sense) in percentage of 59.85%. The lowest percentage was registered for F. (lack of time due to the fact that adopting principles does not represent a priority) of 37.88% and G. (there are no obstacles) in percentage of 9.09%.

Another question from the questionnaire refers to the users of information from integrated reports, the responders having the possibility of multiple-choice answers, the responses being centralized and graphically represented in figure 10.

Figure no. 10. The users of information from integrated reporting



Source: Author's projection

One remarks answers for each option, for the most frequent of which being clear that non-financial information is addressed to investors in percentage of 86.26% and the public authorities in percentage of 90.91%. Tightly related to these are the shareholders with a percentage of 74.24%, the management in percentage of 91.97%, the third parties in percentage of 62.88% and the banking institutions in percentage of 57.58%. The last percentages are attributed to clients (39.39%), suppliers (35.61%) and employees (21.97%).

5. Discussions and conclusions

By offering responses, the questionnaire results could be interpreted because information was received about the level of integration of the sustainable development's requirements within the accounting model at a microeconomic level. Through the identified characteristics their interconnection could be formed and the emitted hypothesis could be verified in order for an opinion to be established. Therefore, the hypothesis: *At a microeconomic level, the requirements of sustainable development have an impact on the accounting model*, holds true. The economic entities which have adopted the sustainable development's requirements have observed modifications at the accounting model's level, these modifications being reflected through the reporting method. Offering non-financial information through integrated reporting supposes an effort for the economic entity regarding the resources it must allocate for reporting. The novelty element of the sustainable development's pylons is the one that puts the economic entity's accounting model in difficulty, which must distinctly highlight the social, environmental and economic aspects. The integrated reports drafted by the economic entities are mostly influenced by the specific of the activity they develop. Through the questionnaire, it has been noticed the fact that even though at the level of the accounting model there are changes regarding the traditional reporting system, these changes have a positive effect on the long term and bring benefits to the economic activity.

The limits of the identified empirical research refer to the category of entities for which the questionnaire is addressed to, their choice being conditioned by the number of employees. Given the fact that at Romania's level most economic entities are part of the category of small and medium entities, this study cannot be applied to them because they are not obligated to adopt practices of sustainable development and to draft integrated reports, so the questionnaire's results would not be relevant. To overcome these limits, this questionnaire can be sent out to economic entities which have implemented the sustainable development's exigencies and draft integrated reports voluntarily. Moreover, the limits of the national borders could be surpassed, and the questionnaire can be applied to economic entities within the European space which are part of the regulations of the European Directives, or which respect the principles of the international framework of integrated reporting.

From the research it results the accomplishment of the objective proposed at the beginning stage. Therefore, through the questionnaire we could find out how the practitioners perceive the exigencies of the sustainable development and how much importance is given to them at the economic entity's level. We have brought to the attention the reasons that stay at the base of implementing elements of sustainable development within the accounting model, as well as the stage in which the entities in Romania are in the process of implementing the practices of sustainable development. We conclude

that in this situation, in our sample, the entities which should publish elements specific to sustainable development have integrated within the accounting model the requirements of European reporting, and their integration method is specific to each economic entity. Self-establishment of this procedure is currently suggested by the authorities, considering the non-existence of a form or a predetermined material offered to complete this information.

We consider that the study's results can be valued from a point of view of continuing the process of research by surpassing the created limits, as well as by using the results from a statistical point of view or with informative purpose for the masses.

6. References

- Bonila-Priego, J., Font, X. și Rosario Pacheco-Olivares, M. 2014. Corporate sustainability reporting index and baseline data for the cruise industry. *Tourism Management*, 44, pp. 149-160.
- Dima, S., Popa, A. și Farcane, N. 2015. Informațiile financiare și non-financiare între raportare sustenabilă și raportare integrate. *Audit financiar*, 13(2), pp. 21-33.
- Directiva 2014/95/UE a Parlamentului European și a Consiliului din 22 October 2014 de modificare a Directivei 2013/34/UE în ceea ce privește prezentarea de informații nefinanciare și de informații privind diversitatea de către anumite întreprinderi și grupuri mari Available at: <https://eur-lex.europa.eu/legalcontent/RO/TXT/?uri=CELEX%3A32014L0095> [Accessed 17 May 2022].
- Frías-Aceituno, J., Rodríguez-Ariza, L. și García-Sánchez, I. (2013), Is integrated reporting determined by a country's legal system? An exploratory study. *Journal of Cleaner Production*, 44, pp. 45-55.
- García-Sánchez, I., Rodríguez-Ariza, L. și Frías-Aceituno, J. 2013. The cultural system and integrated reporting. *International Business Review*, 22(5), pp. 828-838.
- Global Reporting Initiative (GRI). *The GRI Sustainability Reporting Standards: The Future of Reporting*. Available at: <https://www.globalreporting.org/Pages/default.aspx> [Accessed 7 May 2022].