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CONTENT

| | | |
|--|--|----------------|
| Oana – Luminița VOICU | KEEPING QUALITY UNDER CONTROL – AN IMPORTANT FUNCTION OF MODERN MANAGEMENT | 6-12 |
| Aderemi Olalere ADEBAYO | FACTORS INFLUENCING INTERNET FINANCIAL REPORTING AMONG NON-FINANCIAL LISTED FIRMS IN NIGERIA | 13-25 |
| Diana-Elena Toma (NASTASIA), Ion CUCUI, Silviu Constantin NASTASIA | RISK ASSESSMENT AND MANAGEMENT IN ECONOMIC ENTITIES THROUGH THE USE OF DISCRIMINATORY ANALYSIS MODELS | 26-34 |
| Alona BEKH | PEST ANALYSIS OF PAID DIGITAL MEDIA SUBSCRIPTION MODEL IN EUROPEAN COUNTRIES | 35-44 |
| Adriana PĂDURARU (HORAICU), Ana-Maria COMĂNDARU (ANDREI), Volodea MATEEVICI | THE ANALYSIS OF FINANCIAL AND NON-FINANCIAL INDICATORS, ESSENTIAL COMPONENT OF APPRECIATING THE GLOBAL PERFORMANCE | 45-56 |
| Marius GUST | TRADITIONAL BANKING AND DISRUPTION FINTECH. EVOLUTIONS, CAUSES, TYPOLOGIES | 57-72 |
| Georgiana-Janina SOARE | NON-FINANCIAL REPORTING: AN INSTRUMENT OF SOCIAL RESPONSIBILITY AT THE LEVEL OF PUBLIC INTEREST ENTITIES | 73-85 |
| Magdalena DĂNESCU | THE RELEVANCE OF HUMAN RESOURCES MANAGEMENT THROUGH STRATEGIC PILOTING WITH THE HELP OF THE DASHBOARD | 86-96 |
| Cristina-Cora PÎRVU | POVERTY AND SOCIAL EXCLUSION | 97-105 |
| Mihail Alin STANCIU | ECONOMIC PERFORMANCE AS THE BASIS OF SUSTAINABLE DEVELOPMENT | 106-111 |
| Alina SUSLENCO | IMPLEMENTATION OF UNIVERSITY SUSTAINABILITY MANAGEMENT BY MEANS OF UNIVERSITY PERFORMANCE STRATEGIES | 112-121 |
| Anda Ileana NECULA, Isabela STANCU (LITA), Gabriel CUCUI, Anca Daniela ȘENCHEA (FLOREA) | CONSIDERATIONS REGARDING THE DEPRECIATION METHODS OF THE ASSETS USED IN AGRICULTURAL PRODUCTION | 122-128 |
| Anda TEODORESCU | THE SCHOOL FINANCIAL AUDIT IN ROMANIA | 129-133 |

| | | |
|---|---|----------------|
| Cristina STROE, Diana MOISEVICI-SERB | PERFORMANCE OF THE EDUCATIONAL PROCESS CARRIED OUT IN THE ON-LINE ENVIRONMENT IN THE CONTEXT OF PANDEMIC | 134-139 |
| Mădălina ALBU | CREATIVITY STIMULATION METHODS USE IN BUSINESS DEVELOPMENT | 140-145 |
| Loredana Maria PĂUNESCU | ANALYSIS OF THE CORRELATION BETWEEN THE MARKET OF LONG CONSUMPTION GOODS AND SALES OF A COMPANY IN THE CURRENT SITUATION | 146-151 |
| Corina DUCU | PECULIARITIES IN THE ACCOUNTING OF THE PUBLIC INSTITUTIONS' EQUITY CAPITALS | 152-158 |
| Tatiana GUTIU | ANALYSIS OF TRADING PARTNERS' PRACTICES FOR IMPROVING THE COMMERCIAL POLICY OF THE REPUBLIC OF MOLDOVA | 159-172 |
| Veronica GARBUZ, Yuriy PETRUSHENKO | THE FUTURE OF EDUCATION AND THE LABOR MARKET IN THE CONTEXT OF INDUSTRY 4.0 | 173-180 |

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KEEPING QUALITY UNDER CONTROL – AN IMPORTANT FUNCTION OF MODERN MANAGEMENT

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Abstract: *At the beginning of the twentieth century quality becomes a “lifestyle”, a basic component of the management in an organization. Nowadays, quality is designed as a competitive strategy in relation to: satisfying the clients’ needs, a continuous enhancing of the quality; making all the employees aware of the quality; preventing defects; the analysis of all the quality-centered activities and processes, in order to correct and adjust them. Obtaining products in accordance with quality requirements and minimal costs represent an operational objective of a firm. What costs money is non-quality. Therefore, using adequate scientific instruments to control the quality and prevent irregularities represents a major goal for an advanced modern management.*

Keywords: *Total quality (TQ), Total Quality Management (TQM), quality control, “zero defects”, non-compliant product.*

JEL Classification: *L15.*

1. Introduction

From its manifestation as a phenomenon at the beginning of the 1930s up until the present, the evolution of quality was marked by four stages (Moldoveanu and Dobrin, 2016, p. 360):

- artisanal production;
- quality ensuring;
- quality management;
- total quality management.

In the modern economy of the 21st century, quality becomes the key factor in market regulation through the client, because he is the one who determines the quality and not the manufacturer. Kelada defines the *quality - client* relationship in a very clear manner, when referring to the concept of *total quality*. In his opinion, total quality represents satisfying the clients’ needs regarding product or service quality (Q), the delivery of the requested quantity (V) at the required time (T) and place (L) at the lowest cost (C) for the client, in a cordial and efficient manner for him and in a flawless administrative system (A), starting with the preparation of the order up until the payment (Olaru, 1999, p. 123).

Western enterprises are convinced that quality is the sole decisive competition factor. Thus, they developed a *total quality strategy*.

While *total quality* (TQ) represents the aim, the *total quality management* (TQM) is the means of its realization. TQM integrates concepts related to *inspection, control, quality ensuring and management* (quality ensuring at large).

In Ph. B. Crosby’s opinion, in order to ensure quality, the following principles should be taken into account: ensuring conformity with the specified requirements through a standard or some other legal act; ensuring quality through prevention; promoting the “*zero defects*” concept, by which “everything has to be done properly from the first try”, therefore avoiding the costs generated by the control of the products’ manufacturing process.

Industrial production determined the emergence of the “*compliance*” term which can be verified through *control*. A thorough control system allows the detection of *non-quality*. The costs generated by unmet requirements determine the extent of quality.

Therefore, competitiveness represents a goal which can be reached by implementing the TQM principle, under the conditions of the valorization of all the resources of the enterprise:

- customer orientation;
- internalizing the client-provider relationship;
- quality above all;
- “zero defects” and constant improvement;
- Systematic view;
- Data argumentation.

2. The characteristics of the quality control function

The quality control function deals with:

- a) the body of surveillance activities for process conducting and evaluation results in the quality domain in each stage of the product’s trajectory in connection with pre-established objectives and standards;
- b) the disposal of recorded deficiencies and their subsequent prevention during a process.

The *SR ISO8402:1995* standard – “*Quality Management and ensuring quality. A Vocabulary*” defines a series of activities specific to keeping the quality of the process, product or work in check; *quality surveillance, quality inspection, quality verification*.

In order to be efficient, quality control must meet a series of characteristics:

- as a method of prevention, focusing on the analysis of the cause of the irregularities and taking appropriate measures, along with the integration of positive irregularities;
- impartial, fair;
- systematic, short duration and high-speed reporting;
- flexible, not excessive, clear, constructive, through a precise mentioning of corrective actions;
- focused on critical aspects in strategic points;
- executed by qualified people.

3. The analysis of statistical processes (ASP) – modern instrument for preventing irregularities.

In order to satisfy the customers’ requirements, it is important to manufacture good-quality products, which are delivered under the required conditions and the appropriate time and by taking costs into consideration as well. From this perspective, production control does not only mean quality control, but also controlling the quantity of the products and the costs. Deviation in the negative sense from standardized quality leads to high costs, caused by reconditioning or throwing away non-compliant products. In order to avoid such situations, it is mandatory to comply to the following steps (figure no.1).

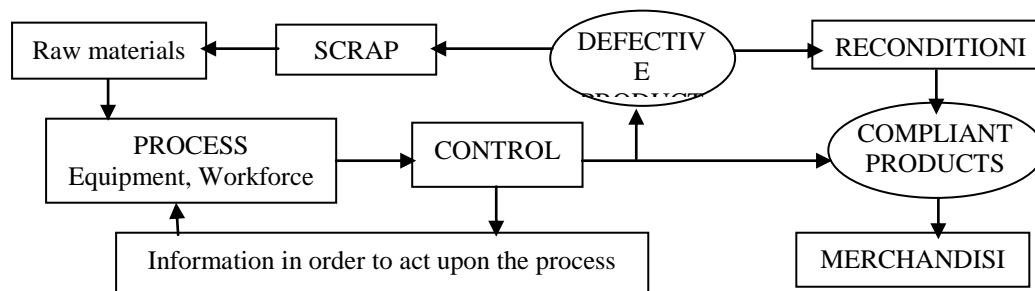


Figure no. 1. Quality process

Source: Moldoveanu G., Dobrin C. (2016), Management operațional, Pro Universitaria, Bucharest, p. 363

Nowadays, a simple technical control is not enough, because it is not compatible with the modern idea of quality management (“zero defects”) and its specific techniques and instruments. *Statistical analysis of the processes (SAP)* represents an adequate instrument for non-compliance prevention, which ensures reaching the “zero defects” target. It is a scientific instrument based on the use of statistical techniques, in the case of reaching mass production. In order to apply it, a few classic techniques and instruments of quality management are required: the Pareto diagram, the cause-and-effect diagram, the control diagram etc. There is an increasing number of big enterprises, especially those from the automotive industry, which request the consistent implementation of SAP by its providers.

A comparison in performance between quality and SAP is shown below (figure no. 2).

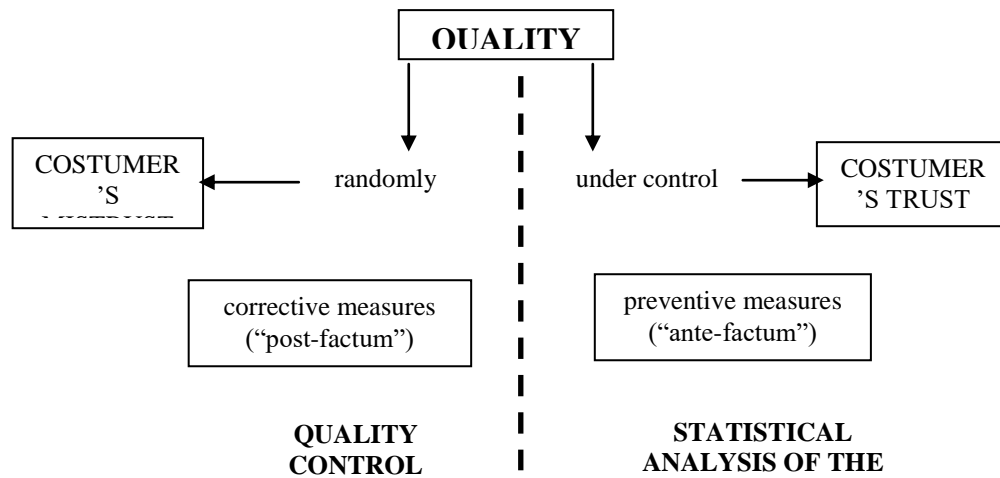


Figure no. 2. Comparison between „Quality control” and „Statistical Analysis of the Processes”

Source: Drăgulănescu N. (1999), Ghid practic de managementul calității pentru firmele performante, Niculescu, Bucharest, p. 56

4. Keeping possible non-compliances under control through quality procedures

The existence of a *non-compliance* practically means that a product or service realized by an organization does not meet a requirement (*SR EN ISO9000:2015*).

The process of keeping non-compliances under control is described by “*Deming’s circle*” which encapsulates four infinitely chained sequential processes: **P** = *plan*; **D** = *do*; **C** = *check*; **A** = *action*¹.

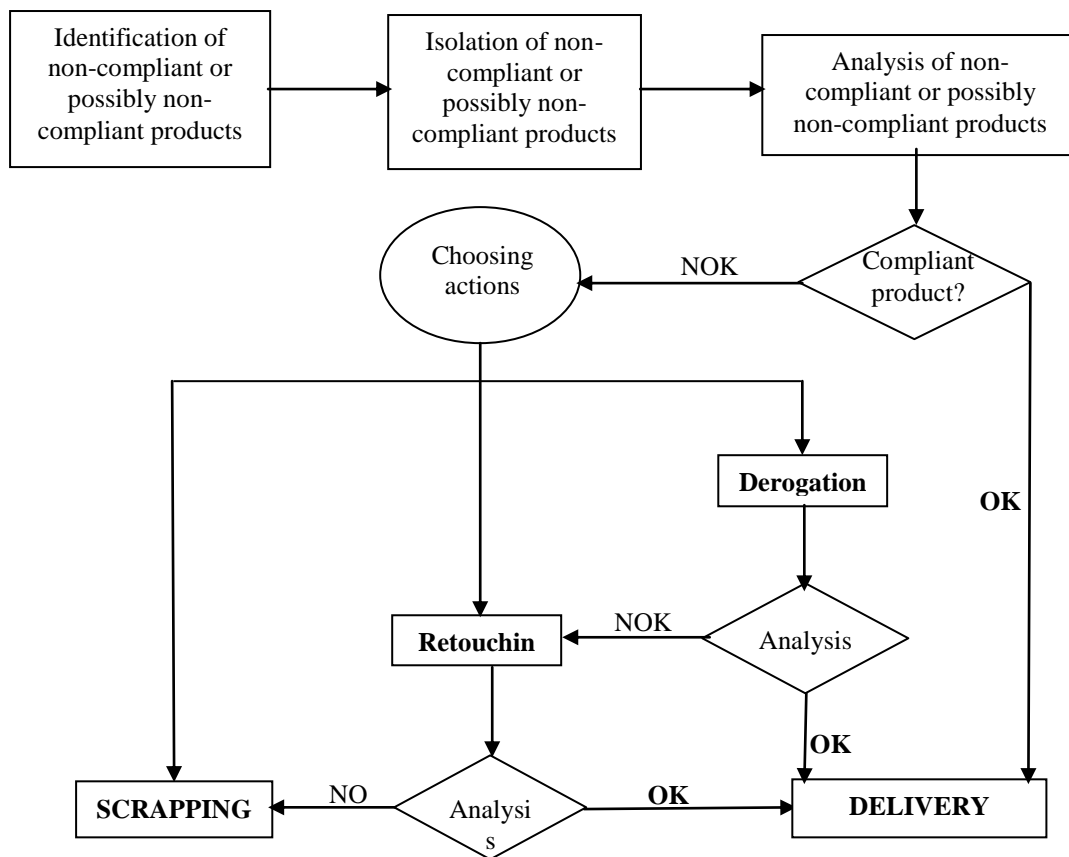
All the aspects which are related to non-compliant products (scrap, products that are subject to recycling/destroying; products which can be derogated; products that must be sorted/returned, products with discharge authorization) are mentioned in the “non-compliant product report” document. This must contain a series of elements, such as: non-compliance identification; a proposal regarding how to handle a non-compliant product; the decision on the determined actions (corrective / preventive).

The *SR EN ISO9001:2001* standard states that the identification and management of non-compliance shall be presented in a documental procedure called “*The control of the non-compliant product*”, with reference to:

- the purpose of the keeping non-compliance in check;
- application domain;

¹ In this case, „action” has the meaning of applying corrective and preventive measures.

- terms, definitions, normative references;
- description of possibly non-compliant products;
- responsibilities;
- records;
- appendices etc.



Scheme no. 1. The logic of chaining activities for the identification and treating non-compliant or possibly non-compliant products

Adapted after: Quality Procedure S.C. „Automobile Dacia” S.A. (2019), *“Identificarea, izolarea, analiza și tratarea produsului neconform” – RPIFDACIA20055022*

Starting from this premise, quality procedures are applied within the quality departments, which refer to:

- identifying, isolating, analyzing and treating the non-compliant product;
- corrective actions;
- preventive actions.

A rigorous methodology is applied in the manufacturing process in order to identify non-compliant or possibly non-compliant products (scheme no. 1).

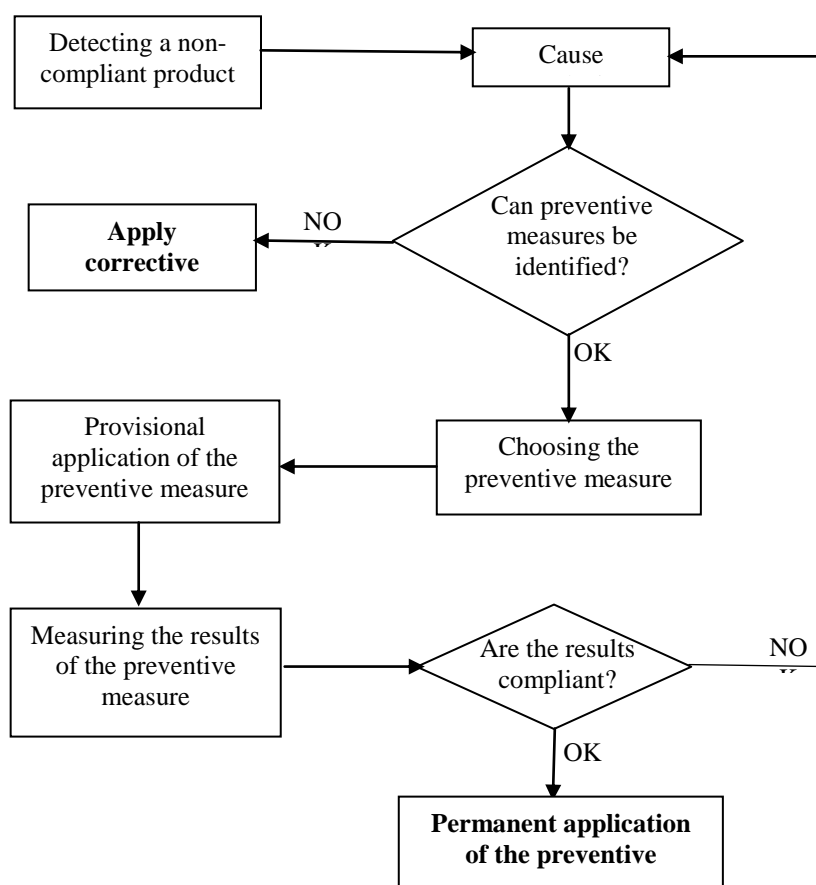
After identification, depending on well-defined criteria, they are classified as follows:

- compliant products, which can be delivered without any intervention;
- products with minor defects, which can be delivered through derogation, after an analysis which shall mention the conditions under which these parts are used;
- products with reparable defects, which can be delivered after applying some additional operations (retouching);

- products with irremediable defects, which cannot be delivered (scrap).

The above-mentioned handling process falls in the “post-factum” mode of action. In this case, we can see that the enterprise must invest additional resources for retouching operations (highly qualified operators; additional analysis and control operations) or for eliminating non-compliant products (recycling, eliminating environmentally harmful products).

In the context of highly qualified workforce shortage and the raise of constraints for environment protection, reducing the number of non-compliant products is an objective with an important positive impact on profitability. In order to solve this problem, the enterprise shall take *preventive measures* to reduce the number of manufactured non-compliant products. This is how is entering in the logic of “ante-factum” action.



Scheme no. 2. The logic of chaining the activities of preventive measures application

Adapted from: Quality procedure S.C. „Automobile Dacia” S.A. (2019), “Acțiuni preventive” – RPIFDACIA20065177

From the analysis of manufacturing products and processes, various causes for non-compliance can be identified:

- incorrectly executed adjustments;
- accidental stoppages caused by ineffectiveness or inadequate execution of a work;
- using inadequate tools;
- non-compliance with the manufacturing technological process or the storage and transport conditions;
- assigning jobs to people with the wrong qualification;
- using non-compliant commodities and materials;

- using the wrong technical documentation;
- the wrong control procedures;
- non-complaint control measures.

The identification and application of preventive measures upon the causes are made to prevent their apparition in the future.

In order to identify and apply preventive measures, shall be applied procedures whose logic chaining is shown in the scheme no. 2.

5. Conclusions

Interest in quality experienced an evolution marked by several stages: quality regarded as an integrated element in the manufacturing production; quality inspection, statistical control of quality; ensuring quality; implementing and development of integrating concepts for quality ensuring – Quality Management (QM), Total Quality Management (TQM). Quality becomes “a competitive strategy originally applied to industrial processes” (Moldoveanu and Dobrin, 2016, p. 360)

The new concept based on TQM puts forward the satisfaction of costumers inside and outside the enterprise, promoting accountability and including all the members of the organization in achieving, ensuring and improving quality. Emphasis is laid upon prevention, so that everything is done “properly from the first try”.

As a function of modern management, *keeping quality in check* contributes to the optimization of all the activities and processes in an enterprise.

The function of the quality control is that of measuring the results, with implications for other management functions: prevention, organization, training, coordination and command.

By analyzing non-compliance, managers will be able to find efficient solutions to their own production process and to the formation of a pro-quality attitude and culture.

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FACTORS INFLUENCING INTERNET FINANCIAL REPORTING AMONG NON-FINANCIAL LISTED FIRMS IN NIGERIA

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Abstract: *This study investigates the factors influencing internet financial reporting among non-financial listed firms in Nigeria, considering factors such as firm size, profitability, and auditor reputation. The study population consists of one hundred and twelve (112) non-financial listed firms of which purposive sampling technique was used to select fifty (50) firms having adequate information needed for the study in their annual report from 2012 – 2018. The study utilised multiple regression analysis to investigate the influence of firm size, profitability, and auditor reputation on internet financial reporting. It was found that firm size positively influences internet financial reporting, while profitability and auditor reputation have a positively significant influence on internet financial reporting. Therefore, the study recommends that policymakers endeavour to ensure that the listed firms provide their financial report for easy access to users on the websites.*

Keywords: *internet financial reporting, firm size, profitability, auditor reputation.*

JEL Classification: *G32, M42.*

1. Introduction

The previous economic crisis has demonstrated that various sectors of the information revealed are inadequate, and that information asymmetry issues are very high. Bear Stearns and Lehman Brothers' bankruptcy has been due to a lack of proper financial reporting (Grougiou, Leventis, Dedouslis and Owusu-Ansah, 2014). The conflict of interest may emerge when managers use their control over accounting gains to achieve secrecy at shareholders' expense. This opportunity helps managers to manipulate profits more easily. These can adversely impact the credibility and accuracy of the company's financial reporting (Lambert, 2001).

Additional information on the capital markets is given on the websites of companies. In contrast with institutional investors, it is critical for private investors. In the context of Nigeria, few evidence have been gathered regarding the voluntary utilisation of internet by firms in emerging countries like Nigeria to publish its financial statement. This study examines the factors influencing the degree of financial information disclosure on the internet. It worthy to note that the level of financial information published on the websites of companies and the internet are influenced by varying factors such as firm size, profitability, auditor reputation and so on (Jimoh and Okoye, 2016).

Additionally, problems and difficulties related to IFR include possible errors in the retrieval or re-keying process that may impact the efficiency and credibility of financial reports; generally accepted accounting practice (GAAP) IFR implications; use of company websites for several different reasons that may make it difficult to discover financial statements; and acceptance of internet financial information as an alternative.

In the internet financial reporting context, the biggest problem is to guarantee the confidentiality and credibility of financial reports reported on company websites. In addition to potential mistakes in the publication process, web-based documents are vulnerable to all types of security threats. Financial information can, after publication, be changed by parties outside and inside the organisation, whether knowingly or unknowingly. There is a significant possibility that financial information users relying on misleading financial information obtained from company websites will make important decisions. The degree to which these concerns are addressed can decide the long-term use of the internet to publicise financial information of corporate bodies.

Therefore, in recent years, the researchers focused on corporate reporting on websites. Moreover, there is a minimal emphasis on Internet Financial Reporting in emerging countries (Hamid, 2005), making it very important to concentrate on emerging countries. This research's primary motivator is the inadequacy of a scientific investigation on corporate internet reporting in Nigeria. Similarly, in developing markets, the improvement in market value companies can generate by strengthening its corporate governance policies is even more significant. In Garay, González, Guzmán and Trujillo (2013), the utilisation of the internet to communicate corporate governance information is increasingly relevant throughout the 21st century. Thus companies can improve their market value by enhancing the consistency and quality of the information they reveal (Patel, Balic and Bwakira, 2002).

It is important to evaluate the factors impacting financial reporting on the internet among non-financial listed companies in Nigeria. Given that Nigeria needs foreign funding to retain its fast growth rate and the agency's key issue is that the majority of owners are asymmetrically informed and expropriated, companies need to be transparent. Hence, this study examines the factors influencing internet financial reporting among non-financial listed companies in Nigeria.

2. Literature Review

2.1 Factors Influencing Internet financial Reporting

In the formation process of the internet financial reporting (IFR), research was analytical and it examined the extent to which it was implemented (Ettredge, Richardson, & Scholz, 2001). The investigation has also gained an understanding of both the motivation and features of firms that implement financial reporting on the internet (Debreceeny, Gray, and Rahman, 2002; Ettredge, Richardson, and Scholz, 2002). Internet Financial Reporting is voluntary corporate disclosure standards (Oyelere, Laswad and Fisher, 2003). In a study by Debreceeny et al. (2002), internet financial reporting was described as the extent to which company financial reports and results are disseminated through the World Wide Web. Other researchers were more stringent in their definition of internet financial reporting as providing financial information on company websites (Pinto and Ng Picoto, 2016).

Like voluntary disclosures, firms have strongly supported internet financial reporting to minimise asymmetry in information (Debreceeny et al., 2002). The disclosure of financial information over the internet provides some benefits over conventional paper-based disclosures (Rahman and Debreceeny, 2014). Although studies have documented the advantages and implications of reporting financial information on the internet. Full implementation of online financial reporting could be a disadvantage to those who do not have access or Internet skills (McCafferty, 1995). Notwithstanding potential publishing errors, there is a clear indication that data may be manipulated internally or externally, which may bring about abnormality if investors depend on it for their decision making (Miniaoui and Oyelere, 2013).

Firm size and Internet Financial Reporting

According to Debreceeny and Rahman (2005), the author gathered that there exist a positive relationship between the firm size and the degree of internet financial reporting. Varying studies have also demonstrated that firm size have positively significant influence on the levels of disclosure and quality of publicizing corporate information through the website of the company (Bonson and Escobar, 2002; Elsayed, 2010; Al-Htaybat, 2011; AbuGhazaleh, Qasim and Haddad, 2012; Desoky and Mousa, 2013; Sharma, 2013). To fulfill the great demand for information, it is probable that larger firms utilise information

technologies to enhance financial reporting. Big companies are faster to implement an innovation, such as disclosure and IFR, as they have enough personnel and resources.

In other studies by Ettredge et al. (2002), Oyelere et al. (2003), and Alarussi et al. (2009) found that firm size statistically affects the internet financial reporting positively. In addition, Xiao et al. (2004) found that a significantly positive relationship between firm size and internet financial reporting because big firms typically have more present and potential investors than small firms and are therefore very active in releasing online financial information. In comparison, big firms gain numerous analysts attention than smaller firms, and therefore their performance informations are subject to greater demand (Hope, 2003). Furthermore, Aly *et al.* (2010) and Henchiri (2011) failed to found a significant relationship between firm size and internet financial reports. Alkhalaileh Al-Qenae and Abu Farha (2005) document that firm size does not influence companies' internet financial reporting.

Profitability and Internet Financial Reporting

Pirchegger and Wagenhofer (1999) found that a positive association exists between a company's profitability and financial information disclosure on the internet for Austrian firms. Also, in studies conducted by Ashbaugh, Johnstone and Warfield (1999); Ismail (2002); Debreceny and Rahman (2005), it was found that a significant relationship exists between profitability of the firm and financial report disclosures on the websites of companies.

Companies are encouraged to disclose more information and to signal the performance of the business to their stakeholders. The study carried out by Akbar and Daljono (2014), Jaya and Verawati (2015) reveal that a significant positive relationship exists between profitability and internet financial reporting. If earnings are low, management is likely to reveal fewer details to cover the causes for losses or reduced earnings. However, preliminary empirical evidence that documents a positive association between profitability and internet financial reporting were not supported in Japanese firms. Furthermore, Larra'n and Giner (2002), like other early studies, found no significant relationship between profitability and online financial disclosure.

Leverage and Internet Financial Reporting

Scholars such as Mitchell, Chia, and Loh (1995); Naser (1998) in their studies, opined that corporate leverage maintains a positive effect on levels of internet financial reporting voluntary disclosure.

A prior study conducted by Aqel (2014), which investigated the influence of leverage on internet financial reporting, found that a positive relationship exists between them. Also, Laswad et al. (2005) gathered that firms believe that internet financial reporting is a means of enhancing monitoring by creditors. Scholars such as Xiao et al. (2004), Al-Sakarneh (2011) and Miniaoui and Oyelere (2013) gathered mixed results and argued that leverage may influence internet financial reporting voluntary disclosure either positively or negatively. Furthermore, Hassink and Bozic (2006) found a negative and non-significant association. It was concluded that denying the effect of leverage on the level of internet financial reporting is difficult.

Auditor Reputation and Internet Financial Reporting

The previous study results stress the significance of the type of audit (Big 4 or Non-Big 4) only in deciding a firm's acceptance rate, not changes in levels of Internet financial reporting disclosure practices (Healy and Palepu, 2001). The outcome reveals that companies audited by the Big4 audit firms may influence top management decisions in the early adoption stages. However, they do not go forward to influence their levels of disclosure. Xiao et al. (2004) suggest that multinational audit firms propagate innovative technology. For example, price Waterhouse Coopers has built a method that makes it easy to compare the financial statements of numerous firms. The Big 4 audit firms are also associate

with Extensible Business Reporting Language (XBRL). They are much best placed to educate their clients on internet financial reporting.

Previous studies have shown mixed findings on the relationship between Big 4 audit firms' clients and the degree of internet financial reporting. Studies by Boubaker, Lakhali and Nekhili (2011) and Xiao et al. (2004) found a positive relationship between Big 4 audit firms and the level of internet financial reporting disclosure. Companies audited by Big 4 audit firms have good potential to signal high-quality information to stakeholders. Bonson and Escobar (2006) and Boubaker et al. (2011) have argued that the audit type is closely related to internet financial reporting practices. However, results from other previous studies have failed to identify such a significant relationship between audit type and internet financial reporting (Joshi and Al-Madhahki, 2003; Aly et al., 2010).

2.2 Underpinning Theories

Disclosure of financial reporting on the internet is a subtle and nuanced phenomenon targeted at multiple stakeholder groups (Solmons 1986). It is also not wise to describe their practices in a single analytical way (Hope, 2003). For this study, agency, stakeholder theory, and the theory of information cost were discussed.

The relationship with the main agent is a relationship that assigns decision making to the agent. It falls out of the distinction between company management and ownership decision making from risk-bearing.

Jensen and Meckling (1976) stated that the separation of power between the owner and the manager would lead to a future conflict of interests because each party was subjected to optimise its benefits. This conflict will aggravate the problem, the so-called agency cost problem. Three common agency costs may arise due to the conflict of interest, which exists in the relationship between the manager and the owner of the company. These costs were identified as monitoring costs, bonding cost, and residual loss (Jensen and Meckling, 1976). In essence, the manager's performance is evaluated and compensated based on the additional information disclosed (Omar and Simon, 2011).

The agency theory indicates that because investors are comparatively away from business operations, they want to guarantee their interests are not susceptible to unethical expropriations by managers. Management is most likely to willingly take several measures, such as undertaking reviews and disclosures, to mitigate owners' problems. It is claimed that voluntary disclosure is a monitoring mechanism that seeks to shield shareholders from opportunist management actions (Henchiri, 2011; Nurunnabi and Hossain, 2012).

The Stakeholder theory also seeks to define the interaction between a company's management and all associated parties. It extends the common understanding of shareholder theories. The theory's emphasis is that an organisation is not solely responsible for shareholders but to all stakeholders at large to discharge the accountability of its functions. Solomon (2017) opined that new companies are so immense and have such an all-embracing influence on culture as a whole (Gray, Owen and Adams 1996).

In comparison, a voluntary disclosure may be considered as mitigation for mandated disclosure shortcomings. An overview of costs and benefits is always undertaken before any more details are disclosed. Managers prefer to disseminate additional information freely where the rewards of the information released outweigh their risks. Xiao, Dyson and Powell (1996) contend that there is no agreed price system for information dissemination.

3. Methodology

The ex-post facto research design was employed for this study. This type of research design, otherwise known as after-the-event, is undertaken after the events and data are already in existence. The study population consists of One hundred and twelve (112)

non-financial firms listed on the Nigerian Stock Exchange. The sampling technique used in this study is purposive sampling technique out of all One hundred and twelve (112) listed non-financial firms, the study selected Fifty (50) firms having adequate information (annual reports) needed from the Nigerian Stock Exchange with available data from 2012 to 2018. Table 1 describes the number of non-financial listed firms by sectors.

The study used different statistical tests to examine the hypothesised relationship, including descriptive statistics. Assumption tests were conducted to provide insight into the normality and heteroscedasticity of data. Furthermore, correlation analysis was used to examine the relationship between the variables while a multicollinearity test was conducted to investigate whether independent variables are linearly related.

Finally, to examine the effect of firm size, profitability, and external auditor reputation on internet financial reporting among non-financial listed firms on the Nigerian Stock Exchange, Ordinary Least Square (OLS) regression analysis was utilised. The data were analysed with the aid of STATA version 14. Table 2 shows the measurements of variables and their sources.

Table 1. Number Non-financial Listed firm by Sectors

| Sectors | Number |
|--------------------------|--------|
| Agriculture | 5 |
| Conglomerates | 5 |
| Construction/Real Estate | 9 |
| Consumer Goods | 20 |
| Healthcare | 10 |
| ICT | 9 |
| Industrial Goods | 13 |
| Natural Resources | 4 |
| Oil and Gas | 12 |
| Services | 25 |
| TOTAL | 112 |

Table 2. Measurement of Variables

| S/N | Variables | Definition | Type | Measurement | Source |
|-----|-----------|------------------------------|-------------|---|--|
| 1 | IFR | Internet Financial Reporting | Dependent | measures internet financial disclosure using dummy variables where is 1 for those disclosing financial information online and 0 for those not doing so. | Sanad, Al-Sartawi and Musleh (2016) |
| 2 | FMS | Firm Size | Independent | Natural log of total assets of the firm | Braiotta (2000); Aly, Simon and Hussainey (2010) |
| 3 | PROF | Profitability | Independent | ROE (net profit/equity) | Aly, Simon and Hussainey (2010); Mokhtar (2017); Mohamed and Dinesh (2016) |
| 4 | AUDREP | Auditor Reputation | Independent | 1 for companies that are audited by one of the Big4 audit firms; 0 otherwise | Aly, Simon and Hussainey (2010) |
| 5 | LEV | Leverage | Control | Total Assets divided by total equity | Hussainey (2010) |
| 6 | CURRENT | Current | Control | Current Assets to current liabilities | Sanad, Al-Sartawi and Musleh (2016) |

Source: Author's Compilation (2020)

4. Results and Discussion

This section presents with the analysis and interpretation of results obtained from data analysis.

Correlation Matrix of the Study

With the aid of the Pearson Correlation, Table 3 shows the direction of the relationship between dependent and independent variables. It shows a positive correlation between internet financial reporting quality (IFR) and Firm Size (FMSIZE) from the correlation coefficient of 0.1176. Therefore, it implies that firm size tends to determine or vary the internet financial reporting positively and proportionally. Hence, an increase in the firm size would increase the firms' internet financial reporting and vice-versa.

Furthermore, the result in Table 3 indicates a weak association between internet financial reporting and Profitability (ROE) from the correlation coefficient of 0.0526. The result implies that profitability is weakly but positively correlated with internet financial reporting among listed non-financial firms in Nigeria. The table also shows a positive correlation between internet financial reporting and Audit Reputation with a correlation coefficient of 0.2387. Similarly, the table shows a weak positive correlation between leverage and internet financial reporting, as shown by the correlation coefficient of 0.141.

Also, the correlation coefficient of 0.0394 reveals a weak positive correlation between internet financial reporting and leverage. The result implies that though the correlation is positive, it is weak. Also, indication a slight deviation from zero association to positivity.

It can also be deduced from Table 3 that Current, which was measured with the ratio of current assets to current liabilities, maintains a negative correlation with internet financial reporting. This implies that the direction of the relationship between internet financial reporting and Current is negative. Lastly, board size also maintains a weak positive correlation with internet financial reporting among listed non-financial firms in Nigeria. Implying that board size contributes few to the company publishing its annual report on the internet.

Table 3. Correlation Matrix of the Study

| VARIABLES | IFR | FMSIZE | PROF | AUDREP | LEV | CURRENT | BDSIZE |
|----------------|---------|---------|---------|---------|---------|---------|--------|
| IFR | 1.0000 | | | | | | |
| FMSIZE | 0.1176 | 1.0000 | | | | | |
| PROF | 0.0526 | -0.0297 | 1.0000 | | | | |
| AUDREP | 0.2387 | 0.2678 | 0.0827 | 1.0000 | | | |
| LEV | 0.0394 | -0.0214 | -0.1079 | 0.0219 | 1.0000 | | |
| CURRENT | -0.1060 | -0.1600 | -0.0143 | -0.0597 | 0.0126 | 1.0000 | |
| BDSIZE | 0.0308 | 0.3291 | -0.0657 | 0.1091 | -0.0575 | -0.0143 | 1.0000 |

Note: IFR = Internet Financial Reporting, FMSIZE = Firm Size (Measure with Natural log of total Asset), PROF which is Profitability (Return on Equity), AUDREP = Auditor Reputation, LEV = Leverage, CURRENT = Current Asset/Current Liabilities, BDSIZE = Board Size.

4.2 Interpretation of Regression Results

This section presents the results gathered from the inferential statistical analysis. Since the validity of the regression results depends on the outcome of the diagnostic tests, the various diagnostic tests' results are first presented. Specifically, the section contains the presentation and interpretation of the regression result conducted to investigate the study's objective.

Diagnostic Test

There are several ways to measure multiple linearities between independent variables, such as the Pearson correlation and Variance Inflation Factor (VIF). Generally,

the Pearson correlation with a significant value greater than 0.8 indicates a linear relationship between independent variables (Gujarati 2003). Tabachnick and Fidell (2007) stated that multicollinearity arises if the correlation of the independent variable goes over 0.9. Along with the correlation test, the variance inflation factor (VIF) was conducted because examining the correlation matrix between variables does not always detect multicollinearity (Hamilton, 2009). The problem of collinearity are said to be presents if VIF is more 10.

The results in Table 4 indicate that multicollinearity does not exist between independent variables because the Pearson correlation indicators for all independent variables are less than 0.8. Moreover, to confirm the results and check whether multicollinearity between variables, Variance Inflation Factor (VIF), and tolerance statistics are utilised. Hair, Black, Babin and Anderson (2010) suggested that VIF of less than 10 and a tolerance statistic below 1 would indicate the existence of no serious multicollinearity problem. Table 4 shows that VIF ranges below 10, and the tolerance value is less than 1. These results reinforce that there is no multicollinearity.

Table 4. VIF and Tolerance Statistic for Multicollinearity Assumption

| Variables | VIF | Tolerance (1/VIF) |
|-----------|-------------|-------------------|
| FMSIZE | 1.23 | 0.816065 |
| PROF | 1.03 | 0.973122 |
| AUDREP | 1.09 | 0.917479 |
| LEV | 1.02 | 0.982384 |
| CURRENT | 1.03 | 0.972092 |
| BDSIZE | 1.13 | 0.882932 |
| Mean VIF | 1.09 | |

Note: FMSIZE = Firm Size (Measure with Natural log of total Asset), PROF which is Profitability (Return on Equity), AUDREP = Auditor Reputation, LEV = Leverage, CURRENT = Current Asset/Current Liabilities, BDSIZE = Board Size.

From the result in Table 4, the conducted omitted variable test investigates if there is an omitted variable. It was found that the F-value is 0.76 and the p-value of 0.5158, indicating that the model has no omitted variable.

Breusch and Langrangian tests were carried out to determine which regression type would be suitable for the analysis. From the result in Table 5, the insignificant of the p-value of 1.00 indicates that Random effect is better. Hausman test was also conducted to confirm the above claim, and it was found that Random effect regression is preferable.

The presence of serial correlation was also tested using Wooldridge serial correlation test in panel data. The test is based on the null hypothesis that there is no serial correlation among the error terms. The test results with an F-value of 4.089 and a p value of 0.2114 indicate that the null hypothesis cannot be rejected at any conventional significance level. Thus, the model is free of serial correlation.

To investigate the presence of heteroscedasticity in the model, the study used the iterated likelihood ratio test under the null hypothesis of heteroscedasticity. The results obtained and summarised in Table 5 reject the null hypothesis. Its estimated F value of 6.34 and p-value of 0.0118, which is significant at all conventional levels of significance, indicates the existence of a heteroskedasticity problem. The problem of heteroscedasticity can be conducted with the conduct of robust regression analysis. Therefore, robust regression was conducted.

The Ramsey Regression Specification Error Test (RESET) is also presented in Table 5. Under RESET, the null hypothesis that the correct specification of the model is linear is tested against the alternative hypothesis that the model's correct specification is

non-linear. Since the probability value of 0.5158 is greater than 0.1, which is the threshold for all conventional levels of significance, the study does not reject the null hypothesis that the original estimated linear form is the correct specification of the model. Therefore, the model is correctly specified.

Shapiro-Wilk W was carried out to test the normality of the distribution. The result in Table 5 found that the distribution is normal, with an F-value of 45.098 and a P-value of 0.000.

Table 5. Regression Diagnostic Test Results

| Test | Test Type | Value | P value | Conclusion |
|-----------------------|----------------------------------|--------|-----------|------------------------------|
| Omitted Variable | Omitted Variable- Test | 0.76 | 0.5158 | No omitted variables |
| Systematic Difference | Hausman | 4.47 | 1.0000 | Random effect is better |
| Autocorrelation | Wooldridge Test | 4.089 | 0.2114 | No serial correlation |
| Heteroskedastic | Breusch-Pagan / Cook-Weisberg | 6.34 | 0.0118*** | Presence of homoscedasticity |
| Specification Error | Ramsey RESET | 0.76 | 0.5158 | Model Correctly Specified |
| Normality | Shapiro-Wilk W | 45.098 | 0.00000** | Data Normally Distributed |

Source: Extracts from STATA Result, 2020.

Presentation and Interpretation of Fixed Effect Panel Regression Result

This section presents the results of regression analysis of the internet financial reporting (dependent variable) and Firm Size, Profitability, and Audit Reputation (independent variables). The study also takes control variables such as Leverage, Current, and Board Size into consideration.

The random effect panel regression results presented in Table 6 reveal that the firm size (FMSIZE) has a positive relationship with internet financial reporting with a z-value of 1.01 and p-value. The corresponding p-value of 0.310, which is greater than 0.05 and 0.10, indicates that the positive impact is insignificant at a 5 percent level of significance. It implies that when there is an increase in the number of firm size in a year, the internet financial reporting among listed non-financial firms will increase.

Profitability which shows a z-value of 1.95 with p value of 0.051. This means that profitability has positively significant influence on internet financial reporting. This implies that the more the firm is made in profitability, the more the firms would report their financial statement through the internet.

The study results also reveal that auditor reputation (AUDREP) with a z-value of 5.15 and a p-value of 0.000 shows that a positively significant (indicates that the impact is significant at 0.05 percent level of significance) influence exists between auditor reputation and internet financial reporting. This result implies that if the firm employed the Big4 audit firm's service, they would report their financial statement on the internet. Also, the control variables of the study Leverage, Current, and Board Size was investigated. Leverage maintains a positively significant influence with internet financial reporting with the z-value of 2.37 and a p-value of 0.018. The result implied that the more the firms are levered, the more the company will report its financial statement on the internet.

Furthermore, Current and Board Size maintains a negative relationship with internet financial reporting. Current has a z-value of -3.15 and a p-value of 0.002, indicating a negatively significant relationship with internet financial reporting. This meant that the current (current asset to current liabilities) does not influence non-financial listed firms to report using the internet. Board Size, which is also one of the control variables, has a z-value of -0.28 and a p-value of 0.780, indicating a negatively non-significant

influence on internet financial reporting. The result implies that the board members do not determine the firms reporting their financial statements on the internet.

Table 6. Summary of Estimated Regression Result

| VARIABLES | Pool OLS | | Fixed Effect | | Random Effect | |
|----------------|----------|---------|--------------|---------|---------------|---------|
| | t-value | p-value | t-value | p-value | z-value | p-value |
| FMSIZE | 0.77 | 0.440 | 0.96 | 0.373 | 1.01 | 0.310 |
| PROF | 1.86 | 0.064 | 1.90 | 0.106 | 1.95 | 0.051 |
| AUDREP | 3.70 | 0.000 | 5.10 | 0.002 | 5.15 | 0.000 |
| LEV | 2.31 | 0.021 | 2.36 | 0.056 | 2.37 | 0.018 |
| CURRENT | -3.11 | 0.002 | -3.21 | 0.018 | -3.15 | 0.002 |
| BDSIZE | -0.10 | 0.923 | -0.37 | 0.725 | -0.28 | 0.780 |
| Observation | | 350 | | 350 | | 350 |
| R-squared | | 0.0701 | | 0.0705 | | |

Note: *FMSIZE* = Firm Size (Measure with Natural log of total Asset), *PROF* which is Profitability (Return on Equity), *AUDREP* = Auditor Reputation, *LEV* = Leverage, *CURRENT* = Current Asset/Current Liabilities, *BDSIZE* = Board Size.

Hypothesis Testing

Hypothesis 1: Firm Size has a positive influence on Internet Financial Reporting

Result of this study, which found a positive relationship between Firm Size and internet financial reporting, is in line with the study by Elsayed (2010); Al-Htaybat (2011); AbuGhazaleh, Qasim and Haddad (2012); Desoky and Mousa (2013) and Sharma (2013). The result implies that when there is an increase in the number of firm size in a year, the internet financial reporting among listed non-financial firms will increase. Similarly, large firms are more probable to utilise information technology in enhancing financial reporting to meet the great demand for their financial information. Also, larger firms have adequate personnel and the necessary resources to easily adopt an innovation, such as internet financial reporting.

Hypothesis 2: Profitability has a positive effect on internet financial reporting

It can also be deduced from the analysis in Table 5 that a positively significant relationship exists between profitability (measured with ROE) and internet financial reporting. The result implies that firms that made more profitability tend to report on the website for everyone to access. This result is in tandem with the study of Verawati (2015), Akbar and Daljono (2014), and Aly, Simon, and Hussainey (2010). It may be inferred that managers can reveal less information to obscure the causes of loss or decreased profit and prevent negative effects on the market value of the firm if profitability are poor.

Hypothesis 3: Auditor reputation has a positive influence on Internet Financial Reporting

Result of the study in Table 6 shows that auditor reputation maintains a positively significant relationship with internet financial reporting among listed non-financial firms in

Nigeria. The result is in accordance with the study by Healy and Palepu (2001). The assumption is that companies audited by Big4 audit firms have clear motivation to notify stakeholders of the high quality of corporate information, regardless of the quantity and nature of information.

5. Conclusion and Recommendations

This paper investigates the determinants of internet financial reporting, such as firm size, profitability, and auditor reputation among non-financial listed firms in Nigeria. The study population consists of one hundred and twelve (112) non-financial listed firms on the Nigeria Stock Exchange. Using a purposive sampling technique, the study selected fifty firms (50) having adequate information needed for the study in their annual report from 2012 – 2018. Based on the analysis, the study found that firm size positively influences internet financial reporting, while profitability and auditor reputation have a positively significant influence on internet financial reporting.

Therefore, it is recommended that policymakers endeavour to ensure the listed firms provide their financial report for easy access to users on the websites. The results of the study are of critical importance to the Nigerian Stock Exchange (NSE). There should be regulatory guidance covering whether an internet financial report is a direct substitute or a complement for what is published on the NSE website.

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RISK ASSESSMENT AND MANAGEMENT IN ECONOMIC ENTITIES THROUGH THE USE OF DISCRIMINATORY ANALYSIS MODELS

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Abstract: *Economic developments may be unpredictable for the actors of the economic environment given the fact that, during the life of an economic entity, tough situations may occur whose manifestation can be difficult to anticipate or predict. Usually, the damage to a large segment of economic entities often occurs as a result of an economic and financial crisis, but anticipating its emergence through standardized signals or indicators may not always be feasible. Such a crisis can be the result of extraordinary, unprecedented events. Given that it is impossible to accurately assess all the risks that an economic entity may face, it would be advisable for economic entities to consider ensuring the ability to adapt quickly to changes in the economic environment. Of course, a rapid adjustment requires, among other things, that economic entities regularly carry out analyzes based on the information provided by the accounting. Therefore, it is necessary to assess the risks, in addition to conventional methods, by methods of high complexity. Therefore, through this research we aimed to address the analysis and management of risks within economic entities by using models of bankruptcy risk analysis based on the score method.*

Keywords: *accounting, results management, performance, risk, Z score, financial analysis*

JEL classification: *C40, G32, G33.*

1. Introduction

The specialized literature brings into discussion various theoretical frameworks that want to standardize the acceptance of failure of a business. However, some of the proposals lead to an insufficiently well-defined concept, which is why researchers are converging towards a broader definition, namely the situation in which an economic entity can no longer meet its financial obligations.

Such an understanding, expounded by the authors Crutzen and Van Caillie (2008) shows that “the failure of the enterprise represents a continuous deterioration of the structure of its resource portfolio, as well as a deterioration of the organizational process, which is reflected, after a certain period of time in the degradation of its financial indicators”.

To the extent that we consider economic performance only as an indicator of potential bankruptcy, it would be difficult to theorize a predictive financial model of failure. Economic performance is closely related to the payment capacity of an economic entity, which is why the identification of predictive models of failure can have as a starting point this relationship of interdependence.

In the literature were highlighted three levels of analysis to determine the absolute performance of an economic entity, respectively: analysis of individual factors; analysis of macroeconomic factors; analysis of intrinsic factors.

From a strictly economic point of view, the causes for which an economic entity reaches the bankruptcy zone can vary depending on several considerations, the researchers succeeding in developing theorems that allow the issuance of assessments regarding the risk of an economic entity being in danger of bankruptcy.

Some of them focused mainly on analyzing the evolution of the results recorded over the years, while others focused on identifying a potentially critical situation that may occur at some point, regardless of previous or future results.

Regardless of the methods applied, a common aspect is that they aim to provide systematic indicators of the financial stability of an economic entity. However, it is necessary to start from conservative premises, in the sense that, regardless of the selected model or if the results of several models converge towards the same conclusion, it is not necessary for the bankruptcy to occur in a short time.

The role of these models should be a warning one, so that the management of an economic entity may take corrective measures that eliminate or considerably reduce the probability of bankruptcy. These models are in themselves only guides that highlight areas for improvement.

2. Scoring Methods for Assessment of Bankruptcy Risk

In the last decade, the financial diagnosis has known a significant development as a result of the accentuated use of statistical methods for analyzing the evolution of economic entities, having as starting point a series of rates.

One method used is that of scores, a method that seeks to apply predictive models to determine the probability of bankruptcy of an economic entity. The method involves, by using statistical techniques specific to discriminant analysis, the evaluation of a sample of economic entities that fall into two distinct categories, namely a category of economic entities with financial difficulties and a category of entities with strong economic performance.

Subsequently, certain rates are defined for each category, establishing the best combination of rates to facilitate the distinction between the two categories of economic entities. Applying the method will lead to obtaining, for each entity, a score obtained by applying the function below.

$$Z = a_1 x_1 + a_2 x_2 + a_3 x_3 + \dots + a_n x_n,$$

where: a - represent the weighting coefficient of the rates;

x - represents the rates used in the analysis.

Further, we will present a series of models for determining the risk of bankruptcy existing in the specialized literature, with their exemplification by reference to the data taken from the financial statements of an economic entity active in the production segment.

3. Taffler Model

The Taffler model was developed in 1977 and later published in 1983 (Taffler). This model focuses on a combination of 4 installments, based on the conclusions of research conducted on economic entities listed on the London Stock Exchange. The name and calculation formula of the indicators underlying the model built by Taffler are presented in the table below.

Table no. 1. Indicators used in the application of the Taffler model and interpretation

| Symbol | Indicator name | Calculation formula |
|--------|--|--------------------------------------|
| X_1 | Rate of return on current assets | Gross result / Current liabilities |
| X_2 | Overall liquidity rate | Current assets / current liabilities |
| X_3 | Current financial dependency rate | Current liabilities / Total assets |
| X_4 | The time interval in which the economic entity can finance its production activity with the help of its own assets without collecting the invoices | Sales revenue / Total assets |

| | |
|---|----------------------------|
| issued | |
| $Z_4 = 0,53X_1 + 0,13X_2 + 0,18X_3 + 0,16X_4$ | |
| $Z \leq 0,2$ | high risk of bankruptcy |
| $Z \geq 0,3$ | reduced risk of bankruptcy |

Source: projection according to the specialized literature

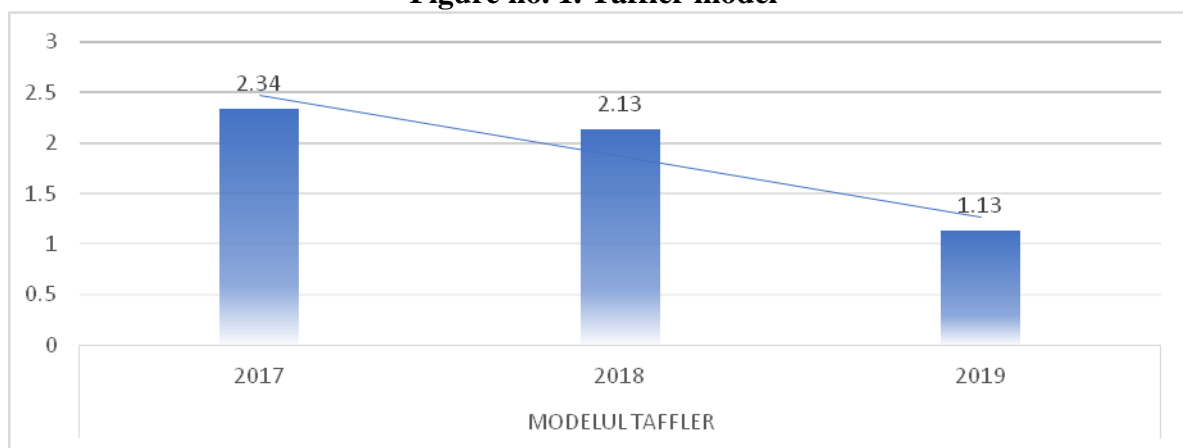
By applying the Taffler model in the case of the selected economic entity, the following results were obtained, summarized in table no. 2.

Table no. 2. Bankruptcy risk assessment using the Taffler model

| No. | Indicator | u.m. | 2017 | 2018 | 2019 |
|-----|----------------|---------|-------|-------|-------|
| 1 | Gross result | mii lei | 6618 | 11391 | 7673 |
| 2 | Current debts | mii lei | 2152 | 4119 | 6374 |
| 3 | Current assets | mii lei | 5072 | 10153 | 10031 |
| 4 | Total debts | mii lei | 2740 | 4756 | 6953 |
| 5 | Total assets | mii lei | 8945 | 14941 | 15348 |
| 6 | Sales income | mii lei | 23688 | 31520 | 21888 |
| 7 | X_1 | | 3,07 | 2,77 | 1,20 |
| 8 | X_2 | | 1,85 | 2,14 | 1,44 |
| 9 | X_3 | | 0,24 | 0,28 | 0,42 |
| 10 | X_4 | | 2,65 | 2,11 | 1,43 |
| 11 | Z | | 2,34 | 2,13 | 1,13 |

Source: own processing

Figure no. 1. Taffler model



Source: own processing

Analyzing the value of the Z score we can conclude that the economic entity has a very good situation with low risk of bankruptcy. At the same time, we notice a decreasing trend of this value which must be adjusted by a closer monitoring of the results obtained from the activity carried out.

4. Springate Model

The model developed by Gordon LV Springate, was developed in 1978. Springate conducted a study on 40 economic entities after which he chose 4 indicators for the design

of the model. This model of bankruptcy risk assessment is important for creditors and investors, as it has an accuracy of 92.5%.

The calculation method of the indicators used and their interpretation is presented in table no. 3.

Table no. 3. Indicators used in the application of the Springate model and interpretation

| Symbol | Calculation formula |
|------------------------------------|---|
| A | Working capital / Total assets |
| B | Gross profit before interest / Total assets |
| C | Gross profit / Current liabilities |
| D | Turnover / Total assets |
| $Z = 1,03A + 3,07B + 0,66C + 0,4D$ | |
| $Z < 0,862$ | high risk of bankruptcy |
| $Z > 0,862$ | reduced risk of bankruptcy |

Source: projection according to the specialized literature

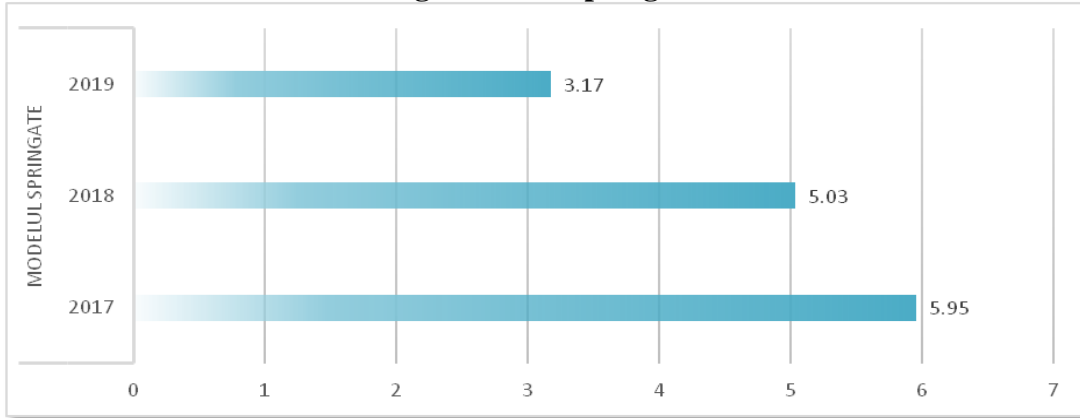
In the following table we have made an example of the Springate model in the case of the analyzed economic entity.

Table no. 4. Bankruptcy risk assessment by using the Springate model

| No. | Indicator | m.u. | 2017 | 2018 | 2019 |
|-----|------------------------------|---------|-------------|-------------|-------------|
| 1 | Working capital | mii lei | 2919 | 6034 | 3657 |
| 2 | Total assets | mii lei | 8945 | 14941 | 15348 |
| 3 | Gross profit before interest | mii lei | 7349 | 9473 | 7814 |
| 4 | Gross profit | mii lei | 6618 | 11391 | 7673 |
| 5 | Current debts | mii lei | 2152 | 4119 | 6374 |
| 6 | Turnover | mii lei | 23688 | 31520 | 21888 |
| 7 | A | | 0,33 | 0,40 | 0,24 |
| 8 | B | | 0,82 | 0,63 | 0,51 |
| 9 | C | | 3,07 | 2,77 | 1,20 |
| 10 | D | | 2,65 | 2,11 | 1,43 |
| 11 | Z | | 5,95 | 5,03 | 3,17 |

Source: own processing

Figure no. 2. Springate model



Source: own processing

Analyzing the obtained data, we notice that the economic entity registers good performances, being solvent while the risk of bankruptcy is low. Even if it falls within the allowable limits, we notice a deterioration of indicators from one period to another. It is thus necessary for the management of the economic entity to take the necessary measures to change the dynamics of evolution in a positive way.

5. Ivonciu Model

Romanian economist Paul Ivonciu conducted a study based on data from over 50 economic entities in various fields of activity, based on which he designed in 1998 a model of the score function, consisting of six indicators. These indicators, as well as the calculation formulas, are presented in table no. 5.

Table no. 5. Indicators used in the application of the Ivonciu model and interpretation

| Symbol | Indicator | Calculation formula |
|--|-------------------------------------|---|
| R1 | Total asset turnover rate | Total revenue collected and receivable / Total assets (minus expenses in advance) |
| R2 | Profitability of total income | Self-financing capacity / Total revenues collected and receivable |
| R3 | Debt turnover rate | Total income collected and receivable / Adjusted receivables |
| R4 | Debt repayment capacity | Self-financing capacity / Total debt |
| R5 | Fast liquidity | (Adjusted receivables + Available) / Short-term debts |
| R6 | Relative long-term stability margin | Working capital / Total assets (less expenses in advance) |
| $I = 0,333R1 + 5,555R2 + 0,333R3 + 0,714229R4 + 1,333R5 + 4R6 - 1,66032$ | | |
| | $I < 0,0$ | imminent bankruptcy |
| | $0,0 < I < 1,5$ | high risk of bankruptcy |
| | $1,5 < I < 3,0$ | area of uncertainty |
| | $3,0 < I < 4,5$ | medium risk of bankruptcy |
| | $4,5 < I < 6,0$ | reduced risk of bankruptcy |
| | $I > 6,0$ | very low risk of bankruptcy |

Source: projection according to the specialized literature

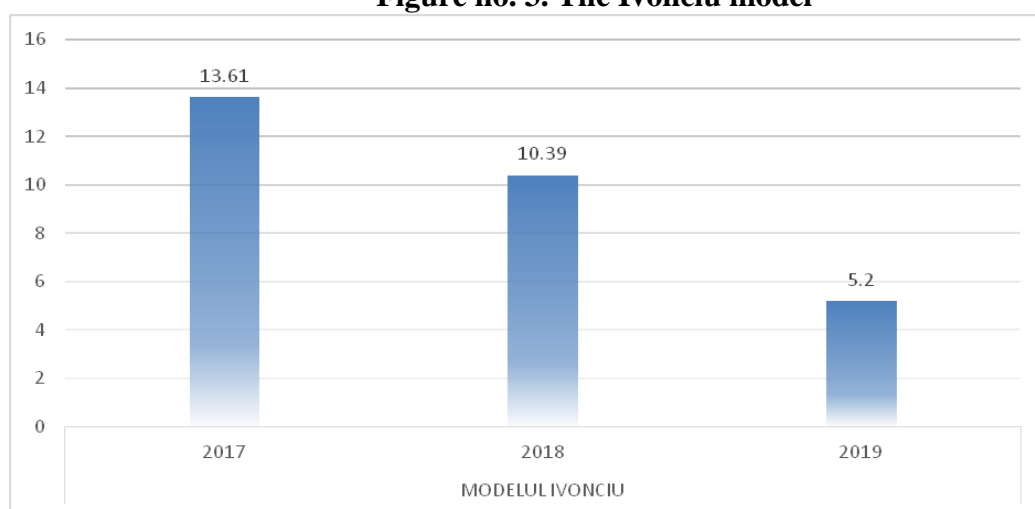
The analysis of the risk of bankruptcy by using the Ivonciu model led to the following results (table no. 6):

Table no. 6. Assessing the risk of bankruptcy by using the Ivonciu model

| No. | Indicator | u.m | 2017 | 2018 | 2019 |
|-----|---|---------|--------------|--------------|-------------|
| 1 | Total revenue collected and receivable | mii lei | 23688 | 31520 | 21888 |
| 2 | Total assets (less expenses in advance) | mii lei | 8945 | 14941 | 15348 |
| 3 | Self-financing capacity | mii lei | 6216 | 10266 | 7047 |
| 4 | Corrected receivables | mii lei | 1022 | 3102 | 6833 |
| 5 | Total debts | mii lei | 2740 | 4756 | 6953 |
| 6 | Available | mii lei | 2680 | 6164 | 2040 |
| 7 | Short term debts | mii lei | 2152 | 4119 | 6374 |
| 8 | Working capital | mii lei | 2919 | 6034 | 3657 |
| 9 | R1 | | 2,65 | 2,11 | 1,43 |
| 10 | R2 | | 0,26 | 0,33 | 0,32 |
| 11 | R3 | | 23,17 | 10,16 | 3,20 |
| 12 | R4 | | 2,27 | 2,16 | 1,01 |
| 13 | R5 | | 1,72 | 2,25 | 1,39 |
| 14 | R6 | | 0,33 | 0,40 | 0,24 |
| 15 | I | | 13,61 | 10,39 | 5,20 |

Source: own processing

Figure no. 3. The Ivonciu model



Source: own processing

According to the data in the table above, in 2017-2018 the Ivonciu model places the economic entity in an area with a very low risk of bankruptcy, while in 2019 the economic entity experiences a decrease in the value of indicators which leads to increased risk of bankruptcy. However, the situation is not alarming, as the risk of bankruptcy is low.

6. Statev Model

In developing the Statev model we started from the particularities and restrictions imposed by the application of the technique of multiple linear discriminant analysis to determine the financial status of the enterprise (State, 2006). The study was conducted on two samples consisting of a total of 98 economic entities operating in the private sector, analyzing the information provided by their financial statements for four consecutive financial years.

To confirm the accuracy and capacity predictive of the designed discriminatory statistical model, a new validation was performed on another sample of economic entities. The indicators underlying this model, the score function, as well as their interpretation are represented in the table below.

Table no. 7. Indicators used in the application of the STATEV model and interpretation

| Symbol | Calculation formula |
|--|---|
| V ₁ | Need for working capital / Total assets |
| V ₂ | Total reserves / assets |
| V ₁₁ | Staff costs / Value added |
| V ₁₅ | Net turnover / Total assets |
| V ₂₈ | Current assets / Total assets |
| V ₃₂ | Value Added / Total Assets |
| V ₄₇ | Short-term debts / Total liabilities |
| $M_{Statev} = 0,872V_1 + 0,360V_2 + 0,257V_{11} + 0,467V_{15} - 0,592V_{28} + 0,592V_{32} + 0,526V_{47}$ | |
| $M_{Statev} \leq 1,25$ | Bankruptcy financial condition |
| $M_{Statev} > 1,25$ | Good financial condition |

Source: projection according to the specialized literature

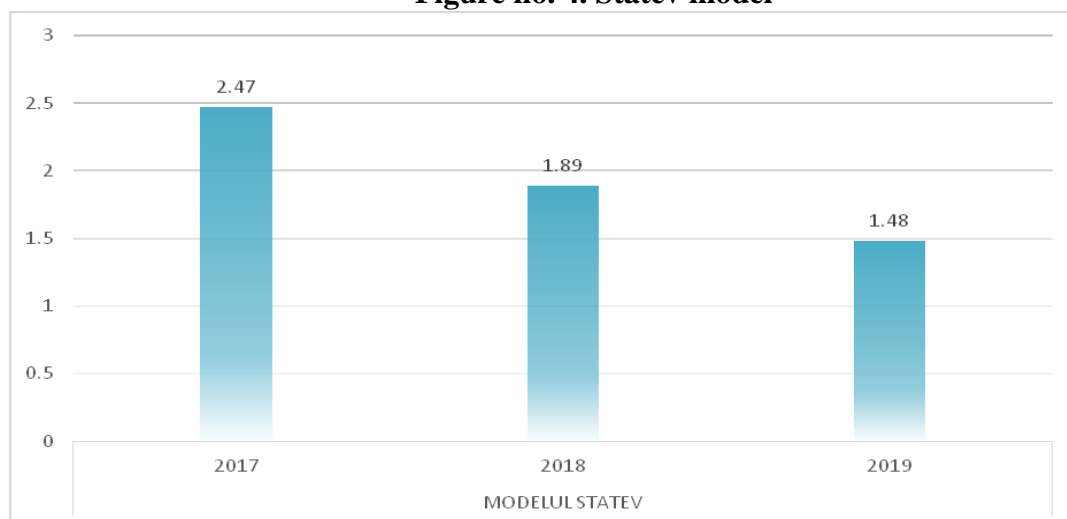
The analysis of the bankruptcy risk in the case of the economic entity selected by using the Statev model led to the obtaining of the results presented in table no. 8.

Table no. 8. Bankruptcy risk assessment using the Statev model

| No. | Indicator | U.M | 2017 | 2018 | 2019 |
|-----|----------------------|---------|-------|-------|-------|
| 1 | Working capital need | mii lei | 534 | 1248 | 3513 |
| 2 | Total assets | mii lei | 8945 | 14941 | 15348 |
| 3 | Reserves | mii lei | 263 | 263 | 263 |
| 4 | Salary expenses | mii lei | 6264 | 7140 | 5020 |
| 5 | Added value | mii lei | 19684 | 25621 | 18244 |
| 6 | Turnover | mii lei | 23688 | 31520 | 21888 |
| 7 | Current assets | mii lei | 5072 | 10153 | 10031 |
| 8 | Short term debts | mii lei | 2152 | 4119 | 6374 |
| 9 | Total liabilities | mii lei | 8945 | 14941 | 15348 |
| 10 | V_1 | | 0,06 | 0,08 | 0,23 |
| 11 | V_2 | | 0,03 | 0,02 | 0,02 |
| 12 | V_{11} | | 0,32 | 0,28 | 0,28 |
| 13 | V_{15} | | 2,65 | 2,11 | 1,43 |
| 14 | V_{28} | | 0,57 | 0,68 | 0,65 |
| 15 | V_{32} | | 2,20 | 1,71 | 1,19 |
| 16 | V_{42} | | 0,24 | 0,28 | 0,42 |
| 17 | M_{Statev} | | 2,47 | 1,89 | 1,48 |

Source: own processing

Figure no. 4. Statev model



Source: own processing

The value of the M_{Statev} score in the analyzed period highlights a very good situation of the economic entity, registering a low risk of bankruptcy. However, at the same time, there is a decreasing trend of this value, which needs to be diminished by various recovery actions established by the management of the economic entity.

7. Conclusions

Bankruptcy risk assessment is of major importance for crisis management and is considered an important objective. However, for the management of the economic entity,

the primary objective of this analysis is not to diagnose the crisis but, based on its results, to substantiate and implement the right decisions, necessary to prevent the crisis or reduce its impact.

Score-based models have the following advantages:

- allow a synthetic estimate of the financial situation from both a forward-looking and a retrospective perspective, providing an image of the risk of bankruptcy for stakeholders;
- facilitates the resolution of the difficulties generated by the financial imbalance through objective assessments.

From the analysis performed in this article we find that all four models used offer the same perspective on the financial situation of the analyzed entity, placing it in a solvency zone, with low risk of bankruptcy.

However, even if all indicators fall within the allowable limits, there is a tendency for them to deteriorate from one period to another, which could lead to an unstable situation to the extent that the management of the economic entity will not act accordingly.

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PEST ANALYSIS OF PAID DIGITAL MEDIA SUBSCRIPTION MODEL IN EUROPEAN COUNTRIES

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Abstract: Due to the growth of advertising business of search engines, aggregators, and social media, many publishers suffer the impact of declining advertising revenues, which most news media have historically relied on. Under such circumstances, the paid subscription model provides a worthy alternative to digital advertising. In the present research, the focus is made on the PEST analysis of paid digital media subscription model in European countries. A correlation and regression analysis are conducted to find out factors (independent variables) that have the most significant effect on the percentage paying for online news (dependent variable) in 23 European countries. As a result of research, the following most essential PEST factors are highlighted: mean broadband download speed, level of internet access in households, median household income, and control of corruption. As for recommendations, it is concluded that publishers should pay more attention to the indicated PEST factors in each European country to ensure their competitiveness. The further research on factors influencing the percentage paying for online news worldwide may boost the successful adoption of best revenue practices by digital media companies and ensure their competitiveness in terms of global digital leadership of top technology companies.

Keywords: digital media, percentage paying for online news, PEST analysis, revenue model, subscription.

JEL Classification: F63, F23, L82.

1. Introduction

Due to the growth of search engines, aggregators, and social media, many publishers suffer the impact of declining advertising revenues, which most online news media have historically relied on. Diversifying the revenue base is a strategic priority of publishers in the years ahead. The growing number of paid subscribers of digital products of the New York Times, the Wall Street Journal, and the Financial Times, as well as the success of alternative models like the Guardian's membership scheme, have demonstrated that the paid subscription model provides a good alternative to digital advertising. In the case of the subscription model, users pay a fixed rate for access to a product at regular intervals. This model requires long-term investment, smart application of analytics, awareness of the local markets, and leveraging the emotional connection to a brand. According to "Journalism, Media, and Technology Trends and Predictions 2020", 50% of 50 editors in chief, almost 40 CEOs or managing directors, and 30 heads of digital surveyed in 32 countries say that subscription and membership are their main revenue focus in 2020. For comparison, only 14% say that display advertising is their key revenue focus for 2020 (Reuters Institute for the Study of Journalism, 2020).

Since online paid content is one of critical value drivers of the digital business, it is crucial to investigate factors influencing the increase of subscriber growth of digital media companies.

2. Previous Research and Theoretical Framework

According to the Global Digital Subscription Snapshot 2020 by FIPP with CeleraOne, more and more publishers in Europe report that their subscription revenues, driven by digital growth, have replaced advertising as their most significant revenue stream (FIPP, 2020). An overview of key European publishers' statistics by title is given in Table no. 1.

Table no. 1. European Publisher Data 2020

| Country | Title | Subscriptions | Reported | Cost |
|-----------------------|----------------------------|---------------|----------|-------------------|
| United Kingdom | Financial Times | 1100000 | 2020 Q1 | GBP 33 / month |
| Norway | Schibsted (Group) | 800000 | 2019 Q3 | Varies (Group) |
| Germany | Axel Springer (Group) | 613000 | 2020 Q2 | Varies (Group) |
| United Kingdom | Guardian (members) | 446000 | 2020 Q2 | Not applicable |
| United Kingdom/Global | Economist App | 424585 | 2019 H2 | GBP 55 / quarter |
| United Kingdom | The Times/Sunday | 345000 | 2020 Q1 | GBP 26 / month |
| United Kingdom | The Guardian (subscribers) | 265000 | 2019 Q4 | £11.99 / month |
| Norway | Amedia (Group) | 258000 | 2019 Q3 | Varies (Group) |
| United Kingdom | The Telegraph | 251000 | 2020 Q2 | GBP 2 / week |
| Sweden | Aftonbladet | 250000 | 2018 Q4 | SEK 79 / month |
| Poland | Gazeta Wyborcza | 240000 | 2020 Q1 | PLN 19.90 / month |
| France | Le Monde | 235000 | 2020 Q1 | EUR 9.90/month |
| France | Mediapart | 170000 | 2020 Q1 | EUR 11 / month |
| Sweden | Dagens Nyheter | 166000 | 2019 Q2 | SEK 119 / month |
| Norway | Verdens Gang (VG) | 150000 | 2020 Q1 | NOK 39 / week |
| Italy | Corriere della Sera | 133000 | 2018 Q2 | EUR 7.99 / month |
| Germany | ZEIT | 126296 | 2019 Q3 | EUR 5.80 / week |
| Norway | Aftenposten | 119000 | 2020 Q1 | SEK 279 / month |
| France | Le Figaro | 110000 | 2018 Q4 | EUR 9.90 / month |
| Germany | Der Spiegel | 102209 | 2019 Q3 | EUR 4.99 / month |
| Finland | Helsingin Sanomat | 100000 | 2019 Q3 | EUR 214.8 / year |
| Germany | NOZ Media (group) | 100000 | 2019 Q4 | Varies (Group) |
| Germany | Süddeutsche Zeitung | 100000 | 2020 Q1 | EUR 14.99 / month |
| Norway | Dagbladet Pluss | 100000 | 2020 Q1 | NOK 55 / week |
| Germany | NOZ Median (Group) | 100000 | 2019 Q3 | Varies (Group) |
| Sweden | Expressen | 90000 | 2020 Q2 | SEK 69 / month |
| Sweden | MittMedia | 81000 | 2019 Q2 | Varies (Group) |
| United Kingdom | Mail+ | 80000 | 2019 Q4 | GBP 10.99 / month |
| Sweden | Svenska Dagbladet | 77000 | 2019 Q2 | SEK 55 / week |
| Germany | Handelsblatt | 70248 | 2019 Q3 | EUR 29.99 / month |
| Switzerland | Tamedia (Group) | 70000 | 2019 Q1 | Varies (Group) |
| United Kingdom | Immediate Media | 63201 | 2020 Q1 | Varies (Group) |
| Netherlands | De Correspondent | 60000 | 2018 Q3 | EUR 7 / month |
| Spain | El Diario | 52000 | 2020 Q2 | EUR 8 / month |
| Germany | FAZ | 50935 | 2019 Q3 | EUR 2.95 / week |
| Netherlands | The Correspondent | 45888 | 2019 Q1 | User defined |
| Spain | Ara | 45000 | 2020 Q1 | EUR 9.99 / month |
| Slovak Republic | Denník N | 42000 | 2019 Q3 | EUR 8.99 / month |
| Switzerland | Neue Zürcher Zeitung | 39000 | 2019 Q3 | EUR 10 / month |
| Austria | Kleine Zeitung | 32700 | 2019 Q2 | EUR 18.99 / month |
| Switzerland | Republik | 22000 | 2019 Q1 | User defined |
| Denmark | Zetland | 20000 | 2019 Q2 | DKK 10 / week |
| United Kingdom | Tortoise | 20000 | 2019 Q4 | GBR 100 / year |
| Spain | Infolibre | 10000 | 2019 Q4 | EUR 6 / month |
| Switzerland | Le Temps | 6900 | 2019 Q3 | CHF29 / month |

Source: FIPP, 2020

In the challenging digital media market, publishers should consider the value of their content offering, the potential revenues to be had by pursuing the digital subscription model and factors, which prompt the consumer decision to pay for online content.

The first attempts to study factors that influence paying for online content were made in the 2000s. Those studies focused on micro factors and investigated personal motivations of the audience (Cook & Attari, 2012; Wagner, 2012; Chyi & Lee, 2013). For example,

Thurman and Herbert (2007) argue that the audience will pay for journalistic content, if the content is valuable and exclusive, while the payment mechanism is convenient. Himma-Kadakas and Kõuts-Klemm (2015) outline two main reasons why users pay for online content. The first one is exclusive and high-quality content. The second reason is the availability of different digital formats, e.g., games, infographics, video, VR, and AR applications. Goyanes (2014) reveals the correlation of the desire to pay for online content and the following variables:

- demographic indicators (age and income);
- consumption of other digital products (purchase of various mobile applications and computer programs, paid watching movies online);
- media consumption (use of Twitter and Facebook).

Reuters Institute Digital News Report 2020 indicates the following reasons for subscribing to an online publication: brand distinctiveness, quality of the content, convenience, and additional benefits. Moreover, subscribing can be influenced by supply-side factors, i.e., the amount of high-quality free news available. For example, in Norway and Sweden, many publishers have introduced paywalls, increasing a sense of scarcity and creating an impression that news could be worth paying for. By contrast, in the United Kingdom, only a relatively small number of publications try to charge for news. What's more, the report highlights such industry problems as the possibility of reaching an upper limit of subscription base and the emergence of "subscription fatigue", when people are frustrated by being asked to pay for multiple services separately (Reuters Institute for the Study of Journalism, 2019).

The present research focuses on macro factors, in particular, the PEST framework, which affects the proportion of people paying for online news in different European countries.

The PEST framework stands for the following (Waters, 2006):

- political factors;
- economic factors;
- socio-cultural factors;
- technological factors.

3. Methodology

The research aims at highlighting macro factors that have a significant effect on the proportion of people paying for online news in different European countries. The research methodology is based on the application of multiple linear regression. The dependent variable is the percentage paying for online news in different European countries. This data is taken from the Reuters Institute Digital News Report 2019. The independent variables are PEST factors that are chosen on the basis of their hypothetic and potential influence on the dependent variable. The rationale behind selecting those factors are given in Table no. 2.

Table no. 2. Rationale behind Selecting Factors for the PEST Analysis of Paid Digital Media Subscription Model in European Countries

| No. | Factor | Hypothetic Rationale | Source |
|-------------------------------|--|--|---|
| POLITICAL FACTORS | | | |
| 1 | Voice and accountability, % | It reflects perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, freedom of association, and free media. Such freedoms boost the diversification of independent media. | World Bank, 2019 |
| 2 | Political stability and absence of violence/terrorism, % | It measures perceptions of the likelihood of political instability and politically motivated violence, including terrorism. In terms of stable political environment, news tends to be more authentic, fair, and meaningful. | World Bank, 2019 |
| 3 | Government effectiveness, % | It reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The quality of public services influences the quality of news organisations. | World Bank, 2019 |
| 4 | Regulatory quality, % | It reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Sound policies and regulations favour the development of independent media. | World Bank, 2019 |
| 5 | Rule of law, % | It reflects perceptions of the extent to which agents have confidence in and abide by the rules of society and, in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The rules of society influence the content quality provided by news organisations. | World Bank, 2019 |
| 6 | Control of corruption, % | It reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The existence of elites and private interests influence the development of investigative journalism. | World Bank, 2019 |
| SOCIO-ECONOMIC FACTORS | | | |
| 7 | AIC per capita, % | Knowing the actual individual consumption per capita gives necessary insights into price developments and the average willingness to pay. | Eurostat, 2019 |
| 8 | GDP per capita, % | Knowing the gross domestic product per capita gives necessary insights into price developments and the average willingness to pay. | Eurostat, 2019 |
| 9 | Urban population, % | The gradual shift of the population from rural to urban areas is a constant phenomenon. The most urbanised regions generally have a high demand for online news. | World Bank, 2019 |
| 10 | Employment rate, % | Knowing the employment rate gives necessary insights into price developments and the average willingness to pay. | Eurostat, 2019 |
| 11 | Median household income, euro | Knowing median income gives necessary insights into price developments and the average willingness to pay. | Eurostat, 2019 |
| 12 | Trust in news overall, % | The undermined trust in news outlets may lead to a decrease in news consumption of certain brands. | Reuters Institute for the Study of Journalism, 2019 |
| TECHNOLOGICAL FACTORS | | | |

| | | | |
|----|---|--|---|
| 13 | Mean broadband download speed, in Mbps | With rising connection speed, more sophisticated services and functions of online services are becoming available. | Cable.co.uk, 2019 |
| 14 | Level of internet access in households, % | Increasing internet penetration builds the base for regular consumption of online news. | Eurostat, 2019 |
| 15 | Secure internet servers (per 1 million people) | It is a measure of the country's business maturity for securing the privacy and confidentiality of their consumers. | World Bank, 2019 |
| 16 | Individuals - mobile internet access, % | With rising mobile internet usage, customers consume content of their favourite news brands on the go. | Eurostat, 2019 |
| 17 | Account ownership at a financial institution or with a mobile-money-service provider, % | Having an account at a bank or another type of financial institution or using a mobile money service facilitates the fast payment process. | World Bank, 2018 |
| 18 | Online news consumption (including social media), % | With rising online news consumption, the paid online subscription model becomes more common. | Reuters Institute for the Study of Journalism, 2019 |

Sources: compiled by the author based on Cable.co.uk, 2019; Eurostat, 2019-2020; Reuters Institute for the Study of Journalism, 2019; Statista, 2019 and World Bank, 2019

4. Results and Discussion

The correlation analysis is conducted to assess the impact of PEST factors listed above on the percentage paying for online news. The results are given in Tables no. 3-5.

Table no. 3. Correlation Analysis of Political Factors and the Percentage Paying for Online News in Different European Countries

| Country | Pay for online news, %, 2019 | Voice and accountability, %, 2018 | Political stability and absence of violence/terrorism, %, 2018 | Government effectiveness, %, 2018 | Regulatory quality, %, 2018 | Rule of law, %, 2018 | Control of corruption, %, 2018 |
|-------------|------------------------------|-----------------------------------|--|-----------------------------------|-----------------------------|----------------------|--------------------------------|
| Norway | 34 | 100.00 | 90.48 | 97.60 | 95.67 | 99.52 | 97.60 |
| Sweden | 27 | 97.54 | 80.48 | 96.15 | 97.60 | 98.56 | 98.08 |
| Finland | 16 | 98.52 | 81.90 | 99.04 | 97.12 | 100.00 | 100.00 |
| Poland | 16 | 71.92 | 65.71 | 75.00 | 78.37 | 66.83 | 74.52 |
| Denmark | 15 | 98.03 | 82.38 | 97.12 | 94.23 | 96.63 | 98.56 |
| Ireland | 12 | 92.12 | 86.19 | 89.90 | 92.79 | 89.90 | 90.87 |
| Belgium | 11 | 94.09 | 59.52 | 83.65 | 86.06 | 88.46 | 90.38 |
| Netherlands | 11 | 97.04 | 78.10 | 96.63 | 99.04 | 96.15 | 96.15 |
| Switzerland | 11 | 99.01 | 95.24 | 99.52 | 96.63 | 99.04 | 96.63 |
| Romania | 10 | 61.58 | 48.57 | 43.27 | 67.31 | 63.46 | 52.40 |
| Spain | 10 | 82.76 | 55.24 | 79.33 | 80.29 | 80.29 | 72.60 |
| Austria | 9 | 93.10 | 80.95 | 90.87 | 91.35 | 97.60 | 91.35 |
| France | 9 | 88.18 | 51.90 | 91.83 | 83.65 | 88.94 | 87.98 |
| Italy | 9 | 81.77 | 57.62 | 68.27 | 73.56 | 61.54 | 62.02 |
| UK | 9 | 93.60 | 48.10 | 87.98 | 96.15 | 91.83 | 93.27 |
| Germany | 8 | 95.07 | 66.67 | 93.27 | 94.71 | 91.35 | 95.19 |
| Slovakia | 8 | 76.85 | 72.38 | 75.48 | 75.96 | 70.19 | 66.35 |

| | | | | | | | |
|-----------------|---|---------------|---------------|---------------|---------------|---------------|---------------|
| Bulgaria | 7 | 59.11 | 60.48 | 62.98 | 72.60 | 53.37 | 50.96 |
| Czechia | 7 | 78.33 | 87.14 | 78.37 | 87.02 | 81.73 | 69.23 |
| Greece | 7 | 75.37 | 50.00 | 65.87 | 64.42 | 59.13 | 55.77 |
| Hungary | 7 | 58.62 | 73.33 | 70.19 | 73.08 | 72.12 | 59.62 |
| Portugal | 7 | 88.67 | 89.52 | 86.54 | 78.85 | 85.10 | 80.29 |
| Croatia | 6 | 64.53 | 73.81 | 69.23 | 68.27 | 62.98 | 60.10 |
| R | | 0.4726 | 0.3607 | 0.4450 | 0.4921 | 0.4787 | 0.5109 |

Sources: author's calculation based on Reuters Institute for the Study of Journalism, 2019 and World Bank, 2019.

Table no. 4. Correlation Analysis of Socio-Economic Factors and the Percentage Paying for Online News in Different European Countries

| Country | Pay for online news, %, 2019 | AIC per capita, %, EU=100, 2019 | GDP per capita, %, EU=100, 2019 | Employment rate, %, 2019 | Median household income, euro, 2018 | Urban population, %, 2019 | Trust in news overall, %, 2019 |
|-------------|------------------------------|---------------------------------|---------------------------------|--------------------------|-------------------------------------|---------------------------|--------------------------------|
| Norway | 34 | 128 | 144 | 79.5 | 39432 | 83 | 46 |
| Sweden | 27 | 112 | 120 | 82.1 | 25559 | 88 | 39 |
| Finland | 16 | 113 | 111 | 77.2 | 24544 | 85 | 59 |
| Poland | 16 | 79 | 73 | 73.0 | 6593 | 60 | 48 |
| Denmark | 15 | 116 | 129 | 78.3 | 30097 | 88 | 57 |
| Ireland | 12 | 97 | 191 | 75.1 | 24920 | 63 | 48 |
| Belgium | 11 | 115 | 117 | 70.5 | 23667 | 98 | 49 |
| Netherlands | 11 | 114 | 128 | 80.1 | 24033 | 92 | 53 |
| Switzerland | 11 | 124 | 153 | 82.9 | 42802 | 74 | 46 |
| Romania | 10 | 79 | 69 | 70.9 | 3284 | 54 | 35 |
| Spain | 10 | 91 | 91 | 68.0 | 14785 | 81 | 43 |
| Austria | 9 | 118 | 127 | 76.8 | 25176 | 59 | 39 |
| France | 9 | 109 | 106 | 71.6 | 22261 | 81 | 24 |
| Italy | 9 | 99 | 95 | 63.5 | 16844 | 71 | 40 |
| UK | 9 | 115 | 105 | 79.3 | 21464 | 84 | 40 |
| Germany | 8 | 123 | 121 | 80.6 | 22647 | 77 | 47 |
| Slovakia | 8 | 73 | 74 | 73.4 | 7462 | 54 | 33 |
| Bulgaria | 7 | 59 | 53 | 75.0 | 3585 | 75 | 40 |
| Czechia | 7 | 85 | 92 | 80.3 | 9088 | 74 | 33 |
| Greece | 7 | 77 | 68 | 61.2 | 7875 | 79 | 27 |
| Hungary | 7 | 67 | 73 | 75.3 | 5444 | 72 | 28 |
| Portugal | 7 | 86 | 79 | 76.1 | 9346 | 66 | 58 |
| Croatia | 6 | 66 | 65 | 66.7 | 6659 | 57 | 40 |
| R | | 0.4859 | 0.4301 | 0.3747 | 0.5616 | 0.3377 | 0.2777 |

Sources: author's calculation based on Eurostat, 2019-2020; Reuters Institute for the Study of Journalism, 2019 and World Bank, 2019

Table no. 5. Correlation Analysis of Technological Factors and the Percentage Paying for Online News in Different European Countries

| Country | Pay for online news, %, 2019 | Mean broadband download speed, in Mbps, 2019 | Level of internet access in households, %, 2019 | Secure internet servers (per 1 million people), 2019 | Individuals - mobile internet access, %, 2019 | Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+), 2018 | Online news consumption (including social media), %, 2019 |
|-------------|------------------------------|--|---|--|---|---|---|
| Norway | 34 | 38.46 | 98 | 36181 | 58 | 99.75 | 84 |
| Sweden | 27 | 55.18 | 96 | 25672 | 49 | 99.74 | 84 |
| Finland | 16 | 29.34 | 94 | 57706 | 39 | 99.79 | 85 |
| Poland | 16 | 24.38 | 87 | 20603 | 34 | 86.73 | 86 |
| Denmark | 15 | 49.19 | 95 | 277134 | 58 | 99.92 | 80 |
| Ireland | 12 | 23.87 | 91 | 95278 | 44 | 95.34 | 84 |
| Belgium | 11 | 35.69 | 90 | 19664 | 57 | 98.64 | 79 |
| Netherlands | 11 | 40.21 | 98 | 130370 | 49 | 99.64 | 78 |
| Switzerland | 11 | 38.85 | 96 | 95788 | 45 | 98.43 | 83 |
| Romania | 10 | 21.80 | 84 | 19180 | 32 | 57.75 | 87 |
| Spain | 10 | 36.06 | 91 | 17716 | 37 | 93.76 | 80 |
| Austria | 9 | 19.33 | 90 | 26307 | 47 | 98.16 | 75 |
| France | 9 | 30.44 | 90 | 29396 | 48 | 94.00 | 69 |
| Italy | 9 | 17.30 | 85 | 15169 | 14 | 93.79 | 76 |
| UK | 9 | 22.37 | 96 | 35990 | 56 | 96.37 | 75 |
| Germany | 8 | 24.64 | 95 | 77933 | 52 | 99.14 | 68 |
| Slovakia | 8 | 29.45 | 82 | 20092 | 40 | 84.18 | 80 |
| Bulgaria | 7 | 16.95 | 75 | 40238 | 25 | 72.20 | 88 |
| Czechia | 7 | 23.27 | 87 | 56198 | 31 | 80.99 | 85 |
| Greece | 7 | 13.41 | 79 | 6651 | 25 | 85.47 | 92 |
| Hungary | 7 | 31.10 | 86 | 26244 | 47 | 74.94 | 85 |
| Portugal | 7 | 22.75 | 81 | 19182 | 34 | 92.34 | 79 |
| Croatia | 6 | 17.22 | 81 | 22743 | 22 | 86.14 | 89 |
| R | | 0.6170 | 0.5628 | 0.1073 | 0.4360 | 0.3839 | 0.1299 |

Sources: author's calculation based on Cable.co.uk, 2019; Eurostat, 2019; Reuters Institute for the Study of Journalism, 2019 and World Bank, 2019

The correlation analysis showed that the percentage paying for online news in different European countries is most influenced by the following PEST factors:

1. mean broadband download speed: $R = 0.6170$;
2. level of internet access in households: $R = 0.5628$;
3. median household income: $R = 0.5616$;
4. control of corruption: $R = 0.5109$.

These four factors showed a moderate positive correlation with the percentage paying for online news, which means that there is a tendency for relatively high scores of the indicated PEST factors to go with high scores of the percentage paying for online news (and vice versa).

The multiple linear regression model is as follows:

$$Y = -6.0153 + 0.2696x_1 + 0.1245x_2 + 0.0002x_3 - 0.0625x_4,$$

where the dependent variable Y is the percentage paying for online news in different European countries, while independent variables are the following:

- x_1 – mean broadband download speed;
- x_2 – level of internet access in households;
- x_3 – median household income;
- x_4 – control of corruption.

Table no. 6. Summary of Overall Fit

| | |
|--------------------------------|--|
| R-Squared | $R^2 = 0.4456$ |
| Adjusted R-Squared | $R^2_{adj} = 0.3225$ |
| Residual Standard Error | 5.5096 on 18 degrees of freedom. |
| Overall F-statistic | 3.6176 on 4 and 18 degrees of freedom. |
| Overall p-value | 0.0248 |

Source: author's calculation

The coefficient of determination $R^2 = 0.4456$ means that the variance of these four PEST factors explains the variance of the percentage paying for online news in different European countries to the extent of 44.56%. The figures listed in Table 6 indicate that this multiple regression model is of moderate quality.

Table no. 7. Coefficients

| Predictor | Coefficient | Estimate | Standard Error | Standardised Coefficients | t-statistic | p-value |
|--|-------------|----------|----------------|---------------------------|-------------|---------|
| Constant | β_0 | -6.0153 | 29.3021 | | -0.2053 | 0.8397 |
| x_1 – mean broadband download speed | β_1 | 0.2696 | 0.1515 | 0.4291 | 1.7795 | 0.0921 |
| x_2 – level of internet access in households | β_2 | 0.1245 | 0.4274 | 0.1221 | 0.2913 | 0.7742 |
| x_3 – median household income | β_3 | 0.0002 | 0.0002 | 0.3452 | 0.9476 | 0.3559 |
| x_4 – control of corruption | β_4 | -0.0625 | 0.1670 | -0.1599 | -0.3740 | 0.7128 |

Source: author's calculation

The value of the constant indicates a moderate value of the dependent variable at zero value of independent variables, i.e., if mean broadband download speed, level of internet access in households, median household income, and control of corruption equal zero, the percentage paying for online news will be negative: -6.0153. The independent variables included in the regression equation do not fully describe the impact of different factors on the percentage paying for online news, as there are other factors, including brand

distinctiveness, quality of the content, convenience, and additional benefits that also affect the dependent variable.

Approximately 95% of the observations should fall within ± 2 standard error of the regression from the regression line. Thus, the value of the percentage paying for online news in the absence of the influence of the PEST factors may deviate from the average value of $-6.0153 \pm 2 \cdot 29.3021$, which is equal to 58.6042%.

Standardised beta coefficients compare the strength of the effect of each individual independent variable to the dependent variable. The mean broadband download speed and the median household income have the strongest impact on the percentage paying for online news.

A p-value is less than 0.05 (0.0248), so it is statistically significant and indicates strong evidence against the null hypothesis.

5. Conclusions and Recommendations for Future Research

From the data presented above, we can draw the following conclusion: as of 2019, four of PEST factors, namely mean broadband download speed, level of internet access, median household income, and control of corruption, are important predictors for the percentage paying for online news in different European countries.

With the mean broadband download speed increasing, more advanced services and functions of online services are available. The high internet penetration in the country creates the basis for daily online news consumption. Knowing median household income gives necessary insights into price developments and the average willingness of readers to pay. The control of corruption in the country reflects perceptions of the extent to which public power is exercised for private gain. The existence of elites and private interests affects the development of investigative journalism.

As for recommendations, media companies should pay attention to the indicated PEST factors in each European country to boost their national competitiveness. For example, if the mean broadband download or internet penetration is relatively low, companies can work on the download speed of their websites or applications or even provide a light version of their products so that any consumer in the country can have easy and convenient access to their products. Considering the median income helps companies choose the appropriate pricing strategy, while the indicator of control of corruption helps understand the topics, which the target audience will be interested in most of all.

The limitations of this study consist in the following: to understand the full scope of correlation of PEST factors and paying for online news, it is necessary to research the time-series data (i.e., consider statistics for ten years) and different regions and countries of the world (including, Americas, Asia Pacific, and Africa). What's more, the coronavirus impact on online media business can be the topic of a comprehensive investigation, since the preliminary measurements show that the crisis has accelerated long-term structural changes towards a more digital, more mobile, and more platform-dominated media environment (Reuters Institute for the Study of Journalism, 2019).

However, the described PEST analysis of paid digital media subscription model in European countries as for 2019 serves as a starting point of investigating the interrelationship between the proportion of people paying for online news and macro factors. The further development of this topic can foster the successful implementation of best revenue practices by digital media companies and ensure their competitiveness in terms of global digital leadership of top technology companies.

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THE ANALYSIS OF FINANCIAL AND NON-FINANCIAL INDICATORS, ESSENTIAL COMPONENT OF APPRECIATING THE GLOBAL PERFORMANCE

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Abstract: *Considering the more and more stringent need for economic recovery and development at a national and international level, an important role falls under the responsibility of economic entities' performance, given the more intense competition for each market segment, and the globalization mechanisms that remove the weak actors. The beginning of the third Millennium and implicitly the international financial crisis have brought to analyze numerous issues regarding the business environment and company performance. The difficulties of financial analysis in forecasting the issues that could arise have led to a reconsideration of the main concepts of: operational tools, knowledge method that imposes the establishment of economic-financial analysis type, establishing the content of the economic-financial analysis process, and finally establishing the methods and techniques of economic-financial analysis. Considering the macroeconomic evolution, we cannot ignore the social and environmental aspects that can incur loss to economic entities, especially to multinational companies, losses that can become real as: market shares and fiscal revenue decrease, less clients, various greening costs, marketing campaigns to regain the trust of consumers in their products and services. Due to all these reasons, the old tools regarding the company's performance are no longer sufficient to determine these indicators. Now, there needs to be a clear distinction between accounting profit and economic profit. The theme of this research „The Analysis of Financial and Non-financial Indicators, Essential Component of Appreciating the Global Performance”, looks to underline one of the most important aspects of the new economic reality, marked by change, transparency, knowledge, collaboration, interactivity, but also by a special interest given to human factor.*

Keywords: *performance analysis; financial and non-financial analysis, evaluation, globalization, innovation*

JEL Classification: *M41.*

1. Introduction

The established tools for measuring performances are the indicators. In economic literature, we can identify dozens of definitions of indicators. As some authors say, indicators are „objective data that describe a phenomenon from a strictly quantitative point of view”. For others, „indicators are numbers that express loyally the controlled phenomenon” or „numerical data, surged from an activity or action, that can contribute efficiently to enriching the progress decisions or putting them in practice”.

The majority of definitions given to economic indicators are restrictive, not considering in a sufficient manner, their role in the management decision.

In my opinion, the spectrum of company performance is more extensive; it has to contain other performances measurable of not, from economic, technical-economic, environmental protection and managerial standpoint, etc. To obtain a reasonable and coherent image of an economic entity performance is needed to be used an indicator system. Performance indicators from this system structure have to contain at the same time, at least the following aspects: the organisation objectives, strategy, effectiveness, and efficiency of activities developed, the adjustment capacity of the company to the market demands in which activates (Comandaru et al., 2020, p.100).

We ascertain that, usually, a set of indicators used in assessing the global performance contains, given their relevance to each economic entity, the two main

indicator categories: financial and non-financial. As we assist globally to an accentuated tendency of reporting the three dimensions of global performance (economic, environmental and social), we consider that in the near future, this way will be imposed by legal regulations, or will be requested by the partners of the economic entities. For a more concise assessment of organizations' performance, it is imperative that the measurement of performance to be made with the help of a multidimensional balanced system, that includes both financial and non-financial indicators, with the purpose of diminishing the constraints of both indicator categories () [Nicoleta-Cornelia B.S. et al., 2012:531].

One of the performance measurement and management systems is the one based on *Balanced Scorecard* (BSC), used and adopted worldwide by organisations of all types: a strategic planning tool, spread in the business environment, industry, governmental organisation as well as in the non-profit ones. Balanced Scorecard is a method of measuring and assessing the performances of a company, a version of the Anglo-Saxon dashboard, used today at a large scale. The main pillars of the system are represented by four key components: Desired Evolution State, Strategy Map, Performance Scorecard and Initiatives Portfolio.

Balanced Scorecard has its origins in 1900. Specialist David N. Norton, director of the Research Institute Nolan Norton, in collaboration with Professor Robert S. Kaplan from Harvard Business School, has made a study of 12 known companies such as IBM, DuPont, and General Electric, on the methods and tools used to measure future performances.

Two of the concepts that dominate the modern management of an organisation are value and performance. Performance supposes creating richness and value to the organisation. In this sense, performance represents the ratio between cost and the value of the output generated. To measure the performance means to estimate the value, and to know the cause of value is to „translate” the performance (Albu and Albu, 2005).

This is why it is indicated that we analyse the processes that participate to the value creation mechanism. In this context, it is requested to use a dynamic and flexible tool: Balanced Scorecard.

BSC defines the most important success factors, and measurements are created in such a way that would support completing the organization objective and measure the performance in vital areas, from a strategic point of view. BSC concept includes and develops four fundamental perspectives (Kaplan and Norton, 1992, pp.71-79).

Financial perspective. What are the shareholders' expectations from a financial performance point of view? (shareholders requests satisfaction)

Client perspective. To reach the financial objectives, how will be created value for clients? (client needs satisfaction)

Internal business processes perspective. At what processes we need to excel to satisfy both the shareholders' and clients' requests? (internal processes quality)

Development and innovation perspective. How do we engage all intangible resources – human capital, systems, and organizational culture – to improve the critical processes to organisation success? (development and innovation capacity). Using financial and non-financial indicators to measure the company's successes, represents in reality, a way of reflecting the global performance.

The critics brought to informing power of financial indicators, be it classic or modern, are diverse, starting from the quality of source information and leading to its utility or, better said, to its lack of practical use in decision making, as demonstrated by some empirical studies. Although more and more analysts use a new type of indicators, non-financial, that better characterize the organisation performances, because they touch the sensible points of the company (such as quality of management and intellectual capital

in general), the financial indicators keep their privileged role in substantiating the investment decisions. Ideally would be the assurance of a balance between financial and non-financial indicators, between those that evaluate the past and those who are future-oriented.

2. Issues identified

Through this article, *The Analysis of Financial and Non-financial Indicators, Essential Component of Appreciating the Global Performance*, I will focus on a study case documenting „The assessment of global performance of company X, by analyzing the financial and non-financial indicators”, representing a pertinent analysis of the type of financial-accounting reporting of Romanian companies.

The paper is structured in two main parts: first part, that presents theoretical information from specialty literature combined with personal views; second part, that presents the practical analysis of financial and non-financial statements of the listed company X, to see to which extent a Romanian company understands the importance of applying an innovative management and reporting, that would raise the standards of national economy and face international competition.

The subject of the current study is motivated, first, by the fact that performance research must be placed in the present economic context, and second, by the necessity to renew and improve the performance measurement and assessment tools with the purpose of reflecting more accurately the results obtained by an economic entity, based on the stakeholders interests. The economic entity is a dynamic environment, that has as main objective adding value. Through this, it is justified the importance of performance study.

3. Objectives and research methodology

The present article falls under the research theme of managerial accounting.

The main objective of this research is to contribute to the building of a diagnostic model of global performance adapted to the business environment from Romania, using the financial and non-financial indicators, a context that imposes the use of a dynamic and flexible tool: Balanced Scorecard (BSC).

The second objective is represented by the interest given to increasing competitiveness, without omitting the various limits to companies' success, like: imperfect legislation that continuously changes; the high impact of politics over the economy, social instability; that determine the global economic environment.

The third objective is measuring the value as a result of transformations that take place within some economic processes involving human activity, and the strategic perspective in concentrating over the products with high added value, through assessing the financial and non-financial indicators. The current research is based on specialty literature study as well as practical experiences shown in past statements: financial statements, accounting archives, and other non-financial data made public to identify various themed fields of reporting compared to the potential value of the company studied through Balanced Scorecard. A listed company has been chosen as the study object, due to its complexity and relevance as well as that is undergoing an implementation process of modern methods of management.

The research methodology used is combining the quantitative and qualitative research, through various and complementary methods: historiography, comparison, documentary analysis, graphical representation, statistical estimation, observation, but also public data and materials from institutions from financial and accounting field, the Bucharest Stock Market and National Statistics Institute. To represent the practical studies the exploratory research was used. The work is based on a deductive approach from general to specific, combining qualitative and quantitative studies. The theoretical content

came to support a better understanding of the economic-financial situation of the organization and represented the scientific base of the entire process. The qualitative research had as a fundamental element the interpretation method to assess the accounting information flow from the company used as an example.

4. Research – Case Study: The assessment of the global performance of company X, by analyzing the financial and non-financial indicators

The content of the present assessment illustrates a few theoretical concepts from specialty literature over which personal views are expressed, following the actual analysis of financial and non-financial statements of company X.

At first, it is necessary to present a couple of definitions of the concept „Value” as a leading point to any economic activity and not only. The concern to define the value phenomenon arised from antiquity and had as initiators some of the greatest philosophers: Aristotel, Xenofon, Platon. From this time on, have evolved two main directions of defining the value:

Value = Utility, and Value = Work

- Acquiring some things, actions, ideas, phenomenons, to correspond to social necessities and to the ideals generated by these;
- The sum of qualities that give meaning or price to an object, being, phenomenon, etc.;
- Importance, significance, price, worth.

To obtain value, capital and work have a balanced role, symmetric. The main factors that lead to getting value: earth/field, work, and capital get each compensation whose name differs from one factor to the other: rent, salary, profit. As such, work is the real measure of exchange value for all things (effort and difficulty to obtain it) (Adam Smith, *The Wealth of Nations*). When we deconsider the value of using the goods, the only attribute that remains to the goods is: the one of being the output of work, *where value = transformation*.

No matter the direction of defining the value, one thing is very clear: *value is the result of transformations that take place during a series of economic processes where the human activity is trained*. These processes are *production, distribution, exchange, and consumption*. The mechanism to obtain and manage the value cannot be built without the participation of the three types of systems – natural environment, society, and economy. Between these systems, there is a potential mutual exchange with positive and negative effects, over the processes that happen in those same systems.

Analysis of financial and non-financial statements of company X

The analyzed company is listed at the Stock Exchange, privately held mainly and tries to implement modern methods of management based on assessing the financial and non-financial indicators. The company has a production activity, with 288,000.00 tons of sugar in 2017, being in the range of the biggest companies from Romania.

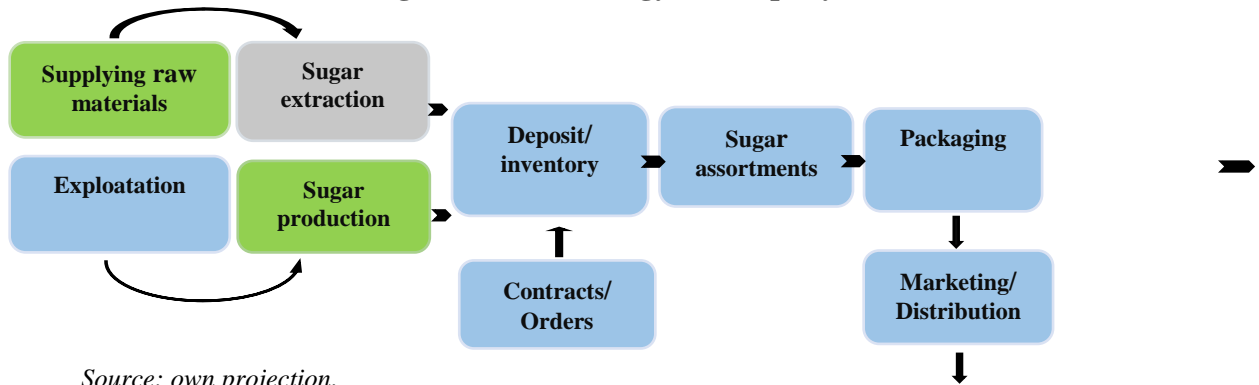
The company *clients* are final users and traders from Romania and worldwide. Over 80% of resulted production is distributed into the international market through the Stock Market Exchange based on long term contracts with clients from over 25 countries from all over the world and from the European Union.

The *strategy* of company X in the past 5 years: Has *invested* approximately 245 million USD in upgrading and developing the production capacity, including approximately 70 million USD in environmental protection and improving work security. These investments had as a result of the increase of sugar production from 187,052.00 tons in 2012 to 288,000.00 tons in 2017. Apart from the main investment made, the company focuses on *developing products with high added value*:

1. Primary products with added value, that include: raw sugar from sugar beet, raw sugar from sugar cane;
2. Processed products with added value: refined white sugar, brown sugar, crystal sugar, cubic sugar, powder sugar.

The company would like to increase its sales from 288,000.00 tons at the moment, to 315,000.00 tons in 2018.

Figure 1. The strategy of company X



Source: own projection.

Environment. Social responsibility. The company has developed automated monitoring programs of the factors that have an impact on the environment, in collaboration with the Environmental Governmental Protection Agency and the Public Health Direction. An environmental protection officer has been assigned to each company division.

In 2016 the company obtained the Integrated Environmental Authorisation, for 10 years, as a sign of recognition of the long term investment plan of the company, with a current value of over 20 million USD. The environmental authorization certifies the fact that all emissions made by the company are in complete alignment with European Union standards.

The organisation has replaced the gas sewage technology, increasing this way the efficiency of retaining from 65% to over 99%. Also, all evacuation gases are in compliance with the best-practice standards in the industry. The gas emissions have been reduced with over a quarter. The company built the first ecological dumping hole, a few years ago.

At the same time, the environmental protection investment programs have allowed the company to gain the ISO 14001 quality standard for environmental protection. The company implements eco-efficiency and safety measures throughout the entire production process and meets successfully the client requirements on this aspect.

Work safety. The company is convinced that its employees are the most important value and their safety is a priority. This is why, the organization is improving continuously work conditions to the highest standards, and the OHSAS 18001/2007 certificate, upgraded currently by ISO 45001/2018 certificate, that the company owns, serves as proof.

To create the complete context of company X analysis, were used company financial reports and statements from 2014, 2015, 2016 and 2017, reports to the National Commission of Securities and other non-financial data published and available in specialty publications. Another level of explaining the company context (other than through accounting assessments) is represented by the value creation illustrated by annual reports (investments) and also by published information about employee protection and social responsibility.

The accounting information at company X are presented for the following categories of receivers: The most important category, *shareholders*, is the most interested in the final result of each financial year and especially in the dividend distribution.

Assessing the increase ratio, it has been observed that in 2015 the company has a gross divided/share of 0,6062 RON, in 2016 of 0.2239 RON, and in 2017 of 0,1876 RON, but at the same time, the debts to the state have decreased and increased the investments.

Managers are required to make certain considerations, estimations, assumptions about accounting values of assets and passives that cannot be easily deducted from other sources by shareholders. Their estimations are founded on historical experiences and other relevant factors. The *bankers* also use the accounting information provided by the company, especially to guarantee the loans given. The agreements implied by these credit contracts impose, among other things, maintaining certain indicators within the limits agreed with the banks, like:

- Debt indicator, respectively current debt that carry interest/annual revenue calculated before interest, taxes, depreciation, and amortization.
- Net Capital/Total Tangible Actives indicator.

At the end of 2017 the company was fulfilling all indicators mentioned in the credit contracts, the cases where during the year were recorded deviating situations from the imposed limits of the mentioned indicators, have been negotiated with the banks and have been remediated. For stimulating the *employees*, through the collective employment contract, the company has engaged to give pension benefits. For this, the company records pension provisions, amounts that will be given at retirement.

The *clients* have advance payments given to the organisation and as such, they are interested in making sure that the orders are fulfilled and they will not be losing the amounts paid. Considering the fact that the organisation is dealing with the international market, based on client satisfaction depends on the notoriety and company image on the national market.

In regards to the *accounting information* provided to *the state*, this is most of the time mandatory and the published information can be processed (the implication of creative accounting) and provided in a different way and with a different meaning than the internal reporting. The state institutions are also involved in the way of transmitting the accounting information, by issuing mandatory procedures and laws: the harmonization program of Romanian accounting to international regulation and to the 5th Directive of European Economic Communities, Directive 2014/95/UE and to International Accounting Standards.

Financial analysts (like the ones from the Bucharest Stock Exchange) have access to a large part of the company information and based on them they calculate the increase perspectives of the company, results forecasting, certain investment parameters, and, at client, request can even calculate the rating of the company and make investment recommendations. The financial perspective is based on calculating a few indicators considered more important for the company like: liquidity indicators, risk indicators, fiscal revenue, return of investment, gross sales margin, average share price, the result per share and a few indicators of management. It is obvious that the company desires to gain good financial results and tracks its accomplishment by each employee, by departments, by types of products, giving first attention to the products (product outputs).

Following periodically the efficiency represents a management indicator because can be made corrections before having the effects visible in the financial result. Observing the calculated indicators and company strategy can be observed that the company wants to maximize the production to a set level, an improved productivity per employee, and a maximum efficiency of machinery. The main concern of *investors* is to modernize the production cycle and to supervise the degree of productivity/efficiency of this activity and how this is reflected in the end result.

Concerning the *human resources*, the main objective of the company is to keep the qualified personnel, given the limited number of available professionals in the industry. Considering the fact that specialized engineers are hardest to find, the organizations' principle is to train its own engineers, based on necessities. The company invests 150,000.00 USD annually in training programs focused on various fields. The fact that company X has invested in modernizing the production cycle and tries to keep its senior employees and industry specialists will lead to value creation for clients, even if this process is a long term one. To make the evaluation of global performance, a system of indicators has been created, where each of the two categories of indicators – financial and non-financial have equal importance, as follows: 60% importance financial indicators, 60% importance non-financial indicators. The environmental and social indicators will also be given equal importance, leading to system structure as follows: financial indicators 60%, social indicators 30% and environmental indicators 30%. Within the structure of the indicators system that assesses the global performance of the analyzed organisation, have been included financial and non-financial indicators, represented in the following table:

Table 1. Financial and non-financial indicators considered in constructing the system of assessing the global performance

| Financial indicators | Non-financial indicators |
|-----------------------------|---------------------------------------|
| Added Economic Value | Degree of Client Satisfaction |
| Return on Investment | Work Satisfaction |
| Financial Return | Work Motivation |
| Operational Cash-flow | Number of Complaints |
| Net profit per Share | Organisational climate |
| Instant Liquidity | Polution Degree |
| Degree of Debt | Respecting Environmental Regulations |
| Total Rentability of Shares | Emissions |
| Total Profit | Recyclable Materials |
| Revenue | Initiatives of reducing the emissions |

Source: personal processing.

It is needed to integrate the social and environmental requests in a management system to be able to approach globally the organisation performance. Performance measurement must be done through a multitude of financial and non-financial indicators to diminish their limits and get a complete image of the company situation.

In the current study, it has been approached the subject of diagnostics, with the purpose of creating a diagnostic model of global performance for organisations, with the help of the 20 selected indicators. Testing the relevance of the information contained by the selected financial performance indicators of the company X, was made based on the financial statements from 2014 to 2017.

The tests founded on the available data of company X, exchanged at the Bucharest Stock Exchange, for the period 2014-2017, had shown that only three out of the nine financial indicators have an impact on the total rentability level obtained by shareholders, influencing this dependent variable. The three indicators are: degree of debt, net profit, and economic added value. It can be said with a probability of 95%, respectively 90%, that the coefficients of those variables are significant from a statistic standpoint.

Regarding the selected non-financial indicators, it was not possible to test their relevance over the market value of the entity, due to limited information about the non-financial performance factors. The purpose of the process was to establish, based on available information, the ratio of each selected performance in the diagnostic model.

Given that the relevance of non-financial indicators over the market value of economic entities could not be tested, they will be given equal importance in the model

structure, each non-financial indicator will have a weight of 6%. Concerning the financial indicators, these will have a differentiated degree of importance, meaning that the three relevant indicators through their information content (economic added value, net profit and degree of debt) will have a weight of 8%. The remaining seven indicators will have equal importance, summing 36%, and individually will have an importance of approximately 5.14%. All these are summarized in the below table.

Table 2. The weight of performance indicators within the diagnostic model

| Financial Indicators | Weight | Non-financial Indicators | Weight |
|--|------------|--|------------|
| Economic Added Value | 8% | Degree of Client Satisfaction | 6% |
| Degree of Debt | 8% | Work Satisfaction | 6% |
| Net Profit | 8% | Work Motivation | 6% |
| Total Rentability obtained by Shareholders | 5,14% | Number of Complaints | 6% |
| Net Profit per Share | 5,14% | Organisational Climate | 6% |
| Instant Liquidity | 5,14% | Degree of Pollution | 6% |
| Operational Cash-Flow | 5,14% | Respecting the environmental regulations | 6% |
| Return of Investment | 5,14% | Emissions | 6% |
| Financial Rentability | 5,14% | Recyclable materials | 6% |
| Revenue | 5,14% | Initiatives to reduce the emissions | 6% |
| Total | 60% | Total | 60% |

Source: personal processing.

Evaluation of the global performance of an organisation through the diagnostic model created is based on points given to each analyzed aspect and leads in the end to obtaining the total points, after the following formula:

$$P_{total} = 0.60 * Quantitative\ aspects + 0.60 * Qualitative\ aspects$$

The model requires examining 20 criteria, out of which 10 financial criteria and 10 non-financial criteria. Each criterion gets a final score from 1 to 6, where 1 is minimum and 6 is the maximum. A total score is calculated after the above-presented formula, by combining quantitative criteria and qualitative ones, and to determine the final score is used the weighted mean, such that the assessed economic entities will be able to fall in one of the following performance categories:

Table 3. The scores of each performance category

| Final score (weighted) | Performance Category |
|------------------------|----------------------|
| 1,00-3,00 | G1 |
| 3,00-4,00 | G2 |
| 4,00-5,00 | G3 |
| 5,01-5,50 | G4 |
| Final score (weighted) | Performance Category |
| 5,51-6,00 | G5 |

Source: personal processing.

Considering the number of points obtained after applying this model, company X assessed could fit into one of the following performance categories:

- G1 – weak global performance, not respecting the financial criterion or the non-financial criterion;
- G2 – acceptable global performance, with a worsening tendency of either the majority of financial criterion or non-financial criterion;

- G3 – average global performance, with a stagnation tendency of both criterion categories;
- G4 – good global performance, with an improving tendency of most financial criterion, as well as of the most non-financial criterion;
- G5 – high global performance, respecting both financial and non-financial criteria.

Therefore, it can be noted that we cannot find a perfect balance in the annual reports of the company, with accent, naturally, on the financial axis, that is dominant. The management based on Balanced Scorecard is heavy and most of the conclusions are taken from published news combined with personal opinions, views of other specialists and data resulted from public financial statements.

5. Results and discussions

Starting from the above information, a series of subjective conclusions have arisen regarding the assessment of global performance at company X, by analyzing the financial and non-financial indicators, the reporting and the concept of social responsibility. At company X, can be observed that it tends to accomplish all four aspects of responsibility: economic, legal, ethical, and social.

The results obtained following the assessment of the financial and non-financial indicators considered when constructing the global performance diagnostic system indicates that the company falls under one of the following performance categories: G1 – weak global performance; G2 – acceptable global performance; G3 – average global performance; G4 – good global performance; G5 – high global performance.

Regarding the place of value creation in the financial communication, the types of value, beneficiaries and the sources of value creation identified in annual reports, it has been concluded that the annual report is fundamentally based on accounting communication and financial statements, but also the value creation is substantial, especially about the human capital and structural company capital. There is shown a report of social value, through which the company seeks to get legitimacy with the public, responding also to the mass media and political pressure, but also offers more likely limited information, while the value statements explain clearly the value creation for shareholders.

These results concern this specific company and its adjacent context (privatization, public pressure, economic policies, a market economy, European integration).

6. Conclusions

The need to understand the economic-financial context of the organisation represents an essential request, but it happens often that the management does not have the correct and complete information to make decisions. BSC and especially the managerial performance systems exceed this obstacle, by a strategically oriented management, by using financial and non-financial performance indicators and achieving economic performance and reaching the set objectives.

Considering the above-presented information, it can be said that the conclusions are rather subjective in relation to the balance of reporting and the concept of social responsibility at company X.

From the moment when the company has become privately owned, the managers (investors) have brought to the organisation a modern and out of the box idea for that time: creating social value or company responsibility towards society. It can be said that this concept is well understood by managers and the actions taken in that area have been timely and appropriate. The environmental concern is reflected through investing in machinery,

obtaining environmental certificates and even training employees. This way, the company tends to accomplish all four aspects of responsibility: economic, legal, ethical and social. From the shareholders' perspective, they will be satisfied as long as they receive earnings (dividends) to a reasonable level compared to the invested capital. Even from the beginning of the privatization, the managers had to reach also mandatory objectives from negotiating with the state (major investments, maintaining employees, paying debts), but at the moment, they look further to client satisfaction, market expansion and everything that would involve greater earnings.

The management relationship with the employees is very good, based on communication and information. The employees consider that they are informed correctly and completely. These think that the shareholders are not only interested in their own earnings, but also in the well being and the comfort of the employees. The bankers, clients and financial analysts do not have significant negotiation power with the company unless themselves are important actors in the industry. The state institutions have an important contribution to the organisation activity. Due to the privatization process, a lot of decisions and actions have been imposed, but at the same time were fundamented on political, economical and personal interests.

Further, I propose a couple of *ideas to improve performance*:

- The need to reevaluate the performance of the quality management system within the company, through financial and non-financial indicators specific to the developed activity, according to market requests and to the internal and international business environment;
- Reducing the extreme situations for the company management, supporting the creation of better conditions for planning, organization, and evaluation of management system;
- Developing an ensemble of documented practices that are maintained and revised continuously;
- Reducing the tendency to use wrong practices;
- Identifying the steps needed to mitigate any issues that require preventive actions;
- Verifying and evaluating the efficacy of the quality system periodically.

In the current scientific process, *The assessment of the global performance of company X, by analyzing the financial and non-financial indicators*, can be underlined the theoretical and practical contributions in the field of management accounting, specifically in the area of assessing the global performance of economic entities. Personal contributions to the research, aim at two main domains: the theoretical and the practical. A consistent part of the research has been focused on presenting the four dimensions of the global performance: economic, legal, ethical and social responsibility, and on the state of knowledge regarding the tools of performance measurement, specifically the performance indicators.

The assessment of global performance at company X has been made based on the empirical research developed with the purpose of determining the optimal structure of the model of evaluation of global performance. This was made by implementing a series of financial and non-financial indicators for each performance dimension within the Balanced Scorecard structure. Building a diagnostic model of global performance of the organization was a result of the process.

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TRADITIONAL BANKING AND DISRUPTION FINTECH. EVOLUTIONS, CAUSES, TYPOLOGIES

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Abstract: *In recent years, financial innovation has accelerated greatly, new financial services have radically changed the banking environment. The main factors contributing to the dynamism of fintech are the development of IT and mobile communications infrastructure, pioneering financial services offered by new technology companies and the design of new financial services based on consumer needs. The fintech areas are: credit, deposits and capital raising services; payment, clearing and settlement services, including alternative currencies; financial investment and insurance services. However, in the near future many of the new financial services will not pose too much of a problem for banks. For example, P2P loans will reduce the market share of banks, but in no case will they eliminate bank loans because, on the one hand, the clientele that will go to the market for P2P loans will be the risky one, unapproved by banks. and on the other hand, because credit institutions still have the majority of resources and the majority of customers. Another example is payments, which continue to be carried out mainly by banks because alternative systems do not yet have a global infrastructure, and the completion of payments presupposes the existence of the legal tender issued only by central banks.*

Keywords: *fintech, banking, P2P loans, crowdfunding, alternative currencies.*

JEL classification: *G21.*

1. Introduction

The Basel Committee on Banking Supervision - BCBS (BCBS, 2018) defines fintech using the definition Financial Stability Board (FSB), as being "financial technology innovation resulting in new business models, applications, processes or products with an associated material effect on financial markets and institutions and for the provision of financial services". This definition is considered useful by BCBS due to the current fluidity of fintech developments, focusing on fintech effects, which are particularly relevant for banks and banking supervisors. It is also worth noting that the term fintech is used to describe a wide range of innovations in financial technology made both by existing banks and by other participants, such as start-ups or large technology companies.

The same source (BCBS, 2018) mentions the results of a survey indicating that most respondents did not uniformly define terms such as fintech, innovation or other similar categories, indicating that the public or participants in the process do not have a clear opinion on the dimensions of fintech, a rapidly evolving field. Participants describe terms such as fintech, innovation or the like as representing (a) an innovative financial service; (b) a new business model provided by a bank or non-financial corporation; or (c) a new technology start-up for the financial industry. Another observation is that some participants made a clear distinction between innovation and disruption, with innovation falling within existing regulations, while disruption requires the development of new rules.

Areas of significance assigned to the categories of fintech, innovation and others are important in terms of how supervisors address or will address the fintech, possible regulations should define new products and specific services for a precise approach.

The categories circumscribed or related to fintech are: application programming interface (API), artificial intelligence (AI), big data, bigtech, cloud computing, copy trading, crowdfunding, cyber-crime, cyber-risk, digital currency, distributed ledger technologies (DLT -distributed registry technologies, also known as blockchain), innovation accelerator, innovation hub, IoT (the internet of things), ML (machine learning), online lending platforms, mobile wallets, neobanks, regtech (regulatory

technology), robo-advisors, security biometric services, smart contracts, suptech (surveillance technology) and the list goes on.

2. Evolutions

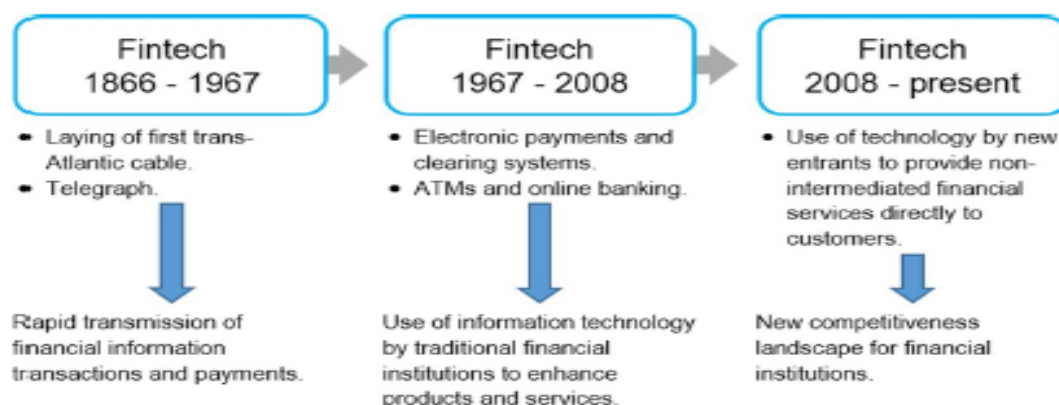
The purpose of this paper is to summarize the main aspects of the concept of "fintech". Fintech is part of the development of financial innovation, which is consolidated into new business models, applications, processes and financial products and new methods for providing financial services (Thake, 2019).

Currency and financial services are several millennia old (obvious if archaic, little evolved ones are included), but for a long time innovation was very slow. In recent years financial innovation has greatly accelerated, new financial services (credit card, electronic payments, virtual banks etc.) radically changing their physiognomy. Most (Arner et al, 2015) believe that we are now in the third phase of financial innovation (figure no. 1).

The first stage was fintech 1.0, which lasted about 120 years, between 1866 and 1987. In that period the physical foundations of modern telecommunications were laid, such as the installation of transatlantic transmission cables, the infrastructure connecting the entire globe. This was the stage when remote machine modern banking appeared, and financial institutions became interconnected. Although the financial industry went through this phase several decades ago, much of the infrastructure at this stage is still partially in use in many existing banks.

During the second stage, fintech 2.0, began in 1987 and lasted until 2008, the year of the globalization of the last great financial crisis. Note that this stage is much shorter, only 20 years old, but financial innovation is much broader. Thus, banks have become increasingly digitized, and have built a significant IT infrastructure; there were ATMs, automatic coin counters, self-banking etc. Also central clearing counterparties, stock exchanges, international banking correspondence migrate to the digital and begin to generalize in this form, and regulatory standards begin to have global meanings.

Figure no. 1. Stages in the evolution of fintech



Source: Thakor, 2019

The current stage, fintech 3.0, is underway and involves both the financial service (product), radically changed as a result of technology, but also financial companies and traditional banking institutions. The main feature of the third phase is that the new financial products are not created by traditional financial intermediaries. New fintech start-ups are the cradle of new financial technologies, and traditional banks do not seem to have a minimum level of IT literacy.

In the approximately 150 years of financial innovation, the finding is that the driving force behind financial innovation has changed over the years, from major infrastructure providers to banks and now to IT companies, new start-ups, which form the fintech world.

3. Factors that amplify fintech innovation

A 2017 study (Varga, 2017) found that the main factors contributing to fintech dynamism today would be the unprecedented development of IT and mobile communications infrastructure, pioneering financial services provided by new technology firms and, last but not least, designing new financial services based on consumer needs.

Innovation in the financial field is generated primarily by technological progress and the cheapening of basic telecommunications services and IT equipment, but also by their availability. This includes developments in hardware, IT in software technology, such as accessible computers, mobile phones, rapid penetration of the Internet, but also the fact that a growing number of people possess programming skills and basic knowledge in the field of IT. Equipment/hardware is becoming cheaper and more diversified: desktops, laptops, tablets, which make it possible to obtain fintech on a lot of devices, and entry barriers are lower and lower. A telecommunications infrastructure has been installed in all major cities of the world, and free Internet, accessible in more and more places, can also be used by people at the bottom of the social ladder. Likewise, mobile phones, including smartphones, have become cheap products. In addition, they increase the opportunities that people have to connect and interact more deeply with others, but also with the payment infrastructure. But cheap hardware has made it possible for low-income individuals to develop their computer skills and programming skills, some even using free educational materials available on the Internet.

The second factor that energized the fintech sector was the financial services innovation approach adopted by fintech companies. fintech technology companies adopt streamlined business models and focus on niche segments of the financial sector. The case of those two billion adults in the world without access to basic banking services, which are approached by these fintech companies, is often cited, relying precisely on the disinterest of traditional banks towards these categories of customers. Providing personal financial services, such as current or savings accounts, transfers, remittances, loans, etc. can help people at the bottom of the hierarchy get out of poverty. So many card companies, fintech companies, mobile operators intend to do this, while at the same time generating untapped revenues from traditional banks. There are opinions that the services offered by fintech companies are, in this case, social services. The successes registered by Grameen Bank (microfinance organization and community development bank in Bangladesh, providing small unsecured loans to the impoverished) are cited, initiated by Nobel laureate, Professor Muhammad Yunus, who helped improve the personal finances of previously under-banked people; Likewise, the success of M-PESA, operated by Safaricom - a subsidiary of Vodafone - which has become the largest transfer service in Kenya. The success of M-PESA (which provided an e-money account in Kenya related to the user's mobile phone number using the company's mobile telecommunications technology infrastructure and only requires users to have a cheap feature phone to make peer-to-peer payments) and which proves that mobile operators can play a major role in providing basic financial services to people at the bottom of society. Through the customer segments that fintech companies target, they rely on lower profit margins and higher volumes of financial transactions (Haldane, 2016, in Varga, 2017). Let us also remember that we are talking about democratizing the financial sector, by improving access to these services.

Many pioneering services were offered in developing, poor countries, where most of the population, invariably poor, bypassed traditional banks. In addition, in many of these

countries made major leaps in the adoption of new or technologies, which as mentioned are cheap.

The construction of bank branches in poor, mostly rural countries was avoided by traditional banks because they could not generate enough income from micro-remittances that individuals living there wanted to make. Nor did lending to under-banked people seem to be a profitable business for traditional banks because the individuals who lived there could not meet the strict and traditional banking criteria for assessing credit risk. Thus, while traditional banks were abandoning sub-banked regions, fintech companies were eager to exploit these opportunities, using technology, pre-existing infrastructure built by telecommunications companies (which meant low operating costs), available customers and services at accessible prices.

In this context, it should be noted that fintech companies enjoy several advantages over the traditional banking sector. Thus, fintech companies do not depend on old basic computer systems, many of which are over 30 years old and have been repeatedly upgraded with new additional services, which are a heavy burden for innovation, because the basic functionalities and infrastructure are outdated, and modifying old systems and infrastructure is costly and poses additional operational risks. The IT departments of traditional banks are not prepared to respond quickly to customer needs, and any change in IT systems involves a series of preparatory works that involves a period of time (even months) before any change. Meanwhile, fintech companies are building their business models around technology and software, with IT being an important factor in their success, in which they invest heavily, especially in state-of-the-art programming.

A third cause of fintech companies' dynamism is explained by the fact that they build their products, by focusing on the customer, the user, offering useful tools and the possibility to experiment. The development of new financial products and services by fintech companies has been exacerbated by customers' loss of trust in traditional banks, especially due to their role as initiators of the financial crisis that began in 2007-2008. The recession that followed the crisis, bank management's lack of transparency before and during the crisis, improper banking operations deeply affected the public's trust in traditional banks. This facilitated the rise of new fintech companies, which quickly gained market share at the expense of banks. In addition, the financial situation during and after the crisis somewhat reduced the importance of banks (for example, the relative decline in corporate credit in the context of risk aversion in the traditional banking sector or low interest rates that discouraged savings). fintech companies understood that public disappointment with banks had created an opportunity for better financial services and more user-centred innovation. fintech companies design their services to be available on all types of digital devices: mobile phones, tablets, even smart watches. Customers no longer have to wait in bank branches to approve a loan, make a financial transfer or open bank accounts. Millennials (i.e. those born in the 1980s and 1990s) are looking for different, more personalized and convenient services. Cited studies (Viacom Media quoted by Varga, 2017) found that 53% of millennials do not believe that their bank is in any way special or offers something different to other intermediaries. fintech companies are also gaining market share by offering customized analytics-based solutions, customized financial management solutions that help customers manage their money wiser, peer-to-peer lending platforms with much more default payment estimation models, precise and competitive loan opportunities with much lower interest rates than banks.

Fourthly, *I believe that national or supranational authorities, whether governmental or banking, intervene in the market and stimulate the development of this fintech segment through a series of regulations that require/oblige banks to open their servers for IT companies. The clearest example is that of the European Union. Thus, in October 2015,*

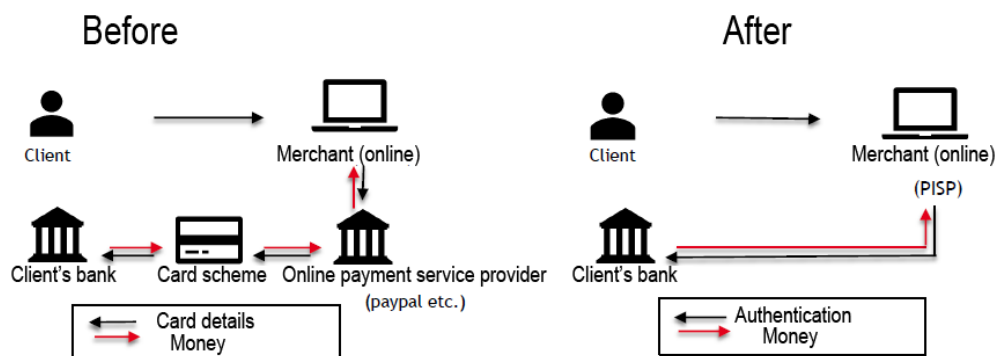
the European Parliament adopted a revised payment services directive, known as (PSD2 - Payment Service Directive 2). Thus, the new rules aim to promote the development and use of mobile payments through open banking services. At the same time, it requires banks to allow companies, creating banking IT solutions, access to their payment infrastructure - application programming interfaces (APIs) - and customer data, up to the level of account transactions (payments and receipts).

Thus appeared the phrase "open banking", designating that part of financial technology that refers to the use of APIs (application programming interface), that allow third-party developers to build additional services or applications that support banks or become their competitor. Open banking thus offers greater financial transparency for account holders, ranging from open data (already available as public information) to private data.

These third-party developers (Anton, 2018), generically called "TPP" - third-party providers, can be non-banking institutions, fintech companies or merchants that can be authorized as payment service institutions. TPPs are divided into two groups: Account Information Service Providers (AISP) and Payment Initiation Service Providers (PISP).

The introduction of PISP in payment schemes is an essential change in the banking industry, because until this directive, bank transfers were made only by banks and electronic money/card issuers. Thus, by authorizing PISP, merchants can, with the customer's consent, access their account data, and online purchases can be settled directly by the merchant, as PISP, based on customer acceptance, without the intermediation of a card and without involving another payment processor.

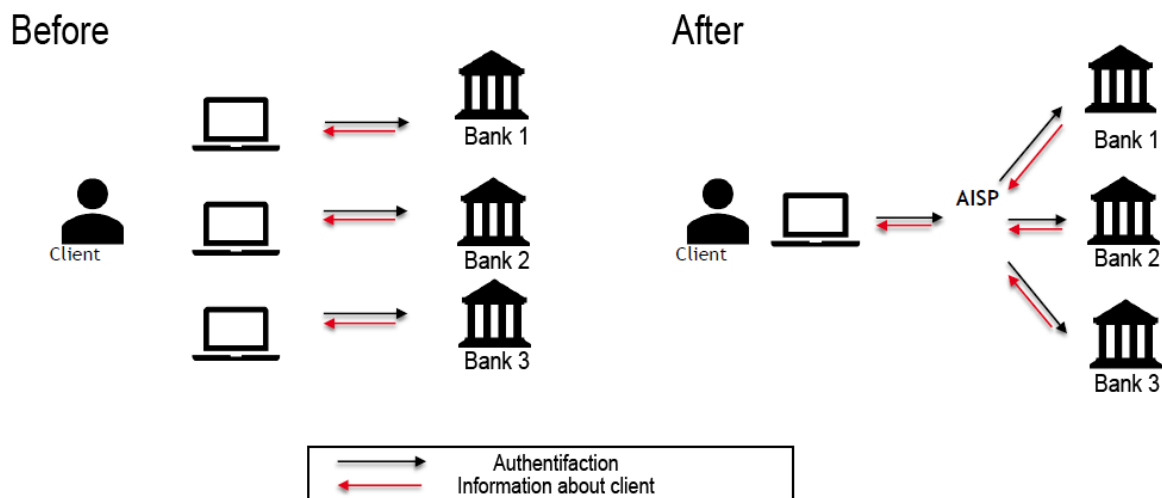
Figure no. 2. Comparison between the traditional payment technique and the payment model under the conditions of existence of PSIP (payment initiation service providers)



Source: Anton, 2018

AISPs are providers that access bank accounts and extract information about the availability of these accounts, based on the explicit consent of account holders. If the client has several bank accounts, AISP services will allow them to access their account data held in one place. AISP can also analyse the client's financial behaviour, based on data about their accounts, and make recommendations for streamlining transactions.

Figure no. 3. Comparison between the traditional way of consulting the account balance and the model in which payment initiation service providers (PSIPs) operate



Source: Anton, 2018

Third party providers (TTPs) must be licensed as payment service providers (PSPs) and have the right to provide services throughout the European Union on the basis of the authorization received in the country of origin.

PSD2 improves security policy and wants for a way to reduce risk, to protect customers against fraud and illegal use of sensitive and personal data.

PSD2 is recognition of the "fintech" revolution in the payment services market and eliminates banks' monopoly on customers' banking data. In fact, PSD2's objective is removing barriers from the payment services market, forcing banks to allow third parties access to the information related to bank accounts.

But banks too will take advantage of the new regulations, expanding their offerings. It is thought that new payment methods will become popular through the connection with social networks, moving to instant payments: we see an advertisement on, for example Facebook, we want this product, we put it in the cart, we allow Facebook to access our bank account, and through biometric data (fingerprint, facial recognition, etc.) we accept payment to the merchant. No complications, no IBAN or other codes, no bank card. And an intermediate conclusion, THE CARD'S DAYS ARE NUMBERED.

For the client, PSD2 will mean access to innovative payment services, alternative cards, access to all bank accounts via a single application, efficient use of information about the turnover of accounts, investments, comparative analysis of the costs of payment services, bank fees, instant payments to merchants or service providers.

When assessing the impact of new technologies on the banking industry, two factors are particularly relevant: (i) the rate of adoption of basic technology in society and (ii) the technological knowledge of the general population to be able to use the new technologies. The Basel Committee on Banking Supervision (BCBS, 2018) is of the opinion that the current pace of innovation is faster than in previous decades and there are signs that the pace of adoption will increase. For example, the adoption of ATMs took place over two decades, while internet banking and mobile banking took root in a shorter period of time. In addition, a generation of digital natives has reached maturity, and their technological skills match the innovations of the fintech era perfectly. In fact, we are witnessing a change in customer behaviour and demand for digital financial services, and the rapid pace of change means that the effects of innovation and disruption can occur faster than before, implying the need for financial operators to adapt more quickly to changing environment.

4. Fintech domains

In general, fintech circumscribed domains are:

- loans, deposits and capital raising services;
- payment, clearing and settlement services, including the issuance of alternative currencies (digital, cryptocurrencies, etc.);
- management of financial investment services (including stock trading);
- insurance services.

Figure no. 4. Areas of innovative services

| | | Sectoral innovations | | | |
|-------------------------|--|---|---|----------------------------|--------------------------------|
| | | Credit, deposit, and capital-raising services | Payments, clearing and settlement services | | Investment management services |
| Market support services | | Crowdfunding | Retail | Wholesale | High-frequency trading |
| | | Lending marketplaces | Mobile wallets | Value transfer networks | Copy trading |
| | | Mobile banks | Peer-to-peer transfers | FX wholesale | E-trading |
| | | Credit scoring | Digital currencies | Digital exchange platforms | Robo-advice |
| | | | Portal and data aggregators | | |
| | | | Ecosystems (infrastructure, open source, APIs) | | |
| | | | Data applications (big data analysis, machine learning, predictive modelling) | | |
| | | | Distributed ledger technology (blockchain, smart contracts) | | |
| | | | Security (customer identification and authentication) | | |
| | | | Cloud computing | | |
| | | | Internet of things / mobile technology | | |
| | | | Artificial intelligence (bots, automation in finance, algorithms) | | |

Source: BCBS, 2018

However, there are other opinions. Thus, BCBS (BCBS, 2018) uses a different classification of fintech innovations. Figure no. 4 describes the categories of fintech services and products, as well as market support services. There are three sectors that relate to basic financial services - banking and a number of market support services, that relate to innovations and new technologies that are not specific to the financial sector, but also play a significant role in fintech development.

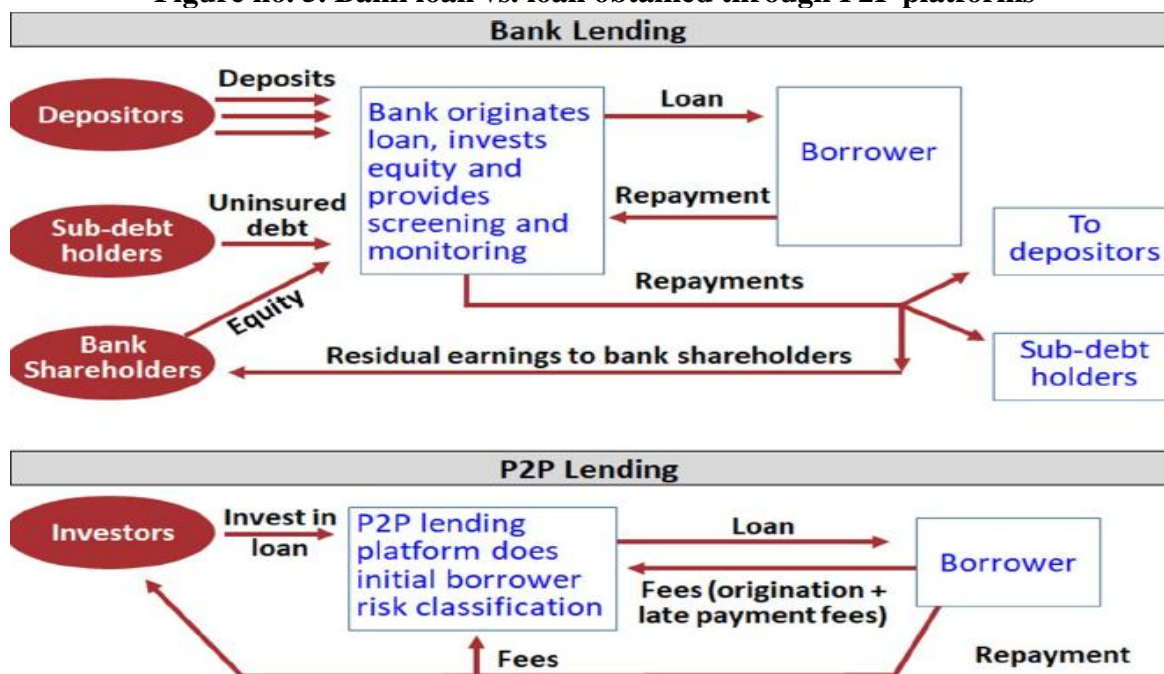
4.1. Lending services, attracting deposits and capital

A first category of banking services offered by fintech companies are loans, attracting deposits and capital, and take the form of **crowdfunding and online lending platforms** (both categories being generically called P2P loans), **mobile phone banking applications/mobile phone banks** (are banks intended only for mobile devices, also known as neo-banks or digital banks or challenger banks and should not be confused with an online account from a traditional bank. Mobile phone banks are 100% application-based, providing more transparency and convenience, with fewer restrictions and waiting times than the traditional bank.) and scoring services for credit applications (but also other data provision and lending services).

P2P loans - sometimes referred to as "market loans" - are loans granted or received by individuals and companies through online services, which directly link lenders to borrowers without the use of an intermediary bank. As reported by Milne and Parboteeah (2016), P2P lending increased in both the US and Europe after the 2007-2008 crisis.

The P2P loan process works as follows. The borrower submits a loan application on a P2P platform. The P2P platform conducts a preliminary analysis of the demand for credit and assigns a score ("degree of loan") which estimates the risks inherent to the borrower and the requested loan. Investors, in the sense of potential creditors, then bid on the amounts they want to give to the borrower and the interest rates. The platform then combines the offers made by potential creditors into a single loan. The P2P platform itself does not invest in the loan, so there are no deposits, subordinated debts and equity of the bank to finance the loan, as in the case of a bank loan. In the case of P2P loans, all the money is provided directly by the investors, who finance the loan, so it can be said to be unmediated, which means that there is no third party between investors and borrowers to commit their own capital. The costs of the P2P platform are offset by loan initiation fees (1-6%), any late fees paid by the borrower and a service fee for the platform as a percentage of all repayments made by borrowers (usually 1%). Because the owner of the P2P platform collects a percentage of the loan repayments, the platform has a function similar to that of a (minority) shareholder who performs an operational control.

Figure no. 5. Bank loan vs. loan obtained through P2P platforms



Source: Thakor, 2019

Although P2P loans increased significantly after the financial crisis of 2007–2009, the total volume of P2P loans is still small compared to bank loans. Total P2P loans amounted to \$26.16 billion in 2015 and, according to Morgan Stanley (quoted in Thakor, 2019), are estimated to be between \$150 billion-\$490 billion by 2020. But by comparison, the volume of loans of US commercial banks amounted to \$13.1 trillion in December 2018. The same source indicates the structure of P2P loans: consumer loans - 36%, business loans - 26.1%, financing of trade/factoring - 19.4%, mortgage loans - 18.5%.

The most popular P2P lending platforms are:

- in the USA: LendingClub Corporation (LC), Prosper Marketplace, Upstart, CircleBack Lending, Funding Circle (co-founded in the USA and Great Britain) and Peerform;

- in Europe: Minto, Grupeer, IUVO Group, Housers, Bitbond, Zopa and Auxmoney.

But the largest P2P lending market in the world is China, with more than 4,000 platforms, making loans of about \$20 billion a year (Thakor, 2019).

As features, it is cited that consumer credit P2P loans are cheaper than credit cards, are not guaranteed, and in the US are subject to U.S. Securities and Exchange Commission regulation and must comply with state laws, but the regulation of these platforms is much lighter compared to banking regulations.

The use of fintech in lending operations is not limited to P2P platforms. Here we must mention shadow banks (shadow banks/alternative banking system), some financial intermediaries that provide maturity transformation services, such as banks, but are not financed from deposits. Shadow banks make extensive use of information technology in lending, but do not seek to match the needs of debtors with those of creditors (on equal footing, as on a P2P platform). They invest their own capital and have balance sheets somewhat similar to those of banks, except that deposit financing is replaced by debt financing and securitization collection. But the alternative banking system is much more complex and although not subject to supervision and regulation, it includes: (a) intermediaries that are not subject to banking supervision, such as hedge funds, (b) unregulated transactions/stocks, such as unlisted derivatives, and other unlisted instruments and (c) unregulated activities, such as swaps on credit/non-repayable loans at maturity (credit default).

4.2. Payment, clearing and settlement services and cryptocurrencies

The relationship between business and consumers is fast becoming digital. Companies are transforming the way they operate to meet the ever-changing needs of their customers and the growing use of mobile phones and devices. One area of the financial industry that is full of innovation is the payments segment. Businesses and users are adapting to online and offline transactions using mobile technology, such as smartphones, tablets or smartwatches, or various other mobile devices.

A first category included in fintech's payment, clearing and settlement services and cryptocurrencies sub-domain is **digital currency**. Digital currency (including virtual currency, electronic money or e-currency terminology) is an accounting balance or record stored in a distributed database, existing on the Internet or on a computer, in digital files or on a card, and which can be used for transactions, payments or held as an asset for subsequent transactions. Examples include cryptocurrency digital coins you coins you virtual coins they digital cash central bank and the electronic. Digital currencies do not have a physical shape like banknotes and coins. They are usually not issued by a government agency and are not considered legal payments, but allow - sometimes without any control - the transfer of ownership across government borders. These types of currencies may be limited and therefore only used in certain communities, such as the purchase of services or an online game. Also, many digital currencies are used to buy other digital currencies. Digital money can be centralized, where there is a central point of control over the money supply (and there are projects of many central banks in this regard) or be decentralized, where the control over the money supply is exclusively private.

The biggest disruption of fintech in payment services was the emergence of cryptocurrencies. The most popular cryptocurrency (sometimes called, partially true, and digital currency or virtual currency) is Bitcoin, which was launched in 2009 and allows P2P transactions independent of the banking system. Bitcoin is a digital computer code, issued cryptographically and which can be stored in an electronic wallet in cyberspace. Bitcoin and other similar coins are based on decentralization (in terms of control, ownership, security and verification of transactions) and are based on a public digital register based on cryptography that replaces banks and is called a blockchain. The blockchain eliminates the need for a reliable financial intermediary, such as a bank, that verifies transactions and makes the control exercised by the state/regulators/governments

unnecessary. The emergence of Bitcoin was followed by the emergence of other alternative currencies ("altcoins"), as well as cryptocurrencies and alternatives to bitcoin. They all use a similar peer-to-peer system to validate transactions (a process called mining) and add them to a blockchain. The differences between them consist in algorithms for validating transactions ("proof of work, mining"). Here are some altcoins: Ethereum, Litecoin, Bitcoin Cash, Dogecoin, Monero etc. While some believe that Bitcoin and other cryptocurrencies are a coin, others considered it a financial investment.

But cryptocurrencies are also a solution for those seeking funding for various projects through a mechanism called an initial coin offer (ICO). An ICO is basically a version of cryptocurrency issued through the crowdfunding mechanism. Thus, cryptocurrency developers sell tokens to investors, who become part of the project, to obtain financing. In some cases, investors can withdraw from the project, trading their chips bought on a secondary market.

Since 2016, more than 24 countries have been investing in distributed registry technologies (DLT), with investments of \$1.4 billion. In addition, more than 90 central banks are involved in discussions on DLT, including the implications of a central digital currency (EconoTimes, 2017). Here are three examples:

- The Bank of Canada has explored the possibility of creating a blockchain version of its currency (TEAGUE, 2016) and did a simulation in 2016, issuing CAD on a blockchain similar to Ethereum, and commercial banks used the new CAD currencies to close their positions at the end of the day and settle their balances.
- The Dutch central bank is experimenting with a bitcoin-based virtual currency called "DNBCoin" (Popper, 2011).
- The same source mentions that the Bank of England has embarked on a multi-year research program to explore the implications of a digital currency issued by a central bank and wants the next version of the bank's software infrastructure to be compatible with distributed registers (blockchain).

Mobile wallet. A mobile wallet is a virtual wallet that stores credit card, debit card, or other payment card information on a mobile device. Mobile wallets are a convenient way for a user to make payments in-store and can be used at merchants or service providers. In fact, a mobile wallet is an application that is installed on a smartphone. Once the application is installed and the user enters payment information, the wallet stores this information by connecting it to a personal identification format, such as a number, a key, a QR code or an image of the owner for each card stored.

When a user makes a payment to a merchant mobile app uses a technology called Near-Field Communication (NFC), radio frequency to communicate with the device's acceptance of the trader's. NFC uses the personal identification format created for the card and user to communicate payment information to the merchant's POS terminal. The information transfer is usually triggered when the user waves or holds the NFC-enabled mobile device over the store's NFC reader (POS terminal).

Not all smartphones or mobile devices are equipped with NFC technology.

For example, for iPhone users, there are alternative ways to use their mobile wallets to make payments in the store, the special application being Apple Pay. Thus, when you buy something, Apple Pay uses a device-specific number and a unique transaction code. So the card number is never stored on your mobile device or on Apple's servers, and when you pay, the card information is never passed on by Apple to merchants. Apple Pay works with Face ID or Touch ID to authenticate the two factors. This means that you do not have to confirm payments by codes, secret questions or passwords. The most used mobile wallet in the US is PayPal, which allows users to make payments using their mobile phone numbers.

The phone number must be connected to the user's PayPal account for the transaction to be approved. Other mobile wallets use other personally identifiable features of the user. The LevelUp mobile wallet uses QR codes that can be scanned at cash registers. The late Square Wallet used the user's image, which could be easily checked by the cashier.

Fraudulent activities, such as identity theft, are more difficult to initiate with mobile wallets. If a user's credit card can be easily stolen or duplicated, smartphones are not that easy to steal, or even if it is stolen, it is hard to access if there is an access password or a fingerprint check is installed, or face-ID.

Mobile wallets are also useful for retail companies that make large volumes of transactions every day, as mobile wallets help reduce waiting and payment times.

Because mobile wallets are a digitized version of physical wallets, almost all cards stored in a physical wallet can be stored in the mobile wallet, such as driver's license, social security number, health cards, loyalty cards, bus or train cards.

In addition to mobile wallets, there are also digital wallets. Although both store payment information, it is implemented differently. Digital wallets are mainly used for online transactions and cannot necessarily be used on mobile devices. Mobile wallets are used by people who would rather not carry a physical wallet when shopping in store. Apple Pay, Samsung Pay and Android Pay are examples of mobile wallets that can be installed on a portable device. A regular PayPal account is a form of digital wallet, but when used in conjunction with mobile payment services and mobile devices, it works like a mobile wallet.

Peer-to-peer transactions (also called person to person transactions, P2P transactions and P2P payments) are electronic transfers from one person to another via an intermediary, usually a P2P payment application. P2P payments can be sent and received via mobile device or any personal computer with Internet access, providing a convenient alternative to traditional payment methods. Through the P2P payment application, each person's account is connected to one or more user bank accounts. When a transaction takes place, the account balance in the application records the transaction and either sends or withdraws money directly from the user's bank account or stores it in the user's account within the application. Since the inception of this concept, many businesses have developed P2P transaction capabilities, increasing competition and consumer convenience, and the invasion of mobile devices in everyday life has further boosted the number of P2P payment applications, becoming more convenient for users. The company that wrote history in the field of P2P payments was PayPal, which specializes in electronic money transfers. The payment system initially served both e-commerce companies and individuals, and became global after the acquisition of PayPal by online retailer eBay in 2002. The eBay business model has required a transaction intermediary to facilitate payments between customers and sellers. Buyers needed this service because they did not want to disclose credit card information to random sellers. Sellers needed this service because many did not have the means to open credit card merchant bank accounts to accept online payments.

Many of the previous services also have variants for enterprises (such as wholesale), being located: in the field of payment networks, foreign exchange transactions (FOREX) or digital exchange platforms. However, the number of applications in this category open to companies seems even smaller and, in addition, they lack notoriety compared to those open to the general public. Additionally, many of these applications, even if they operate in the virtual environment, do not seem to resist government action, with states imposing bans or limiting their activity. Probably at stake is tax compliance and money laundering prevention policies.

4.3. Investment management services

Fintech will significantly change the way stocks are traded, money is managed or financial advisory services are provided. In this sense, fintech has enriched financial services with applications such as: high frequency trading, copy-trading, e-trading, advisory robot.

High frequency trading (HFT). High Frequency Trading (HFT) is a trading method that uses powerful computer programs to trade a large number of orders in a fraction of a second (Chen, 2020). Applications use complex algorithms to analyse multiple markets and execute orders based on market conditions. HFT can be seen as a major form of algorithmic trading in finance, through the use of sophisticated technological tools and computer algorithms for the rapid trading of stocks. Traders with faster execution speeds are usually more profitable than traders with lower execution speeds. In addition, high frequency trading is also characterized by very high transaction values and a good balance between buy and sell orders. Some of the best known high frequency trading companies are: Tower Research, Citadel LLC and Virtu Financial. High frequency trading became popular when stock markets began to provide incentives for companies to add liquidity to the market. For example, the New York Stock Exchange (NYSE) has a group of liquidity providers called Supplemental Liquidity Providers (SLPs) that try to increase competition and add liquidity to existing quotas on the stock exchange and that are stimulated in the form of a fee (\$0,0012 per security in November 2020) or in the form of a discount for the provision of market liquidity, which weighed in millions of transactions per day, means a consistent profit. The success of high-frequency trading strategies is determined by their ability to process large volumes of information simultaneously, which ordinary human traders cannot do. There are criticisms of HFT: they allow institutional players to gain an advantage in trading, because they are able to trade in large blocks using algorithms, the liquidity produced by this type of trading is momentary, disappearing in seconds, which makes it impossible for traders to take advantage of it, that it has replaced traditional brokers-dealers, that it uses mathematical models and algorithms to make decisions (which are taken in a few milliseconds, and this can lead to large market movements for no reason), that it has eliminated human decision and, last but not least, that it allows large companies to profit at the expense of small and retail investors.

Copy-trading (a form of social trading system) allows you to see what other people are trading in real time, to choose traders you like and to follow their activity (either for a fee or for free), copy their transactions with a single click and build a portfolio of user-based stocks. Any transaction made by the investor who copies is executed in the account of the trader who is copying. The investor who copies usually retains the ability to disconnect the copied transactions and manage them on their own. They can also close the copy relationship altogether. Copy traders are compensated by monthly subscription fees from investors who want to copy their transactions. Copy trading has led to the development of a new type of investment portfolio, “people-based portfolios” (investment funds are invested into other investors, rather than traditional capital market instruments) or “signal portfolios”. Copy trading developed from mirror trading, another form of automated trading (algorithmic trading). Mirror trading is an automated trading system in which traders share their own trading history that other users could copy, mirroring, on their own account, all transactions of the copied trader (Fillipo, 2017). One of the first social trading platforms was eToro in 2010, followed by Wikifolio in 2012, and NAGA Trader, based in Europe and listed on the Frankfurt Stock Exchange in 2017, claims to have traded over 27 billion € on its platform in the second half of 2019 (Wikipedia, 2020).

Robo-advising. Robo-advisors (robo-advisor or “automated investment advisor”, “automated investment management” and “digital advisory platforms”) are digital

platforms that provide automated, algorithm-based financial planning services with little human supervision, if any (Frankenfield, 2020). A robo-advisor collects information from clients about their financial situation and future investment objectives (obtained through an online questionnaire) and then uses the data to provide advice and automatically invest clients' assets. The best robo-advisors offer easy investment account setup, efficient goal planning, account services, portfolio management, accompanied by high security, financial education and low fees. The first robot advisor, Betterment, was launched in 2008 and began managing investors' money in 2010. Their initial goal was to rebalance investments in stocks with financial resources, as a way for investors to manage passive investments (debt). After a decade of development, robo-advisors are now able to cope with much more sophisticated tasks, such as eliminating tax losses, selecting investments and planning investments in pension funds. As a result, the industry has seen explosive growth; the assets of robot-managed clients reached \$60 billion at the end of 2015 and are estimated to reach \$2 trillion by 2020 and \$7 trillion globally by 2025 (same).

Most robo-advisors manage stock portfolios structured according to the proportions desired by investment account owners (modern portfolio theory is used to build passive, indexed portfolios for their users). These proportions are monitored by robo-advisors to ensure that they are maintained, even after price changes in the markets, but also that performance regulations are met. Robo-advisors do this using a fluctuation interval (rebalancing bands). For example, each class of actions or bonds is assigned a weight target and corresponding tolerance range (allocation strategy could include a requirement to hold 30% emerging market equity, 30% in blue chips and 40% in internal government bonds, all these shares having a fluctuation corridor of +/- 5% for each asset class). In practice, holdings in the emerging market can fluctuate between 25% and 35%, while 35% to 45% of the portfolio must be allocated to government bonds. When the share of holdings leaves the allowed band, the entire portfolio is rebalanced/reallocated to reflect the initial composition. In the past, this type of rebalancing at the level of each investor was not practiced by trading companies, because it was cumbersome, time consuming and generated numerous transaction fees. In the case of robo-advisors, this is practically automatic and free. Another frequently encountered type of rebalancing the robo-advisors - and is profitable by using algorithms - is the elimination of tax losses by selling stocks losses are offset by gains made by buying a UI similar title. The main advantage of robo-advisors is that they are low-cost alternatives to traditional counsellors. By eliminating the human workforce, online platforms can provide the same services at a fraction of the cost. Most robot advisors charge a fixed annual fee of 0.2% to 0.5% of a client's account balance, compared to 1-2% charged by a human financial advisor. Robo-advisors are also more accessible and available 24/7 if investors have an Internet connection. It takes less capital to become an investor, and some robo-advisors (Betterment) do not have a minimum limit, while many human advisors require an account of at least \$100,000. Robo-advisors require less bureaucracy. The client does not have to call or physically meet with a financial advisor, explain their needs, complete the document and wait. Robo-advisors do all this with a simple click on a few buttons on the computer or on the mobile phone screen. Many digital platforms tend to target the young cohort of technology-savvy millennials and Generation X investors who feel more comfortable sharing personal information online and entrusting technology with important tasks such as wealth management. So the marketing efforts of robotic consulting firms use social channels to reach millennials. But the robotics industry is also proving to be interesting for baby boomer generations, who are high net worth investors and do not reject technology. Robo-advisors have the same legal status as human advisors, and they must be registered with the

supervisory authorities (Stocks and Exchange Commission in the US, and the official name is "registered investment advisor" or RIA for short).

4.4. Insurance

"InsurTech" is the fintech branch dedicated to insurance (Thakor, 2019). The basic element that is brought by fintech in insurance is the connection of devices (phones, watches, computers, etc.) worn as personal equipment, but also cars and other equipment in homes on the Internet and computers, which allows huge amounts of information to be gathered, personal information about individuals. This leads to "big data", which allows insurance companies to use them to calculate risk more accurately and in a much more dynamic way than they do today. Consumers can choose to use sensors and trackers provided by insurance companies, which then generate data that insurance companies use not only in setting the prices of insurance products, but also in designing these services, adjusting insurance premiums by rewarding certain types of low-risk behaviours. The results obtained from these monitoring are used in risk assessment and insurance premiums. This will avoid pooling customers with heterogeneous behaviours and use their individual risk profiles. It is expected that many of the traditional insurance contracts will be changed, reducing cross-subsidies from low-risk insurers to high-risk agencies. Also, new types of insured risks will appear, allowing the conclusion of insurance contracts for smaller and smaller risks, the accuracy of their assessment being higher and higher.

5. Conclusions

Fintech is vaguely defined as "innovation in financial technology that results in new business models, applications, processes or products with an associated material effect on financial markets and institutions and for the provision of financial services". This is because it is not yet crystallized, and the public, as mentioned in opinion polls, does not uniformly define terms such as fintech, innovation or other similar categories.

The world of finance is currently in the so-called fintech 3.0 stage, which involves both the financial service, radically changed as a result of technology, but also financial companies and traditional banking institutions. The main feature of the third phase is that new financial products are not created by traditional financial intermediaries, new fintech start-ups being the cradle of new financial technologies, traditional banks do not seem to have a minimum level of IT literacy.

Innovation in the financial field is generated primarily by technological progress and the cheapening of basic telecommunications services and IT equipment, but also by their availability. Included here are developments in hardware, IT, and software technologies such as affordable computers, mobile phones, fast internet penetration, basic knowledge and programming skills of a growing mass of people. Equipment/hardware is becoming cheaper and more diversified: desktop computers, laptops, tablets, which make it possible to obtain fintech on a lot of devices, and entry barriers, are lower and lower. The second factor that energized the fintech sector was the financial services innovation approach taken by fintech companies. fintech technology companies adopt streamlined business models and focus on niche segments of the financial sector. A third cause of fintech's dynamism is that new companies build their products, by focusing on the customer, the user, offering useful tools and the opportunity to experiment. Fourthly, I consider that a fourth driving factor for fintech is that national or supranational authorities, whether governmental or banking, intervene in the market and stimulate the development of this segment through a series of regulations that require/oblige banks to open servers for fintech companies. The clearest example is in the European Union, where in October 2015,

the European Parliament adopted a revised payment services directive, known as (PSD2 - Payment Service Directive 2).

In general, the areas covered by fintech are: credit, deposits and capital raising services; payment, clearing and settlement services, including the issuance of alternative currencies (digital, cryptocurrency, etc.); management of financial investment services (including securities trading); insurance services.

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NON-FINANCIAL REPORTING: AN INSTRUMENT OF SOCIAL RESPONSIBILITY AT THE LEVEL OF PUBLIC INTEREST ENTITIES

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Abstract: *The globalization of markets imposes, more than ever, competitiveness imperatives for economic entities around the world and has consequences both on the environment and on the people. In this context, there are alternatives to the sustainable development to keep environmental and social resources in optimal shape. Economic entities as major players in society must play their part and be aware of the importance of integrating actions specific to sustainable development and social irresponsibility at the strategic and decision-making level. To survive and be more competitive, they are forced to innovate and develop products that are more environmentally friendly. Social responsibility is a concern at national and international level, and the reporting of non-financial information is a result of the actions taken by economic entities in this regard.*

Keywords: *social responsibility, non-financial information, sustainable development, public interest entity.*

JEL Classification: *M41.*

1. Introduction

The specialty literature defines social responsibility by appealing to the application of the principles of sustainable development and good governance in the management of economic entities and their projects. These principles are: environmental balance, social equity, economic efficiency, transparency, behavioural ethics, involvement of all stakeholders, etc. Corporate social responsibility (CSR) is the set of actions, principles and practices by which an economic entity is involved in a company, in order to ensure a positive impact of its activity and to contribute to the development of that company.

In other words, Corporate social responsibility is understood as a new model of collaboration between governments, businesses and civil society, and the rise of collective objectives, with reference to entities have economic consequences (in doing business, which intensifies its power within the community), political (within governments, which extend control over the entities, though not always directly) and socially (concerning the various stakeholder groups, which do not only benefit from the private legislation of the entities, compared to the public one, from state).

Although the specialty literature abounds in theoretical disputes, the research study aims to highlight the fact that, efficiently and realistically, the social responsibility can be governed by economic entities in such a way as to represent a profitable business strategy. It can be considered that there is a direct and reciprocal link between the profitability of an entity and its behavioural values: an economic entity that promotes moral values and complies with ethical rules of behaviour will be easily noticed by the public and will record considerable added value; similarly, a financially strong economic entity may admit to promoting and allocating various sums of money in an ethical manner, which will lead to continued economic development in the future.

The relationship between economic development and the responsibility of an economic entity is in a circular ascending line, the so-called “virtue circle”. Moreover, the corporate social responsibility attracts a positive involvement in the entity and stakeholder groups.

The experience of multinational economic entities that have been involved in various social and environmental projects has demonstrated this. The whole effort based on multiple analyses reflects the fact that business ethics and corporate social responsibility

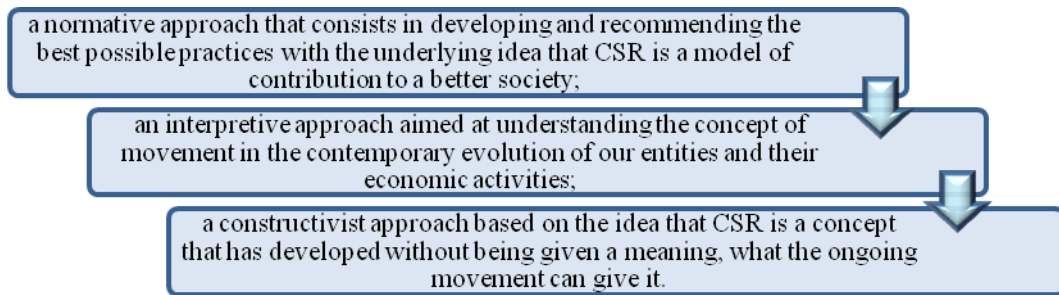
are not only philosophical topics, widowed in consistency and without possibilities to be put into practice, but they are also useful ways to support the financial interests of the economic entity in the medium and long term.

2. Literature review

The concept of corporate social responsibility (CSR) has been expanding worldwide for several years. Pasquero in 2005 (Pasquero, 2005) emphasizes that trends that influence the direction of the contemporary world create new economic, social and environmental needs, which in turn generate new demands for responsibility. In this sense, CSR is a form of contemporary modernity in management.

It is also a multidimensional concept, sometimes more ideological, sometimes more pragmatic, each era favoured certain dimensions at the expense of others, but all contributed to its enrichment. This double effort to deepen and expand the concept of CSR promotes rooting in all areas covered by the study of action. To a large extent, his theoretical inaccuracy allowed him to dissolve interdisciplinary barriers.

After Capron and Quairel-Lanoizelée, three approaches are possible to understand this area:



Source: own conception

The concept of CSR has grown considerably over time. Its dissemination through very diverse cultures can only accelerate this process. Above all, a normative concept and, therefore, much more political than technical, is the subject of a permanent re-conceptualization and cannot be definitively defined. It is a concept with multiple perspectives, an ambiguous and ambivalent concept.

Dejean and Gond (2004, pp. 5-31) argue that CSR definitions are quite heterogeneous. According to these two authors, there are two categories of definitions, at the academic level and at the institutional level that allow to give a special value to the commitments that go beyond the legal framework. Table no. 1 presents a synthesis of the most representative definitions of the CSR concept over time.

Table no. 1. Definitions of corporate social responsibility (CSR)

| | |
|-----------------------|--|
| Bowen (1953) | “Corporate social responsibility refers to the obligations for business people, policy implementation, decision making and compliance with guidelines in accordance with the objectives and values considered desirable by our society.” |
| Davis (1960) | “Corporate social responsibility refers to “decisions and actions taken for reasons beyond the direct economic and technical interest of the entity.” |
| McGuire (1963) | “The idea of social responsibility implies that the organization not only has legal or economic obligations, but also has social responsibilities towards the society.” |
| Hay, Gray | “Social responsibility causes entities to make decisions and get involved in |

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| and Gates (1976) | various areas such as: pollution issues ... poverty and racial discrimination issues and other social issues.” |
| Carroll (1979) | “Corporate social responsibility includes economic, legal, ethical and discretionary.” |
| Jones (1980) | “Corporate social responsibility is the obligation that entities have towards the actors of society.” |
| Capra et Spretnak (1984) | “Social responsibility: includes the economic field; social justice; the social contract; social and civil rights, especially for women and minorities.” |
| Wartick et Cochran (1985) | “Social responsibilities are determined by society, and the company’s tasks are: (a) to identify and analyse society’s changing expectations in relation to firm responsibilities; (b) to establish a comprehensive approach to be responsible to the changing demands. (c) To implement appropriate responses to relevant social issues”. |
| Anderson (1986) | “Corporate social responsibility is exercised in three main areas: international, federal, state and local laws; standards, moral and ethical procedures within which philanthropic entities and donations operate”. |
| Wood (1991) | “The basic idea of social responsibility is that entities and society are intertwined (overlapping in several points) rather than separate entities; thus, the company has certain expectations regarding the behaviour and results specific to the entities”. |
| Amadiou (1999) | Corporate social responsibility “is a concept that covers all the consequences, human and social aspects of the business activity” |
| Livre Vert del’UE (2001) | “Being socially responsible means not only fully fulfilling your legal obligations but also exceeding and investing more in human capital, the environment and stakeholder relations.” |
| The Conference Board of Canada (2001) | “An entity’s overall relationship with all stakeholders, including shareholders, employees, communities, suppliers and competitors. Social responsibility has various aspects, such as community investment, employee relations, job creation and conservation, environmental management and financial performance”. |
| Triomphe (2002) | Corporate social responsibility consists in assuming voluntary responsibilities that go beyond the law and regulations. |
| Gond and Igalens (2003) | “Social responsibility refers to the nature of the interactions between business and society and formalizes the idea that the entity, because it operates in an environment that is both social, political and ecological, must assume a set of responsibilities that goes beyond its purely legal and economic obligations”. |
| World Bank (2004) | The World Bank has defined corporate social responsibility (CSR) as a “commitment” (or obligation) for the business community to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve the quality of life, good for development and business. |
| Pasquero (2005) | By “corporate social responsibility” we mean “all obligations, legal or that a company must assume to pass for a taxable model of good citizenship in a given environment”. |
| Boidin (2008) | We delimit this term by distinguishing two ways of defining it. The first conception of CSR is positive: the latter is presented as the way in which economic actors (and entities in particular) understand and take |

| | |
|----------------------------------|---|
| | responsibility in different areas. The second perspective is normative: CSR is seen as an objective to be achieved by prescription (stock analysis), methods, deposits (places carefully kept, in good condition). |
| ISO26000 standards (2010) | The responsibility of an organization for the impact of its decisions and activities on society and the environment through transparent and ethical behaviour that: - contributes to sustainable development, including the health and well-being of society - takes into account the expectations of stakeholders - complies with applicable laws and is compatible with international standards and - there is integrated throughout the organization and implemented in its relationships. |

Source: adapted from Christelle Decock Good (2000).

In other words, Walton (1967) develops the concept of responsibility, in terms of directors and managers of the entity and not only in terms of leadership exclusivity. In fact, according to him, “the concept of social responsibility recognizes the confidentiality of relations between entities and states that these relations must be present in the spirit of the top managers of the entity, as well as the spirit of those who deal with different groups to which he is connected and who pursue their own goals”.

3. Research methodology

The methodology adopted in this research is in line with the research methodology used in the field of economics, by combining theoretical research with empirical research. The form of “observation-deduction” reasoning was adopted, in order to draw conclusions starting from the existing theories and studies in the field and continuing with the empirical investigations based on an opinion poll and a content analysis of the financial and non-financial reports and statements published by some Romanian economic entities selected in the study.

Theoretical research was based on the study of specialized literature and practical experiences in the *research units*. Also, various studies and statistical analyses of different professional bodies and interpretations of specialists in the field were considered. The methodology used combined qualitative and quantitative research, through various and complementary methods: historiography, comparison, documentary analysis, graphical representation, statistical estimation, observation, interview, as well as the materials made available by financial accounting institutions from various economic entities with wide fields of activity.

The sustained research guided the knowledge of the theoretical aspects related to the impasse entities and the reshaping preferences considered by them. The theoretical information was provided with the help of reading a relevant number of specialized works, both from the Romanian specialized literature and from the foreign specialized literature. The *research technique* used the method of re-examining the specialized literature in the country and abroad, analysing all documentary materials, reports and legislation prepared by countless institutions, comments and explanations of specialists, and a wide range of published materials.

4. Social responsibility - institutional and normative foundations

With the emergence of the idea of non-financial reporting, countless steps have been taken to monitor economic developments at EU level, through countless *initiatives and standards* that can lead to a common goal, that of sustainable development, of a more secure future.

In this regard, the following appeared: *The Global Reporting Initiative or GRI Institution of 1997*, the Sustainability Reporting Framework that allows entities and organizations to measure and report on sustainability performance. GRI provides entities and organizations with a comprehensive sustainability reporting framework that is widely used around the world. These initiatives were brought together by the Coalition for Environmentally Responsible Economies (CERES) in association with the United Nations Environment Program (UNEP). The GRI or Global Reporting Initiative was set up in late 1997 with a mission to develop the Directive applicable worldwide to consider the economic, environmental, and social performance. This reporting initiative¹ was originally planned for large entities but was later extended to all governmental or non-governmental organizations.

At the international level, the International Social Responsibility (IAS) and the International Organization for Standardization (ISO) have published standards and benchmarks that have a direct link to CSR (Corporate Social Responsibility), but not only to deal with CSR. SA 8000 (social responsibility standard 8000) is a standard initiated by the Council on economic priorities and managed by the Social Accountability International (SAI). It is oriented towards working conditions, the prohibition of child labour or forced labour.

In 2001, the Commission on Consumer Policy (ISO/COPOLCO) initially introduced the use of ISO specifications in the workplace on the basis of a social responsibility (SR) standard and supported the publication in ISO 26000 of relative directories based on the 2010 social responsibility guidelines. It was an international standard of voluntary application, for all types. Therefore, it has been one of the first steps to encourage all types of public or private sector organizations and implements ISO 26000 to benefit from corporate responsibility.

These specific ISO 26000 guidelines could be used to support the best practices that have recently been developed, social responsibility (SR) initiatives in the public and private sectors. These were in line with the additions to the relevant declarations and conventions of the United Nations and its specialized agencies, especially in International Labour Organizations (ILO), the UN Global Office for Use (UNGCO) and the Organization for Economic Co-operation and Development (OECD).

So, the concept of social responsibility has given rise to different debates. Indeed, very different views of corporate responsibility were expressed in the working group. A compromise has been reached with the following definition which allows an agreement on the different opinions expressed by various experts in the field.

Organizing accountability for the impact of its notifications and activities on society and industry in terms of the business environment is transparent and ethical behaviour that:

- * contributes to sustainable development, including the health and well-being of society.
- * to consider the presence of the parties.
- * complies with applicable laws and complies with international standards of conduct (ethics); and
- * is integrated in the organizational entities and implemented in the functioning of its relations.

Note 1: Complex activities between products, services, and processes.

Note 2: Corresponding relations with organizational activities in its sphere of influence

This definition summarizes the different conceptions of social responsibility and defended in the ISO 26000 negotiation. The ethical vision is indeed found and defended by

¹www.reportingrse.org.

the Americans, it presents a British-oriented approach, the necessary respect for the costly law for Europeans, the contribution to sustainable development and compliance with international norms of behaviour (ethics) strongly defended by the French. However, ISO 26000 is not a standard where compatibility, for certification and use of regulations or contracts should be provided, as it does not contain requirements and therefore such certification would not be proof of compliance with this international standard.¹

5. Mandatory non-financial reporting by EU economic entities

The mandatory nature of non-financial reporting for large economic entities in the European Union was established with the acceptance and publication in the Official Journal of the EU of Directive 2014/95/EU. After a very short time, CRPE has drawn up a report on policies that clarify in detail the context of the publication of this Directive, the integrations caused by the texts and the initial recommendations of Brussels. Since the end of September 2014, the European Council has chosen, as the first Directive 2014/95/EU, with regard to non-financial reporting by economic entities of public interest in the EU, to enter into force in November 2014.

It referred to the annual and consolidated financial statements, as well as to the reports that are directly related to the latter, of economic entities of public interest with a deadline for adoption in the laws of the Member States on 20 July 2015. The changes caused by Directive 2014/95/EU were to be adopted in the laws of the Member States by 6 December 2016 at the latest. This Directive arose from the conditions under which the European Parliament called on the Commission to submit a legislative proposal on the description of non-financial information by economic entities, accepting a high degree of adaptability in action, so as to take into account the multidimensional nature of social responsibility and the variety of policies on social responsibility of economic entities.

Given the requirement to disclose information, Member States expected that the parent entity has the possibility to rely on national (currently absent in Romania), Union (e.g. Eco-Management and Audit Scheme) or global (e.g. United Nations Global Compact) etc., in which case the parent entity is the one that specifies the frameworks it was guided by. If a parent entity prepares a separate report, in accordance with the same financial period, which refers to the whole group, whether or not it is based on national, Union or global frameworks, containing the required information on the non-financial statement Member States may exempt the parent entity concerned from the requirement to draw up and submit the consolidated non-financial statement, provided that the separate report is published jointly with the consolidated management report in accordance with Article 30 or may be consulted by public within a reasonable period not exceeding six months from the date of posting of the balance sheet, on the website of the parent entity, and to be specified in the consolidated management report (Directive 2013/34/EU).

For now, in Romania, it cannot be said that ministries are ready to implement this directive, although this should have materialized as early as 2017. The incomprehensible difficulty is that economic entities at the national level do not yet know what to report when required to prepare and submit the report.

However, the Ministry of Public Finance stated that it would be willing to implement the directive only in relation to listed commercial entities. The specific directive must publish information on the object of activity of the entity, the influence on the environment, information on employees, respect for human rights, anti-corruption and anti-bribery measures. The directive was adopted in national legislation in 2017, and in 2018 (OMFP no. 1902/2004) the first reports were to be submitted. The European Commission

¹www.iso.org.

has estimated that approximately 6,000 entities in the European Union will be affected by this directive. But this assessment was uncertain. For example, “Sweden, which has already adopted the directive, stated that it will be necessary to report 1,500-2,000 entities, the situation in which those there, in adopting and transcribing the directive, considered that it is necessary to report the entities with a fewer employees than mentioned in the directive”, the GRI (2010) representative added.

In our country, the Government has the obligation to decide what and who will report, but until then all economic entities that fall under the scope of non-financial reporting must be established. The non-financial statement is an integral part of the directors’ report and must be published together with their report, to which the provisions on the preparation and submission of annual financial statements apply. If the non-financial statement is included in the directors’ report, but also if the information required for the non-financial statement is included in a separate report published jointly with the directors’ report or made available to the public, the responsibilities for their preparation and publication in accordance with the provisions of the national legislation are the responsibility of the members of the board of directors.

Over 700 large economic entities in Romania were required to prepare and publish reports on the sustainable development of activities since 2017. In this situation were the economic entities with over 500 employees that fell under Directive 2014/95/EU.

6. Implications of adopting the new directive at the level of economic entities in Romania

6.1. Immediate implications (Datcu and Toma, 2014)

Many specialists consider that the time has come for the public consultation that the Ministry of Public Finance has the duty to carry out from the point of view of the legislative process on the normative acts underlying the transcription of the two directives, Directive 2013/34/EU and in particular, Directive 2014/95/EU.

The Romanian Centre for European Policies, through an association with Romanian Business Leaders and Raiffeisen Bank, thought of making the transcription of this directive easier and more effective. Thus, in the shortest possible time, after the issuance of the Policy Memo, the results of a rational research on the non-financial reporting practices present in our country will be made available to the general public in order to achieve the evolution of the field of penetration and the option for one model or another of non-financial reporting, if it exists.

Depending on the effects of the research in question, interested economic entities, civil authorities and the Romanian Government will be invited to work together, following that the local business environment will promote the substantiation, by transcribing this Directive, and laying the foundations for a reporting model that strengthens business responsibility. This directive is a chance offered by the European Union, which deserves special attention from all participants in a business environment not to be polluted, corrupt, flawed and who wants to show responsibility in Romania.

6.2. Immediate implications and short-term recommendations

The beneficial practices underlying the reporting that currently exist in the business environment in our country and the circumstances require economic entities to turn their attention to transparency and incorruptibility, which is the basic principles for the transcription of the Directive which refers to the non-financial reporting that must be taken into account. *The main short-term recommendations are those that are retained are presented in figure no.1.*

Figure no.1

| | |
|---|--|
| Consulting the business environment | * Mandatory consultation of representatives of large economic entities, especially those who already have experience and expertise in non-financial reporting and other stakeholders interested in the effective transposition of the provisions of the Directive in Romanian legislation is extremely important and should include public decision makers from all relevant ministries and authorities; |
| Inclusion of subsidiaries in large international entities/groups | * the current practice of non-financial reporting in Romania shows that it is the subsidiaries / branches of large groups that report so it is important to ensure the transfer of good practices from them to the business environment and public actors, and the inclusion of all subsidiaries of economic entities on the list of those covered by the Directive; |
| Inclusion of public/ private entities | * it is also important to comprehensively address all elements of the new regulations by including large state economic entities in the category of those that report responding to challenges related to transparency and integrity and those related to ensuring responsible and efficient management. |

Source: own projection

7. Advantages, disadvantages, difficulties and costs in implementing non-financial reporting

7.1. Advantages in implementing non-financial reporting

Directive 2014/95/EU was approved on 29 September 2014 and implemented 20 days after its publication in the Official Journal of the EU on 22 October. The measures provided for in the Directive require entities with more than 500 employees and plan on them the consequences referred to in the definition of financial, commercial or industrial transaction of “public interest” to draw up and publish a non-financial report, which should include “the few environmental, social and labour elements, respect for human rights and last but not least, the elimination of corruption and bribery” (Directive 2014/95/EU).

It is noteworthy that Member States have the power to require such a reporting framework and entities with fewer than 500 employees, but the extension of the obligation depends on the legislative power of the state holding supremacy as a member of the EU. Even if the EU legislative regulations are in force regarding the related aspects, the Order of the Minister of Finance no.1938/17 August 2016 has not yet taken into account the increase of the area of requirements, opting to keep the limits highlighted in the EU Directive.

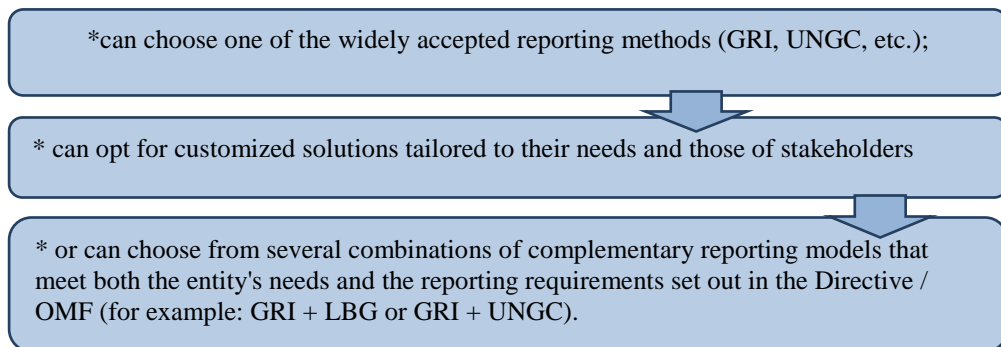
Due to the vague language of the directive (taken over almost entirely by the Order of the Minister of Public Finance), as well as the non-existence of regulatory frameworks and practical application rules in our country, a significant number of CSR officials in entities had preoccupations to discover what, when, and how they will necessarily have to elaborate and present non-financial approaches (Figure no.2.).

Figure no.2

| | |
|--------------------------|--|
| Why do we report? | <p>In addition to the legal reporting obligation starting with the financial year 2017, some motivations related to good business practices are also developed. Thus, according to studies published by the Romanian Centre for European Policies, in partnership with Raiffeisen Bank and Romanian Business Leaders, Romanian entities that took part in carrying out this action indicated as a reason for developing non-financial reporting its usefulness as a PR tool (performance and responsibility), communication, as well as a way to be transparent in front of customers, partners and suppliers. Non-financial reporting increases the entity's intelligibility in the community in which it operates, provides transparency on the purpose of CSR and, at the same time, and highlights the impact of these initiatives.</p> <p>In addition, the United Nations Global Compact (UNGC) points out that investors are increasingly emphasizing social, environmental, and management issues in the development of investment strategies, which also influence consumer decisions.</p> |
| How do we report? | <p>It is important to mention that neither Directive 2014/95/EU, nor the Order of the Minister of Finance no. 1938 does not indicate any limitation on the reporting method, the entities having the possibility to choose from several reporting options of the requested information. Thus, entities may use "national, EU or other recognized international frameworks" to create the report. They also have the opportunity to choose!</p> |

Therefore, in order to comply with the regulations in force, entities have several alternatives for putting the Directive into practice:

Figure no.3. Reporting options for entities



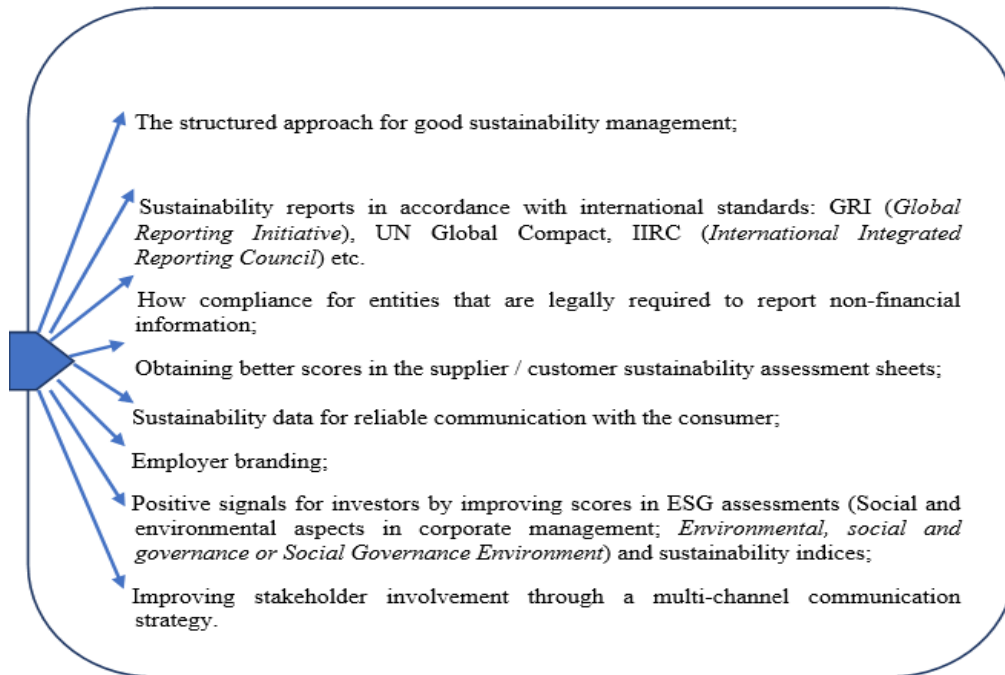
Source: own projection

The choice of one of the strategies presented in the figure depends to a large extent on the needs of the entity, all those interested, as well as the capacity of financial resources, staff and time that can be used to create the report.

Any manager who wants to coordinate a profitable long-term business needs information about the indicators that can lead to the avoidance of possible risks. These generally relate to non-financial results analysed and recorded by the entity. It is very important for management and shareholders to have clear, secure, balanced and comparable information.

For the evaluation and implementation of non-financial reporting, the following specific solutions and strategies must be taken into account (figure no. 4):

Figure no. 4. Solutions and strategies regarding the evolution of the implementation of non-financial reporting



Source: own projection

An annual data reporting cycle and a framework (GRI) such as GRI G4 (*GRI standards were required for all reports or other material published on or after July 1, 2018*) will bring a number of benefits, both internal and external¹.

Figure no. 5. Internal and external advantages of non-financial reporting

| Internal advantages | External advantages |
|---|--|
| <ul style="list-style-type: none"> * A better understanding of risks and opportunities; * Highlighting the connection between financial and non-financial; * Improving the long-term management strategy as well as the business plan; * Process efficiency, cost reduction and productivity improvement; * Benchmarking and evaluation of sustainability performance in terms of laws, rules, codes, performance standards, etc. * Avoiding involvement in environmental, social and governance failures; * Comparison of performance internally, as well as between organizations and sectors. | <ul style="list-style-type: none"> * Reducing or reversing the negative impact on the environment, society and employees; * Improving reputation and brand loyalty; * Involvement of external influencers (stakeholders) to understand the real value of the organization, as well as tangible and intangible assets; * Present how the organization influences, and is influenced, expectations about sustainable development at the global, national, or industry level. |

Source: own projection, adapted to GRI Standards

¹GRI STANDARDS GLOSSARY, www.globalreporting.org.2018.

The positive economic impact of reporting can be analysed on two separate components: direct effects and indirect effects (Longinos and Salvador, 2007, pp. 245-260).

Direct positive effects can result, for example, from a better work environment, which leads to a strongly involved and more productive workforce, or from a more efficient use of natural resources;
The **indirect positive effects** are generated by a greater attention paid to the needs of consumers and investors, which will develop the company's opportunities on the market. Similarly, criticism of an entity's business practices adversely affects its reputation and its ability to attract and retain customers.

Followed by *the advantages of implementing the Non-Financial Report at the level of the initiating entity*¹:

- obtaining a social operating license from the main stakeholders of the economic entity, not only from shareholders;
- Harmonization of business practices with the expectations of all categories of stakeholders;
- Sustainable competitiveness: improving the corporate image, reputation and brand;
- emphasizing the buyer's loyalty to the seller; more efficient operations in terms of sales, productivity and quality; improved financial performance;
- creating new business opportunities and gaining a comparative advantage;
- increasing the possibilities of attracting and retaining quality employees;
- attracting and retaining quality investors and business partners: increasing the value of shares held by shareholders;
- reducing stock volatility; lower cost of capital; access to socially responsible investment funds;
- Risk reduction by adopting the best practices of business partners;
- Cooperation with local communities;
- avoiding crises due to deviations from corporate social responsibility;
- obtaining government support and avoiding strict regulations;
- building political capital.

7.2. Disadvantages of implementing non-financial reporting

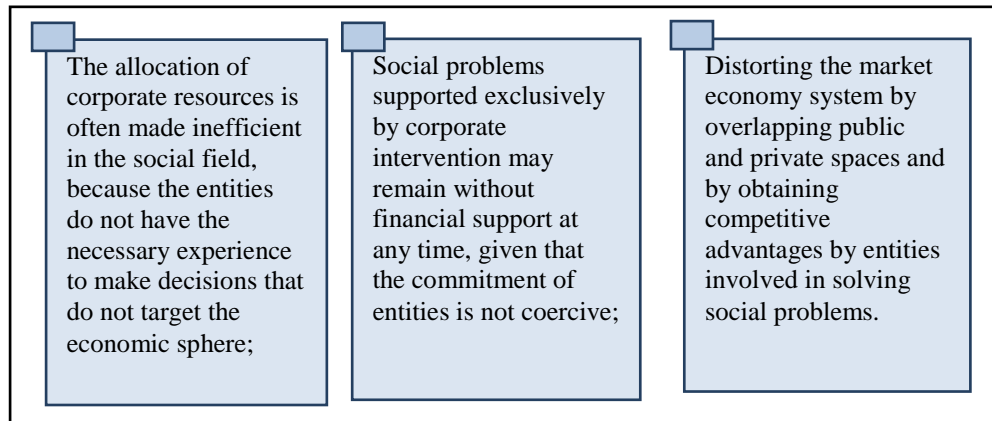
Although corporate charity is often profitable by funding a wide range of social causes, the practice and expectations of non-financial reporting lead to internal disagreements and even some unexpected effects, which jeopardizes the divergent roles that entities and governments play in a set of principles, rules and forces inherent in the democracy of a free market economy.

Two of the main arguments against non-financial reporting are: *an increase in profits based on the social problem is completely unethical, and entities are simply not suitable for taking on social roles* (Sasse, Trahan, 2007, pp. 29-36).

There are three types of negative results (figure no. 6) that can lead to an inadequate or excessive implementation of non-financial reporting that can be found in:

¹Examples of indices specific to socially responsible investments are: Dow Jones Sustainability Index (DJSI), Financial Times Stock Exchange Index (FTSE4Good), Domini Social Index 400 (DSI), Cowe, 2004, p. 20.

Figure no.6. Types of negative results that can lead to excessive implementation of reporting



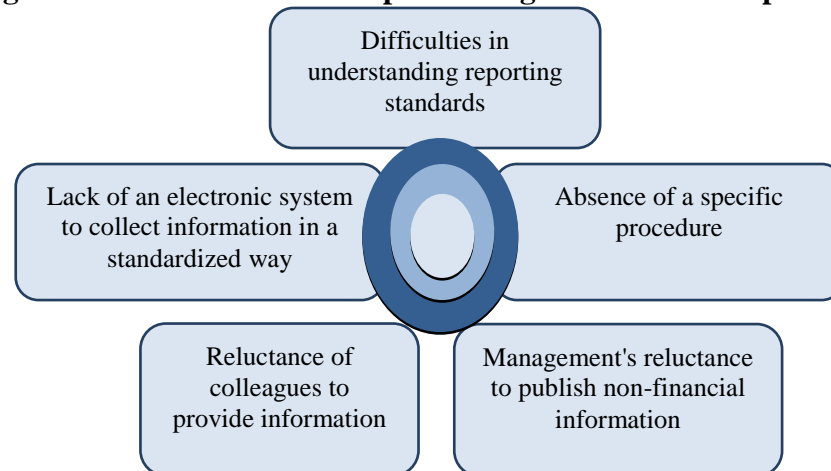
Thus, if we take into account the negative aspects mentioned above, non-financial reporting should not replace public policy, it would be better to keep only the voluntary character, which has by law full freedom of action, while governments must remain the main regulators, even in conjuncture of a global business environment.

In order to respond to the associated challenges of corporate social responsibility, the European Commission confirmed the usefulness of a demanding research as well as a quantitative analysis of the impacts of non-financial reporting policies on the financial and business performance of the sponsoring entity.

7.3. Difficulties in implementing non-financial reporting

Following their own analyses carried out on several sustainability reports of the economic entities that have the obligation to report and those that have already been reporting for more than five years, it was found that the main difficulties they faced were:

Figure no. 7. Difficulties in implementing non-financial reporting



Source: own projection

Therefore, it is a huge requirement for performance training and efficiency of policies in the field. At the same time, the absence of effective policies means that the designated employee to implement the reporting is most often caught between “hammer and anvil”: there receives a mission related to the reporting, but does not necessarily have the internal authority to request information from other departments (and for this it takes a period of time to obtain information).

8. Conclusions

Sustainable organizational change is of ascending importance that leads to a rethinking of management and performance measurement and monitoring systems within entities, as a reaction to current economic phenomena. Entities involved in sustainable actions must pay particular attention to the impact of environmental, social and economic factors in providing added value, informing stakeholders and reflecting on sustainable performance reporting.

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THE RELEVANCE OF HUMAN RESOURCES MANAGEMENT THROUGH STRATEGIC PILOTING WITH THE HELP OF THE DASHBOARD

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***Abstract:** The improvement of the economic performances at the level of an economic entity supposes in fact a decrease of the degree of occupation of the human resources, implicitly of the volume of activity, hence, the need to recover the hourly volume. Basically, we are dealing with a reduction of malfunctions and a conversion of hidden costs into added value. Good cost management with human resources can be achieved through strategic piloting with the help of the dashboard. The use of this management tool helps to highlight the inevitable dysfunctions as the difference between the strategic objectives set by the economic entities and the actual achievements related to the period.*

***Keywords:** dashboard, strategic piloting, human resources, economic entity, hidden costs.*

***JEL Classification:** M12, M41, M51.*

1. Introduction

The current context of economic development has generated concerns for many of the world's economic research institutes, which have outlined in the last 50 years a new perspective on socio-economic management, in order to stimulate the economic and social performance of economic entities. Among these concerns, the management of human resources and the effects produced by their intervention in the activity of economic entities, are preponderant, as actions being retained: i) development and enhancement of human resources skills in contradiction with volatile skills; ii) the significant gap between the virtual competences of the human resources in the economic units; iii) innovations to reduce human resource failures and recycle the hidden costs of value-added human resources.

For the development of economic entities, the most favourable strategic situation is represented by economic growth, because it allows the joint increase of economic and social performance considering both the maintenance of human resources and the improvement of results in terms of quality and finance.

Most studies conducted by economic research institutes recommend that economic entities that decide to resort to reducing dysfunctions and converting hidden costs into added value adjust their strategic plans, abandoning strategies to maximize immediate results and short-term economic performance, to allocate a part of the costs with human resources generated from conversions, for activities creating potential in the medium and long term, respectively: i) development of commercial activities; ii) socio-organizational technical and technological innovations, generating economic performance in the near future.

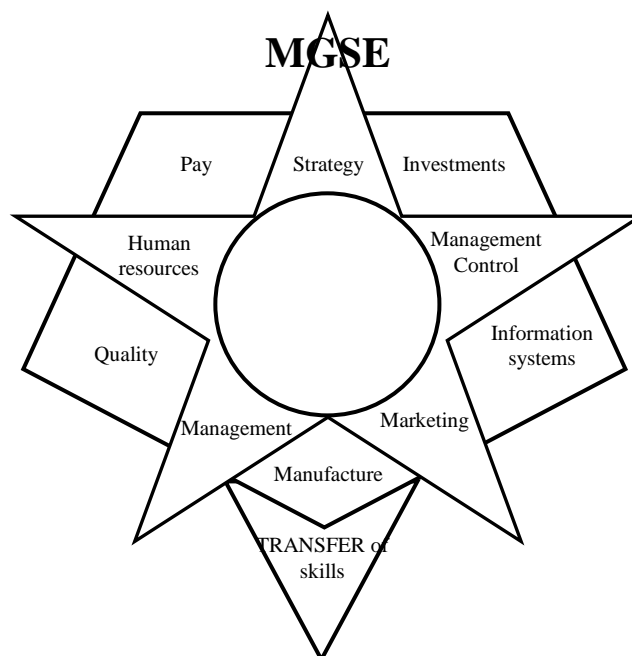
It is also good to know that: i) improving the competitiveness, profitability and economic and social efficiency of economic entities cannot be achieved only by accumulating financial resources, technical means or working hours; ii) coercive management does not allow the socio-cultural evolution of economic entities and people in general, in everyday life; iii) human resources have a predisposition to protect the economic and social environment, to comply with legislation and even state intervention in the economy, but do not accept to work under any conditions and according to any rules of the game. Human resources want to be considered as a professional producer and respected by the employing economic entities. All the aspects, mentioned above, can generate

malfunctions, which in turn generate counter-performances, excessive operating costs, productivity or low efficiency, found in hidden costs.

2. Literature review

A good management of human resources can be achieved by synchronizing the activities of economic entities, to increase their effectiveness. In this sense, the general socio-economic management model presented by the authors Savall, H. and Zardet, V. (2010), entitled “*The star of strategic management*”¹, is to be appreciated (Figure no. 1). This theory promises the development of two innovative concepts, respectively: the theoretical concept SIOFHIS and the operational tool CAMRU (additional contract with human resources).

Figure no.1. *General socio-economic management (MGSE)*



(Source: *Maîtriser les couts et les Performances Cahes*, page 27)

The theoretical concept SIOFHIS, is an operational information system on the integrated and stimulating functioning of human resources, usable by an economic entity. The purpose of the use is to determine the capacity of the economic entity to organize and stimulate the capacity of human resources in order to achieve the proposed objectives. The system thus built, allows the enhancement of the principles of global management, but especially, allows the synchronization of activities, highlighting the tools and sources for achieving economic and social performance of economic entities.

The whole concept is based on the efficient synchronization of activities, continued with adjustment, which becomes the complementary source of efficiency and performance. A review of objectives and procedures is regularly provided.

¹Savall, H. și Zardet, V. (2010) “*Maîtriser les couts et les Performances Cahes*”, Economica Publishing House, Paris, p. 26-30.

After highlighting the essential factors for achieving performance, the same Savall, H. created in 1977 the CAMRU concept, an operational tool for sustainable performance growth by reducing human resource dysfunctions. This method, relatively simple, is based on the principle of synchronizing activities to coordinate traditional areas of management.

Regarding the CAMRU operational tool, several features are specific:

- CAMRU is in fact an additional contract to the employment contract, with a regulated duration, which can usually be six months or can be for an indefinite period depending on the objective;
- Through CAMRU, in fact, the professional relationship between each employee and the hierarchically superior boss changes. It is a job description, for a determined period for stimulating and improving short-term labour productivity, with implications on the performance of the economic entity;
- Through CAMRU a grouping of maximum ten priority objectives is set, which are either individual or collective. It starts on the one hand from the diagnosis of malfunctions, as the main source of hidden costs, and on the other hand from the strategic plan of the economic entity (for 4-5 years). The new job description (CAMRU), annexed to the employment contract will be coordinated by the same structures that generate the employment contract (section, service, workshop, form), having as management tool a decentralized piloting dashboard;
- In essence, CAMRU is a complementary tool for working with human resources, which clearly states the objectives of improving performance, but also the advantages that both parties can have. This synchronization can stimulate the productive behaviour of human resources by increasing performance by reducing costs and increasing the quantity of products and their quality.

3. Research methodology

Of all the epistemological currents in the field of socio-human sciences, two paradigms were retained for this study: positivism and constructivism.

The positivist theory, founded by the Frenchman Auguste Comte, reveals certain empirical regularities in the choice of accounting methods. However, the lack of statistical power of the tests and the obtaining of relevant results, as a result of little-known alternative hypotheses, makes this research have some limitations. The research carried out in this study is part of this current, by addressing theoretical information, based on the analysis of the interaction between accounting information and the scope of production by some economic entities on the one hand and respectively in terms of methods used for performance management and evaluation, respectively the sustainable conversion of hidden costs into added value, on the other hand.

Constructivism is the current that has evolved as a result of criticism of positivism. According to this current, the knowledge becomes a construction between the knowing subject and the knowable object, obtained from the researcher's interaction with the researched object. Some aspects treated and presented in the study have a scientific approach inscribed in the constructivist current. In other words, scientific research is positioned on the positivist-constructivist axis, based on experience and reflection.

4. The structure of the strategic piloting dashboard - TBPS

Good cost management with human resources is achieved through strategic piloting with the help of the dashboard. The use of this management tool helps to highlight the inevitable dysfunctions as the difference between the strategic objectives set by the economic entities taken over in CAMRU and the actual achievements related to the period. In essence, the strategic piloting of human resources consists in the permanent adjustment

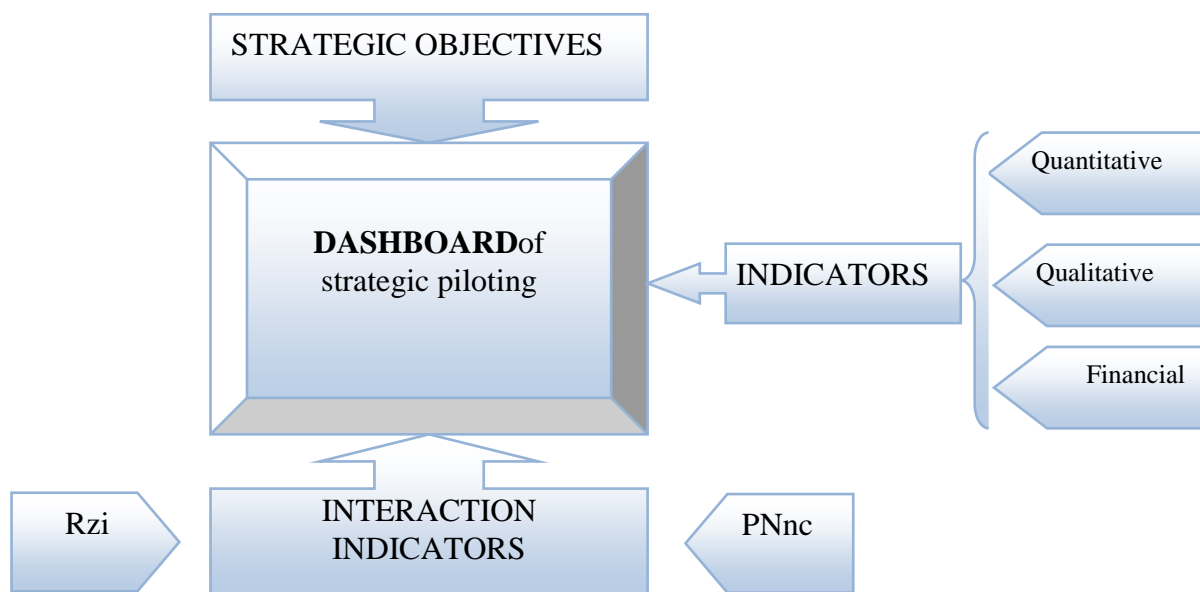
of priority actions and the connection with the strategic objectives broken down in CAMRUs.

The dashboard consists of all the specific indicators, presented in synthetic form, with a correlated periodicity, so as to allow the person in charge to react quickly when the malfunctions appear. The notion of “responsible” is generic, as it includes all persons who have a certain level of responsibility, in this sense, for the exercise of strategic piloting of human resources.

In fact, each person responsible for the strategic piloting of human resources has tasks in his area of responsibility, in reality, being considered a co-pilot of the strategic piloting dashboard of human resources. Moreover, the dashboard for the strategic piloting of human resources, for execution is sectioned and adapted for each function, respectively responsible person on his area of activity.

Below is the synthesis of the recommended principles for the construction of a dashboard for the strategic piloting of human resources, specific to a production station, located mainly among the production structures of economic entities in the sample on which the scientific research was conducted (Figure no.2).

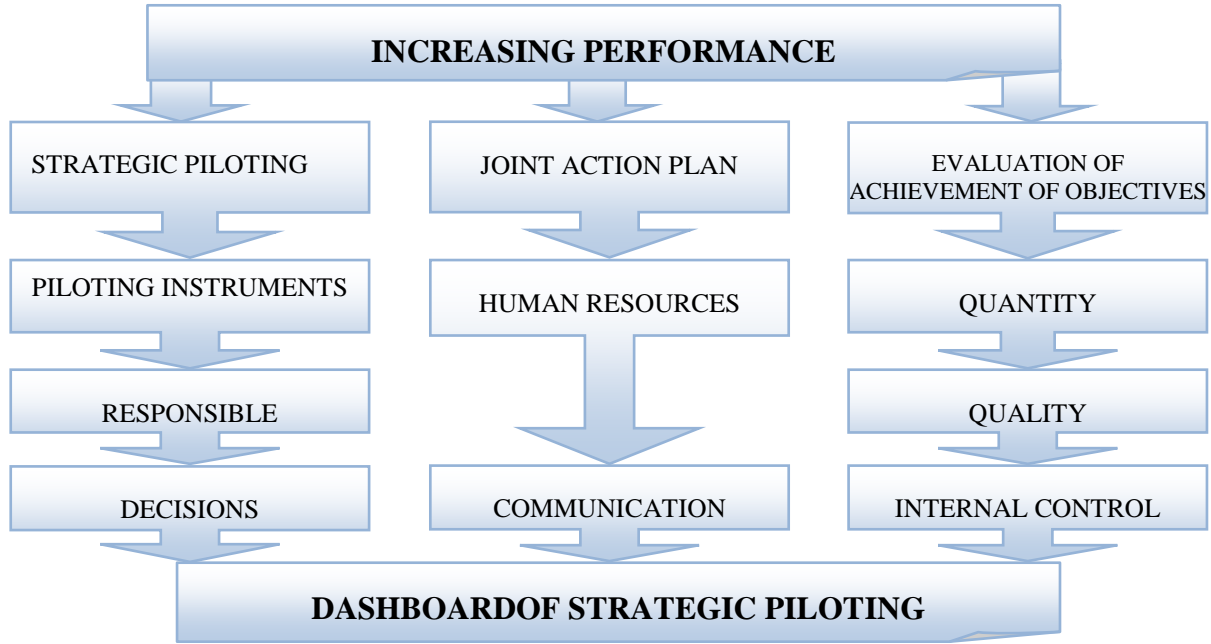
Figure no.2. Common principles for achieving the strategic piloting dashboard



(Source: own processing)

Respecting the common principles of achieving the strategic piloting dashboard, the strategic piloting dashboard of human resources was designed, specifying the main groups of objectives (Figure no.3).

Figure no.3. The main target groups for TBPS



(Source: own processing)

4.1. Insertion of strategic objectives in the strategic piloting dashboard

The strategic piloting dashboard is the main working tool available to co-piloting in activities of knowledge and ongoing analysis of the operation of the area of responsibility, in order to make relevant decisions to achieve strategic objectives, in this case a production structure of the entity.

Therefore, for each co-pilot, the dashboard must be detailed and explicit for all strategic objectives. All these details must be assumed by the head of the structure and approved by the management of the economic entity.

After formulating, appropriating and approving the strategic objectives that will be registered in CAMRU, it is necessary to present the concrete actions for the enhancement of the priority action plan with the help of TBPS.

In the case of the production structure, for a set strategic objective, the following strategic operationalization actions can be chosen, each time, for each concrete action, with the help of different co-pilots. The proposed actions are the following:

- ✓ launch of the new product;
- ✓ customer reliability;
- ✓ Personalization of relationships with traditional customers.

These actions can be three different ways of implementing the strategic objective by three different co-pilots. The first action is also the first indicator, which is the subject of concern of the person responsible for the *manufacture of the new product*. The second action is the second indicator that is subject to the concerns of the person responsible for *packaging the products*. The third action is the third indicator, which is the subject of the *logistics manager's* concerns. At the same time, the definition of the three actions also represents the definition of the three strategic operating indicators, which will be included in detail in the centralized strategic dashboard of the production structure and detailed in the functional dashboard of each co-pilot.

In principle, in a first view, the strategic indicators leading to the establishment of the results achieved following the implementation of the priority action plan can be grouped into two categories:

- ✓ Strategic indicators for local piloting;
- ✓ Strategic indicators for global piloting.

Both categories of indicators remain in the sphere of action and responsibility of the co-pilots, only the former concern the actions at section level, team workshop, etc., and the latter concern the actions destined to consolidate the strategic piloting dashboard at the entity level.

A second vision regarding the grouping of strategic indicators concerns:

- ✓ Strategic management indicators for current piloting;
- ✓ Strategic management indicators for strategic piloting.

For the piloting dashboard to be a co-pilot operating instrument, it must specify:

- ✓ Indicators for immediate results;
- ✓ Indicators for newly created potential.

This grouping represents a third vision regarding the grouping of strategic indicators.

A fourth vision, regarding the grouping of strategic indicators, concerns the highlighting in the strategic piloting dashboard of the following categories:

- ✓ Quantitative indicators;
- ✓ Qualitative indicators;
- ✓ Financial indicators.

4.2. Indicators for defining immediate and future performance

4.2.1. Indicators for defining immediate performance

The indicators for defining immediate performance are indicators that reflect the obtained results as a result of the activities carried out during the current financial year, according to the revenue and expenditure budget and the treasury budget, both included in the annual operational plan “cut” from the strategic plan of the economic entity. All these represent costs and visible performance in the dashboard of the period. But for maximum visibility, to these indicators must be added indicators on the recording of hidden costs and hidden performance inherent in the conduct of economic activities. These costs of malfunctions, generated by production quality problems, need to be managed as best as possible, precisely with the help of the strategic piloting dashboard (TBPS).

In other words, the occurrence of these hidden costs generated by unforeseen dysfunctions, obliges the economic entities to set objectives, supported by innovative actions, to discover malfunctions, limit them, and as far as possible, the conversion of these hidden costs into added value for the improvement of the economic-financial results.

During the study, the following indicators were retained for analysis to define the immediate performances, within the researched production structure, due to the dysfunctions of the hidden costs:

- Absenteeism;
- Quality issues;
- Direct productivity;
- Warranty terms.

4.2.2. Indicators for defining the perspective performance

These indicators reflect intermediate results obtained as a result of the activities carried out during the financial year according to the revenue and expenditure budget, the treasury budget and some development projects implemented during the period or in progress, for which we do not find a positive impact at the end of the year, in the income statement. Thus, in future financial-accounting years we will find these results.

The following indicators were retained for analysis to define the prospective performances within the analysed production structure:

- Indicators for defining perspective performance in terms of immediate results;
- Indicators for defining perspective performance in terms of comparing similar immediate results;
- Indicators for defining perspective performance in terms of anticipated results on immediate results;
- Indicators for defining perspective performance in terms of human resources behaviour;

In summary, the strategic piloting dashboard(TBPS) has a dual role in defining and understanding the fundamental economic mechanisms of economic entities: prospective and retrospective.

In all cases, the establishment of the analysis indicators described in the strategic piloting dashboard is done with great care and thoroughness, on hierarchical steps targeting significant cost items, marking the hidden costs for a target product or group of products.

The overall dashboard established in the case of the present research, for a production station may usually comprise a maximum of 20 indicators, while for the relatively simple individual dashboard, the number of indicators shall not exceed ten. The integration of these indicators into the strategic piloting dashboard (TBPS) must be of maximum practical use, in particular to increase efficiency, quality of work and decisions.

5. Construction of a high-performance strategic piloting dashboard (TBPS)

The construction of a high-performance TBPS must allow a great flexibility of information over time and a permanent simplification of its structure. In this sense, for more operability, more security and more incisiveness in action, qualitative information can become quantitative along the way, quantitative information can become financial, financial information can become quantitative.

Regarding the selection of indicators for TBPS, they are guided by the following principles: to include indicators for highlighting strategic objectives; include indicators for highlighting immediate and perspective performance; to include indicators for assessing the constitutive and financial qualitative information. The stages of TBPS construction can be the following:

Stage I: setting the strategic objectives of co-pilots for immediate and perspective results. This stage remains developed here only at a theoretical level. Practically, this stage will take shape in the third part of the doctoral thesis, respectively in the last chapter, in which we shall realize the innovative project for increasing the performances of the agro-industrial economic entities. Regarding the immediate strategic objectives, they can be the following: cost reductions or revenue increases. The strategic objectives for the future can be: new investments that generate cost reductions, or new investments that generate revenue increases.

Stage II: Conversion of strategic objectives into indicators. At this stage, the nominated indicators will represent tangible concrete economic and financial operations, which can be evaluated quantitatively, qualitatively and financially. Also, at this stage, the objectives that will be transferred to the TBPS of the SPPL will be established by mutual agreement with the management of the economic entity on the one hand and with the co-pilots, respectively with all CAMRU signatories, on the other hand.

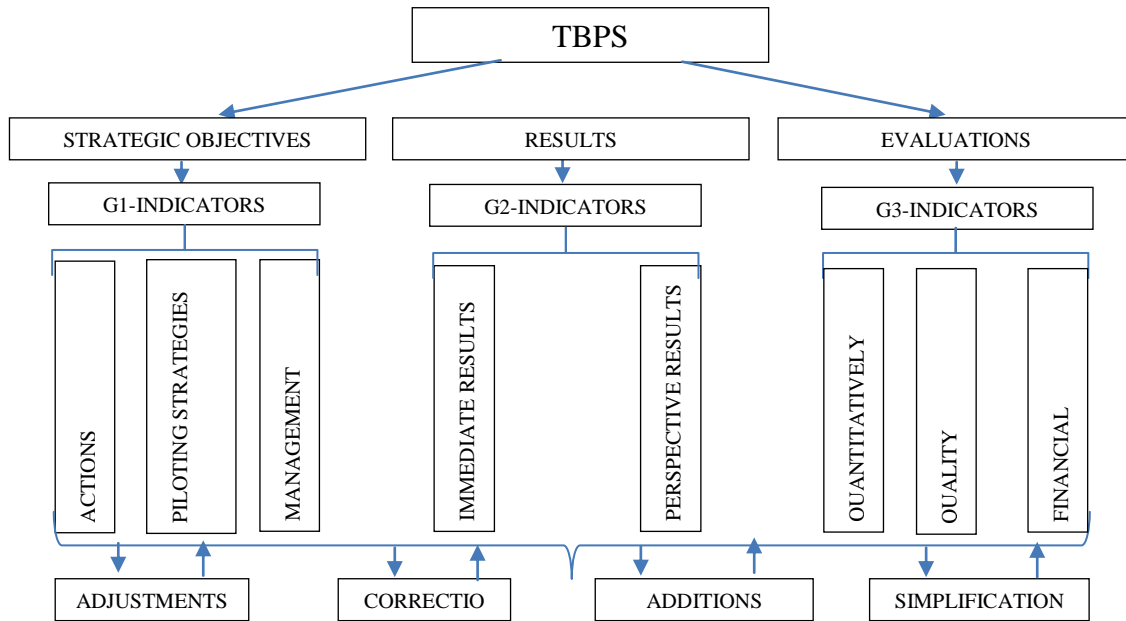
Stage III: Establishment of internal operation indicators and for operational management and completion with external indicators related to the area of responsibility.

Stage IV: Establishing the periodicity of analysis of indicators. Obviously, not all indicators need to be analysed with the same frequency. The construction of TBPS will allow an arrangement of indicators according to the need to use the information provided. As a rule, the periodicity of the analysis of the results provided by the indicators varies

between one week (minimum) and one semester (maximum). At the same time, the flexibility of the TBPS will allow the adjustment, rectification, completion or simplification of the indicators depending on the following situations: setting strategic objectives; the appearance of new dysfunctions; allocating complementary time for outlining indicators.

Given the requirements for the construction of a TBPS for the SPPL production structure of an agro-industrial economic entity concerned with launching new products and achieving human resources with the help of CAMRU to achieve these strategic objectives, usually for modular periods of one semester, the framework structure of such a TBPS must include the indicators grouped in three categories according to Figure no. 4.

Figure no. 4. TBPS framework scheme



(Source: own processing)

6. Using the strategic pilotage dashboard (TBPS)

6.1. Synchronization of the dashboard for strategic piloting with the activities provided in CAMRU

As mentioned, the “additional human resources employment contract (CAMRU), is a pilot tool of the economic entity used to implement the strategy of achieving objectives and increasing performance”. From a legal point of view, CAMRU is an advance commitment between two parties to achieve the improvement of the socio-economic performance of an economic entity for a well-defined duration. Obviously, CAMRU must have well-defined coordinates and clauses on the required effectiveness of the human resources employed on the participation in profitability improvement results due to the reduction of malfunctions and related hidden costs. On the one hand, all these efforts must be stimulated by a form of complementary remuneration.

In order to achieve these objectives of human resources cost management, it is necessary to synchronize CAMRU with TBPS through an active human resources management. In essence, active human resource management involves the following steps:

- Identifying for each person part of the clear objectives that will be passed, in each CAMRU in connection with the individual strategic piloting dashboard;
- Centralizing the individual indicators up to the level of the head of the production station in its TBPS and following these indicators at the level of this production structure. At the same time, the indicators registered in CAMRU will be followed by the head of the

production station and the designated co-pilot, at individual level. It should be noted that all CAMRU can be negotiated whenever necessary for each objective;

- Given the limited level of indicators provided in the CAMRU for each person, the flexibility of the TBPS will allow to take over some deviations of the basic indicators intervening with those adjustments, rectifications, completions or additions.

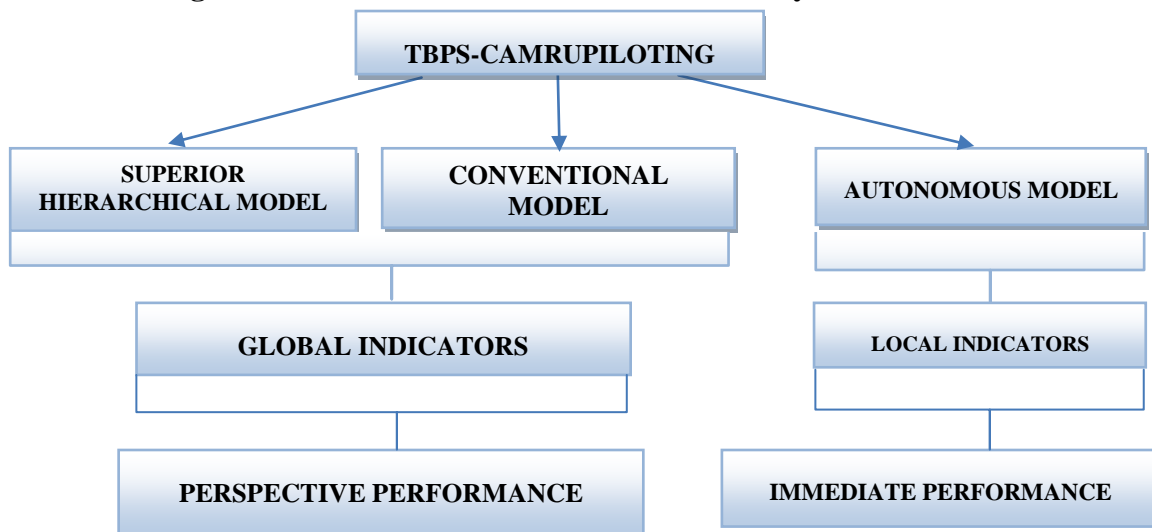
If the responsibility for coordinating TBPS, whether individual or at the level of the production structure, lies with the stationmaster and the designated co-pilot, the pilot decisions during the validity period of CAMRU are taken according to each situation based on existing and valid operational procedures at the level of the economic entity, in which we mention (Figure no.5):

- **The hierarchically superior piloting**, is carried out after an analysis of the results of the individual dashboard by the pilot and the co-pilot of the production station and the information by them of the hierarchically superior echelon. In this case, the procedures provide for the decision to be taken at the level of the economic entity;

- **Conventional piloting**, is carried out after an analysis of the results of the individual dashboard by the pilot and co-pilot of the production station and a pertinent assumption of the contractual human resources CAMRU of the changes to be made to achieve the objectives;

- **Autonomous piloting**, is performed after an own analysis of the stage of achievement of the objectives provided in CAMRU. In principle, the decisions belong to the contractual human resources CAMRU, which does not prepare to consult with teammates.

Figure no.5. Pilot models for TBPS-CAMRU synchronization



(Source: own processing)

6.2. Coordination of the dashboard for strategic piloting (TBPS)

TBPS coordination can be achieved in two stages:

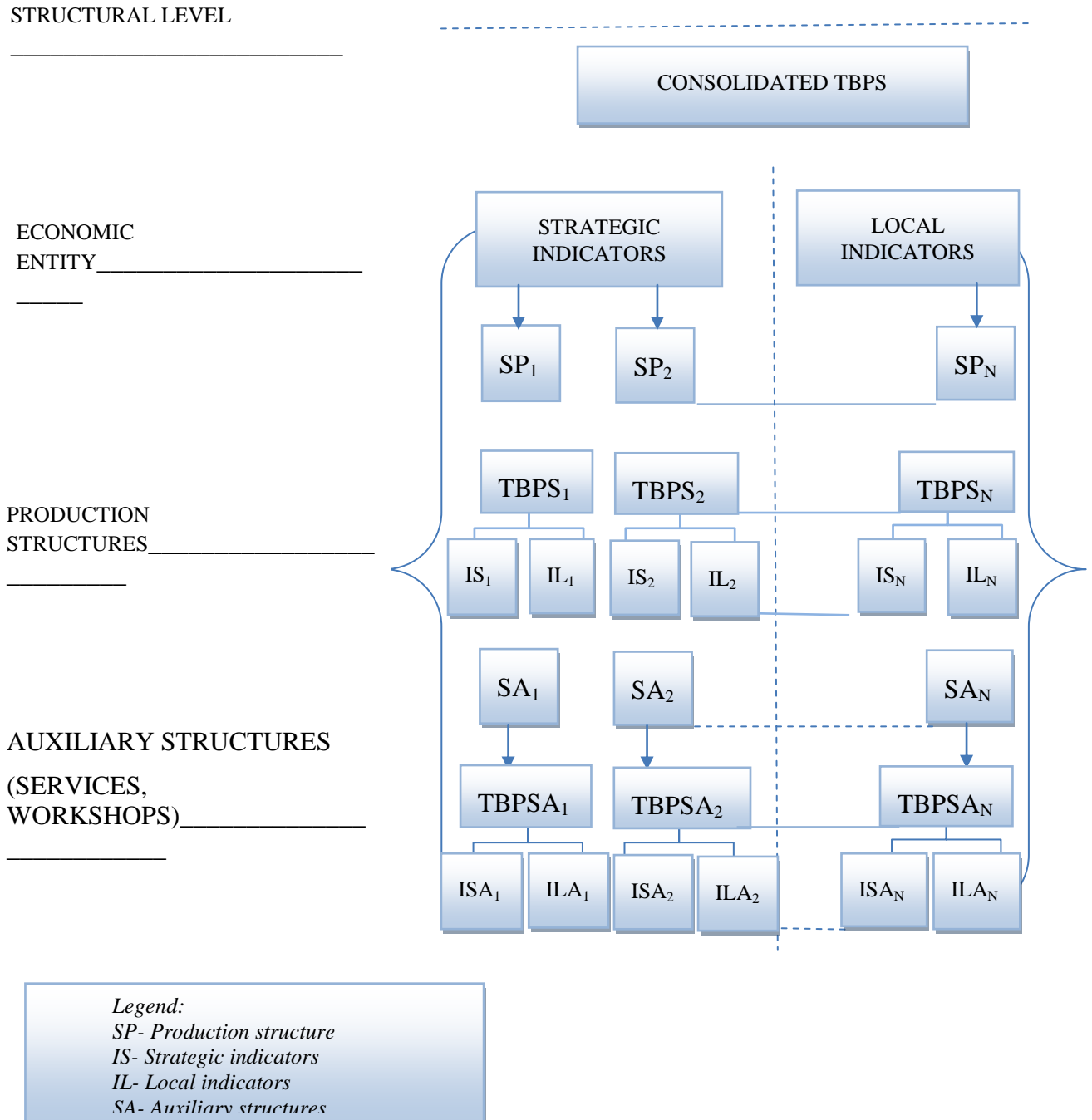
- Stage I: establishing local level indicators for which an autonomous piloting model is practiced;

- Stage II: establishing the strategic level indicators for which either a conventional piloting model or a hierarchically superior piloting model is practiced.

These two stages can be alternative, complementary or simultaneous, depending on the stage of preparation of the strategic objectives at the time of starting the construction of the TBPS.

The consolidation of TBPS can be achieved either by the simultaneous centralization of all production structures, or by adding unit by unit (Figure no.6).

Figure no.6. Unit-by-unit consolidation of TBPS



7. Conclusions

Overall, good cost management with human resources can be one of the significant tools for increasing the performance of economic entities, by using the CAMRU concept, as an operational tool for sustainable growth of economic performance by reducing human resource dysfunctions and eliminating their effects as much as possible, respectively of the hidden costs.

Also, a better management of human resources costs is achieved through the strategic piloting of their activities with the help of the dashboard. By using this significant tool to increase the performance of economic entities, it is easy to highlight the malfunctions and manage them, in connection with the strategic objectives taken over in CAMRU. In fact, all the actions formulated and appropriated by the management of the economic entity as strategic objectives that will be included in the CAMRUs are transformed into concrete actions by highlighting the priority action plan with the help of TBPS.

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POVERTY AND SOCIAL EXCLUSION

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Abstract: *The risk of poverty and social exclusion is the usual conceptualization in the strategic social policy reports prepared by developed countries and recommended to all states of the world. Beyond the fact that this approach euphemizes the situation of chronic poverty, presenting as a risk what is a reality experienced by a significant part of the population, conceptualization ignores the antagonisms of interest in society and eliminates from the discussion some fundamental problems such as the persistence of inequality of school opportunities, the division between the primary and secondary sectors in the labor market, political representation, social polarization. I chose this theme because I wanted to discover first of all what the approach of the concept of social exclusion is and I found that the scope of this concept is quite wide, with most countries considering poverty as the embryo of social exclusion.*

Keywords: *social exclusion, poverty, social inclusion, risk.*

Classification JEL: *H53, I32, I38.*

1. Introduction

Poverty and social exclusion is a reality experienced by a significant part of the population in less developed countries, conceptualization ignoring the antagonisms of interest in society and eliminating from discussion some fundamental problems such as the persistence of inequality of school opportunities, the division between the primary and secondary sectors in the labour market, political representation, social polarization (Szalai, 2003). The castle (2003) believes that the concept of "social exclusion" to induce the false impression that the social processes responsible for the disadvantages that they meet certain categories of people, going somewhere, on the fringes of society, even though those processes are based, in fact, it is in the "center" in the manner of the historical social order, the interference with the private relationships of employment, protection of social and political participation.

Social exclusion is "the procedure through which certain groups are systematically disadvantaged, because they face discrimination related to ethnicity, race, religion, sex, sexual orientation, origin, age, disability, migration, where they live, etc. discrimination is created either from public institutionalization, such as the legal system, education, health and welfare services, or from social institutionalization, society and individuals".

The term "social exclusion" appeared for the first time in Europe where the tendency was to focus on spatial exclusion. Initially, policies focused on those living in "disadvantaged areas" where poor living conditions, inadequate social services, poor political representation/voice or lack of decent work contributed to the experience of marginalization.

The research methodology is based on three main stages: identification of the literature, its selection, corroboration and synthesis of data.

The literature addresses a series of research, mostly conceptual, international studies that show a fundamental theoretical orientation about social exclusion. The methods used focus on the conceptualisation and description of social exclusion, and it is necessary to examine this concept closely in view of its importance in eliminating disparities in material welfare and Social Security.

An initial, informal assessment of the literature revealed that there is little data and authoritative sources on social exclusion, especially those relating to poverty statistics.

2. Analysis of specialized literature

Measuring social exclusion is difficult due to its multidimensional nature and the lack of standard data sources in all countries and for all social groups at greatest risk of being left behind. Although there is no universally agreed definition or reference point for social exclusion, it can describe a state in which individuals cannot fully participate in economic, social, political and cultural life, as well as the process leading to sustaining such a state.

Participation can be prevented when people do not have access to material resources, including income, jobs, land and housing or education and healthcare services - the essential foundations of well-being set out in the 2030 Agenda. However, participation is also limited when people are unable to exercise their voice or interact with each other and when their rights and dignity are not accorded equal respect and protection. Therefore, social exclusion attracts not only material deprivation, but also lack of agency or control over important decisions, as well as feelings of alienation and inferiority. In almost all countries, to varying degrees, age, gender, disability, race, ethnicity, religion, migration status, socioeconomic status, place of residence, sexual orientation and gender identity, over time, were reasons for social exclusion.

The term social exclusion was first used by René Lenoir (secretary of state for social services in France) in 1974, to refer to the situation of particular groups of people - "people with disabilities, physical and mental, people-related, disabled, in the elderly, abused children, drug addicts, delinquents, single parents, families with multiple problems, the marginal people, asociale, and other "inappropriate" social - over which he has estimated to contain one-tenth of the population (Ebersold, 1999).

Table 1. Typology of definitions on social exclusion

| <i>Social exclusion</i> | |
|----------------------------|--|
| Peace R, 1999 | It refers to a wide range of phenomena and processes related to poverty, deprivation and hardship, but is also used in relation to a wide range of categories of excluded persons and places of exclusion. |
| Andersen Al., 1994 | Exclusion from the employment market |
| Conroy 1994 | Inequality due to lack of a job |
| Silver, 1995 | Multiple economic deprivation, broken family, lack of social ties, purpose in life, even loss of identity |
| Roemer, 2014 | Material deprivation, but also opportunities for full participation in social and civil life |
| Democratic Dialogue 1995 | A set of processes whereby individuals, households, communities or even entire social groups are marginalized |
| Social Exclusion Unit 1999 | Labeling a group or areas based on problems related to unemployment, poor skills, low incomes, poor housing, high crime, poor health and broken families |
| Rheem Al-Adhami, 2011 | An individual in society who does not participate in the normal activities of citizens in that society |

Source: by author

In René Lenoir's speech, efforts were made to promote social inclusion in order to prevent social exclusion. As such, social inclusion is defined as the process of improving the terms and conditions of participation in society for people who are disadvantaged on the basis of age, sex, disability, race, ethnicity, origin, religion, or economic status, or other opportunities for increased access to resources, voice and rights.

Therefore, social inclusion is both a process and an objective. Promoting social inclusion requires combating social exclusion by removing barriers to people's participation in society, thus being a deliberate process of integrating and welcoming all

people into a society based on equal opportunities and greater tolerance (<https://pjp-eu.coe.int/en/web/youth-partnership/social-inclusion>).

3. Inclusion would not exist without social exclusion

The concept of social exclusion is understood and used in different ways by specialists. For some authors, exclusion is primarily due to poverty. Others see it more comprehensively and equate it with insufficient and inadequate social participation, social non-integration and, in some cases, the inability of a person or category to act without receiving help. But even in the absence of a generally accepted definition, there are three recurring themes in debates about social exclusion (Rheem Al-Adhami, 2011).

► Exclusion is directly related to the rules of society at a certain time. A disadvantaged person is perceived differently in culturally or economically different societies. The very norms of society change over time, and with them the attitude of the "majority" towards a certain marginalized or vulnerable category.

► Exclusion is caused by an action of an individual, group or institution. A person can socially exclude himself or herself by his own will or be excluded as a result of the decisions taken or not taken, willed or not, by other people, organizations or institutions.

► Exclusion is not only a result of current circumstances, but also means that the future prospects of the affected person are limited.

Another defining aspect of exclusion is that it manifests itself favourably at the level of the geographical or social community, because it mainly affects groups, not individuals. Social exclusion reflects a combination of closely correlated causes and drivers. As such, it must be seen as a process, and not just as a time-marked result, for example, as a strict result of poverty.

According to Romanian legislation (see law no. 47/ 2006 on the national system of social assistance), "the process of social inclusion is a set of measures and multidimensional actions in the areas of social protection, employment, housing, education, health, information-communication, mobility, security, justice and culture, designed to combat social exclusion".

4. Poverty-the basis of social exclusion

Social exclusion and poverty are realities inherent in any human society with a minimum degree of diversification, since individuals, households or other spatial units can be excluded from access to resources such as jobs, health care, education and political or social life. Specifically, social exclusion is a complex and multidimensional process involving the lack or refusal of resources, rights, goods or services, as well as the inability to take part in normal relations and activities within the reach of most people in society, whether they belong to the economic, social, cultural or political sphere. Exclusion affects both the quality of people's lives and the equity and cohesion of society as a whole. A group of researchers from the University of Bristol has created a reference matrix that includes ten dimensions or areas that can play an important role in social exclusion throughout the four stages of life: childhood, youth, adulthood (in the workplace) and old age.

✓ resources: material / economic resources access to public and private services
social resources

✓ participation: economic participation social participation culture, education and skills political and civic participation

✓ quality of Life: Health and well-being living environment.

Poverty is one of the most misleading concepts taken up by the social sciences from the common language, where the meaning of this concept was sufficiently accurate. But

placed in the universal context of science, clarity disappears, generating two great difficulties. The first difficulty arises from the fact that what is commonly understood by poverty, the common understanding, makes it particularly difficult to redefine it in a universal perspective. The second difficulty arises from the transition from an individual context to a general social one. At the level of common knowledge, the meaning of the concept is strongly related to the perception of individual cases. We all know that x and y are poor. The problem, however, is to define the category of all poor people under the conditions of a scientific approach. This problem arises both at the universal level and at the collective level (Zamfir and Zamfir, 1995.)

What is found, however, in most of the studies, is the definition of poverty as economic deprivation. This concept is supported by the fact that poverty characterizes people who lack the material resources (income in money or in kind) that can provide them with the necessary consumption of art and services (food, clothing, shelter, means of transport etc.).

One of the most commonly used frameworks for analysing exclusion is the one proposed by the study on poverty and social exclusion in the UK funded by the Joseph Rowntree Foundation, which included the following aspects of practice (Ministry of Labour, family and Social Protection, 2009).

- Poverty or exclusion from access to adequate resources – defined as poverty in terms of both source of income and deprivation of all kinds;
- Exclusion from the labour market-identified with the help of a series of employment indicators (at the same time, the authors of the research admit that these indicators are valid only when they correlate with exclusion from social relations);
- Exclusion from services - where services relate to public transport, play facilities and children's clubs and basic services in the dwelling (gas, electricity, running water, telephone);
- Exclusion from social relations, care covers the following five dimensions:
 - non-participation in joint activities, regarded as essential by the majority of the population;
 - the size and quality of social circles –support usually available in times of crisis;
 - non-involvement in political or civic activities;
 - isolation as a result of fear of crime, disability or other bioactive.

The dimensions of social exclusion change over time and differ from one country to another or from one region to another. For example, there is now a growing concern for socially excluded categories based on limited access to modern technologies and means of communication, in a phenomenon known as the "digital divide".

Poverty there are obvious negative effects on all societies, but it influences to a different degree the rich and the poor countries, this almost axiomatic statement being demonstrated by different economic, social, political, cultural, etc. Moreover, in contemporary societies we are dealing with a localization of poverty in certain areas of the world, areas that have struggled in recent centuries to find solutions to get out of the "periphery" of the modern world (Wallerstein, 1992), but these efforts have been, in most cases, unsuccessful. The countries of Eastern Europe were, in turn, concerned to narrow the existing gaps vis-à-vis the western half of the continent. Romania was also no exception from this point of view. Unfortunately, the states in this part of Europe failed to make the necessary leap to achieve the level of development of the Western European states, to standardize the economic, social, political and cultural development of the European continent, remaining un desiderata even after the enlargement of the European Union by including states in this part of the continent.

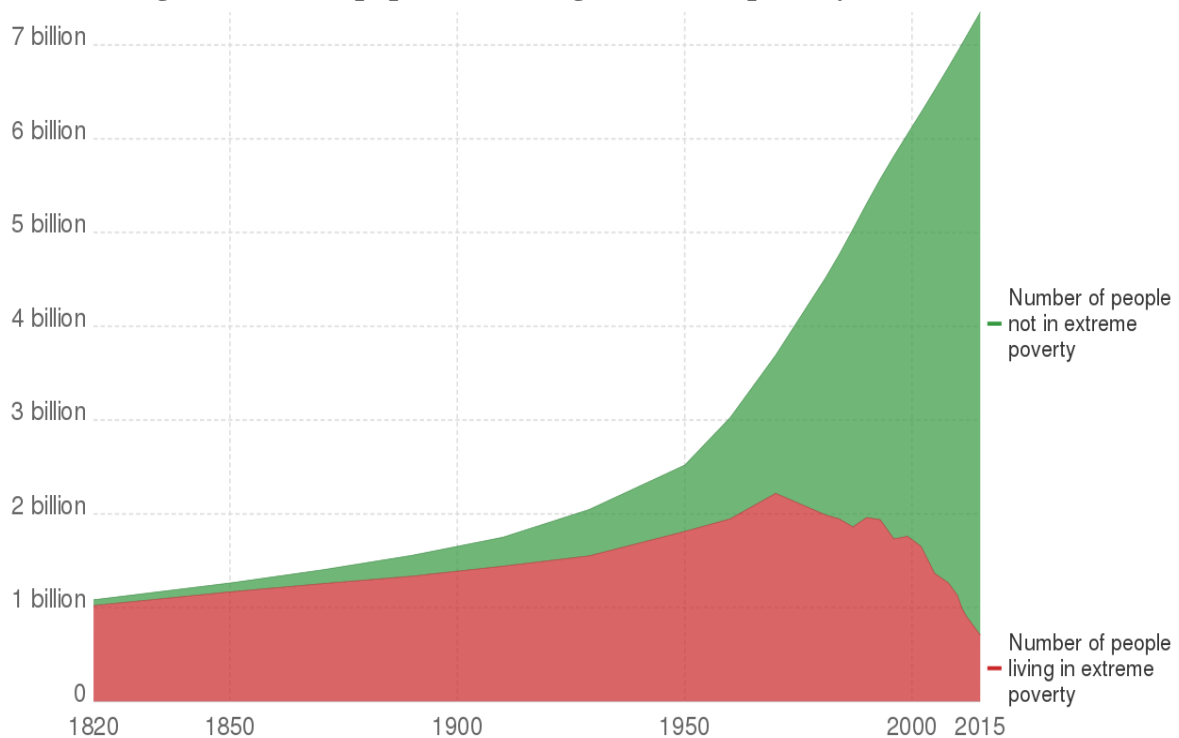
The relationship between poverty and social exclusion can highlight how care the concept of social exclusion can be harnessed as a tool for plotting a preparation. Social exclusion coincides with poverty, but at the same time extends beyond it, because it also includes relational aspects and the distribution of poverty. Therefore, as Bhalla and Lapeyre (1997) argue, the analytical framework should perceive the connection between the economic, social and political dimensions of social exclusion.

5. Poverty rate and risk threshold

Extreme or absolute poverty was originally defined by the United Nations in 1995 as a state characterized by a severe lack of resources needed to meet basic human needs, including food, drinking water, sanitation, education and the media. This depends not only on income, but also on access to various services (ONU, 1995). In 2018, extreme poverty is defined by the World Bank on the basis of an international poverty threshold set at an income of \$ 1.90 / day(based on 2011 prices, the equivalent of a \$ 2.07 in 2017). Compared to US prices in 1996, this threshold is equivalent to a gain of \$ 1.00 per day, hence the commonly used phrase: subsistence with "less than one dollar per day"(<http://www.worldbank.org/en/topic/poverty/overview>).

The fact that \$ 3.20 is the amount available for daily living reflects the level of poverty in low-and middle-income countries, and the amount of \$ 5.50 / day reflects the level in high-and middle-income countries, the World Bank's biannual report on poverty and common prosperity entitled "assembling the pieces of the poverty puzzle" ("butt poverty Puzzle").

Figure 1. World population living in extreme poverty, 1820-2015¹

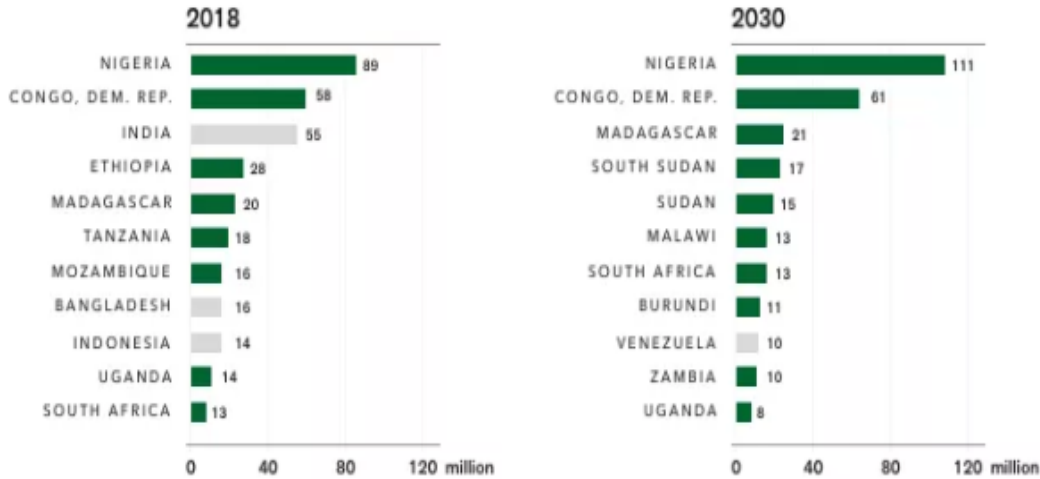


Source: Roser, M. and Ortiz-Ospina, E., 2013. *Global Extreme Poverty*. [online] Available at: <https://ourworldindata.org/extreme-poverty#citation>.

¹ Extreme poverty is defined as living at a consumption (or income) level below 1.90 "international \$" per day. International \$ are adjusted for price differences between countries and for price changes over time (inflation)

The World Bank remains committed to the goal of ending extreme poverty, which is defined as living less than \$ 1.90 / day by 2030. The share of the world's population living at the edge of extreme poverty fell to 10% in 2015, but the rate of decline in extreme poverty slowed.

Figure 2. Global Poverty Ranking: African countries will represent 9 out of the top 10 by 2030



Source: World Data Lab projections

The vast majority of people in extreme poverty, i.e. about 96% of them, live in South Asia, Sub-Saharan Africa, western India and the Asia-Pacific region; almost half live only in India and China (USAID, 2013). Since June 25, 2018, despite rich resources, Nigeria has become the poverty capital of the world, with about 89 million citizens living in extreme poverty (Chandy L. and Kharas H., 2014). If it cannot change its current trajectory, it will reach 110 million people living in extreme poverty by 2030. The second position in the World Data Lab global poverty ranking is currently occupied by the Democratic Republic of Congo (DRC), which will enter in 2019 with more than 59 million poor people and will end in 2030 with 61 million in current trajectories. By the end of 2030, nine of the 10 countries with the poorest people will be in Africa, up from seven countries today.

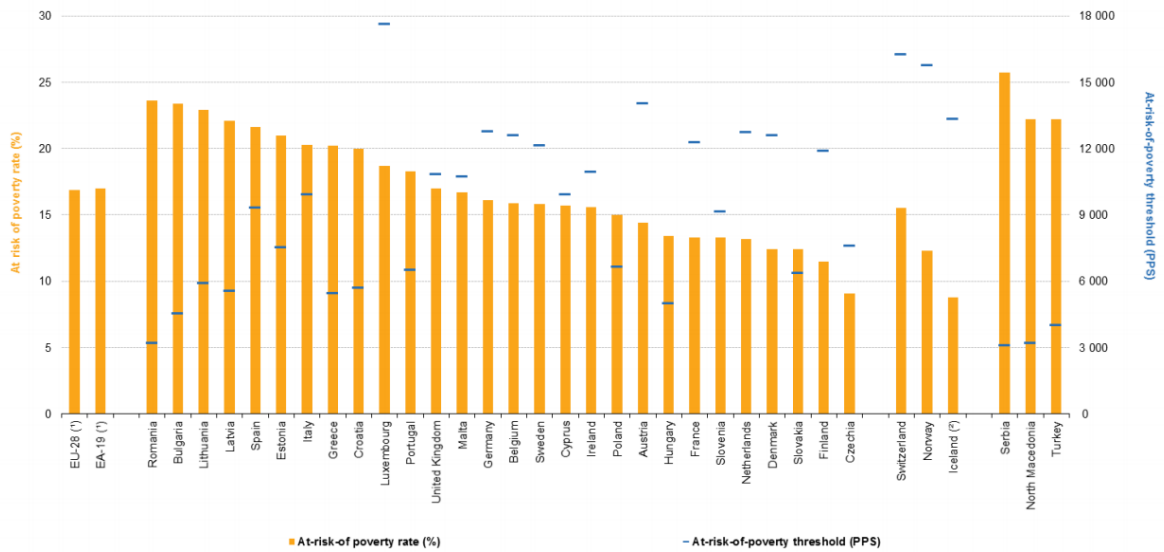
Economic developments around the world suggest that - although the number of people currently living in extreme poverty is lower-almost half of the world's population (i.e. 3.4 billion people) is struggling to meet their basic needs, according to World Bank studies (MPI, 2019).

However, as economic growth translates into a much larger share of the world's poor now living in richer countries, opening up additional credit lines dedicated to fighting poverty and a deeper understanding of the drivers of poverty are crucial to effectively fighting poverty.

In the EU-28, in the year 2017, and the 113 million people (22,4% of the population of the EU) were at risk of poverty or social exclusion, which means that about 1 in 5 people in the EU have experienced at least one of the following three forms of poverty: monetary poverty, material deprivation, severe, or very low work intensity of their household. The rate of risk of poverty or social exclusion in the EU over the last decade has been marked by two turning points: in 2009, after which the number of people at risk began to rise due to the delayed social effects of the economic crisis; and in 2012, when

this upward trend reversed. By 2017, the number of people at risk fell below 2008 levels (see Figure 1), which is the reference year for the Europe 2020 target.

Figure 3. Poverty rate and risk threshold, 2017



Source: Eurostat (ilc_li01) s, i (ilc_li02)

The EU-28 rate, calculated as a weighted average of national results, conceals considerable variations between EU member states (see Figure 1). In nine member states, namely Romania (23.6 %), Bulgaria (23.4 %), Lithuania (22.9 %), Latvia (22.1 %), Spain (21.6 %), Estonia (21.0 %), Italy (20.3 %), Greece (20.2 %) and Croatia (20.0 %), a fifth or more of the population was considered to be at risk of poverty; this was also the case in Serbia (20.0%). 25.7%) and in Northern Macedonia and Turkey (both with 22.2%). Among EU member states, the lowest percentages of people at risk of poverty were recorded in the Czech Republic (9.1%) and Finland (11.5 %), while Iceland (8.8 % – 2016 data) reported an even lower rate of population at risk of poverty.

The risk of poverty threshold (also shown in Figure 1) is set at 60% of the median disposable income per adult-national equivalent. For the purpose of spatial comparisons, it is often expressed in purchasing power standards (PPS), so as to take into account differences between countries in terms of cost of living. Income values for this threshold varied significantly in 2017 between EU member states from SPC 3 182 in Romania to SPC 14 006 in Austria, with the value of the threshold in Luxembourg (SPC 17 604) clearly exceeding the upper limit of this range. The poverty line was also relatively low in Serbia (SPC 3 087), Northern Macedonia (SPC 3 179) and Turkey (SPC 3 987) and relatively high in Iceland (SPC 13 316 – 2016 data), Norway (SPC 15 740) and Switzerland (SPC 16 225).

6. Conclusions

In order to prevent and combat social exclusion, equal opportunities must be made a reality for all people throughout their lives. The result of the action of any individual is determined by two types of factors: circumstances, given all external conditions over which a person does not have control, and effort, which includes all factors under the control of the person and in his sphere of responsibility. Any inequalities resulting from the effort made are ethically acceptable, while inequalities caused by circumstances are not acceptable and must be eradicated. In addition, inequality of opportunity leads to waste of productive potential and inefficient allocation of resources, thereby undermining economic

efficiency. Ensuring that all people have equal opportunities to develop their potential throughout their lives is therefore essential, both morally and economically.

Identifying the specific needs of poor and vulnerable groups is a key element in implementing effective social inclusion policies. Due to the fact that vulnerable groups face specific problems for which general policies may not provide real solutions, public policies need to implement integrated and personalised services to enhance their social and economic participation (in particular with the help of public welfare services and community workers).

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ECONOMIC PERFORMANCE AS THE BASIS OF SUSTAINABLE DEVELOPMENT

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Abstract: *Globalization and current economic changes bring new challenges for companies, industries and countries. The popularity of the concepts of performance and sustainable development is highlighted by the high national interest in these issues, similar to the policies through which the government aims to increase the performance of the national industry. The present paper aims to answer some questions regarding the analysis of company-level performance and the promotion of sustainable development. By linking the concepts of economic performance, global performance and sustainable development, a conceptual framework can be constructed to analyze the different approaches to performance. The analysis of ways to achieve sustainable development can be done from the perspective of performance. The competitive advantage of companies is based on their ability to achieve performances and to translate them into the level of sustainable development. The results of this article contribute to a better understanding of the correlation between performance and sustainable development at the level of the respective entities of the economy. The perception of business performance by all the categories involved undergoes a major change in the current period, the sustainable development already becoming a condition of survival.*

Keywords: *economic performance, global performance, sustainable development.*

JEL Classification: *P17, Q56.*

1. Introduction

The term performance has a Latin origin, "performance" having the meaning of completing a proposed activity. In English "To perform" has the meaning of performing an action that requires a certain aptitude and "Performance" reflects a sequence in which an entity reaches the set objectives. Within the set of definitions for performance in the economic field, it can be delimited: performance in relation to the level of achievement of strategic objectives, performance in relation to value creation, performance in relation to the efficiency and productivity of the entity.

The performance of the entity is found in a close relation with the way in which the managers manage its activity, by the way in which they procure their resources and the way in which they use them to obtain profit. The performance of an entity must be characterized by efficiency and effectiveness in achieving the strategic objectives and allow a sustainable presence on the market. In recent years, sustainable development has become a central topic, increasingly brought to the attention of the private environment, authorities and society. The implementation of responsible business in Romania has started to become more visible as a result of integration into the European Union.

2. The evolution of the performance concept

In the specialized literature we encounter a variety of definitions of performance, being unable to adopt a generally valid definition because of the particularities of each entity and the expectations of those involved. This is why a common definition would be subjective and variable. Performance is not a static concept and its management is a more complex process than its measurement. The concept of performance has experienced several stages in its evolution, of which we mention: in the 50s performance was related to costs and benefits; In the 1960s, the focus was on achieving remarkable profit margins, the basic idea being that a significant profit margin ensures future financing, not taking into account the efficiency of fixed capital; in the 80s the focus was on obtaining the profit in absolute size, not paying attention to the way of exploiting the assets; In the 90s, a key element in establishing the performance is the cost of capital and the cash flow that allow a

higher management of resources and risk. Everything related to the way the concept of performance has evolved can be recalled that the use of indicators that reflect the value creation process (EVA, MVA, CVA) in the USA in 1990 and in Europe in 1995.

The theories in the economic-financial field have been adapted to the economic reality, including new theories have emerged, the reason being that of the dynamics and complexity of the factors influencing the economic environment. Therefore, some economists approach performance from the perspective of the objectives pursued by the entity, referring to their degree of achievement, others regard it as a measure of the value created, while a last category considers performance in terms of productivity and efficiency of the activity.

3. Its performance and approaches

The performance of economic entities is a topic that raises a series of questions, controversies related to its measurement, evaluation and management. The concept of performance of economic entities, does not present a generally accepted definition in this regard.

In the specialty literature the concept of performance is associated with three notions: economics (procuring the necessary resources at the lowest cost), efficiency (maximizing the results obtained, starting from a given amount of resources, or minimizing the amount of resources for a predetermined result). and effectiveness (the results achieved to achieve the expected results).



The performance of the economic entity can be viewed from the perspective of the profitability that takes into account the results obtained and presented in the profit and loss account, results obtained after owning and using the factors of production ("comprehensive income").

Effectiveness can be regarded as the ratio between the achieved result and the objective to be achieved, regardless of the effort made and its minimization. Economicity is not related to the effect achieved, nor to the effort made, nor even to the objective to be achieved. It aims to conduct transactions, use resources and other economic operations at the lowest cost.

Performance in an entity involves improving and harmonizing the cost-value couple, not just what leads to cost reduction or value creation. The accounting result is regarded as the main indicator of the measurement of the financial performance of the entity. Through the calculation method it is oriented to the past, becoming a basis for evaluating the results of a process, in a past period of time, this obliging the inclusion of the concept of cost of capital in the performance approach. Without reaching the minimum level of the cost of capital repeatedly, investors will move to more profitable investments. Any investment must offer a remuneration that includes a risk premium. The level of the risk premium therefore depends on the risk that the investor assigns to this investment.

The performance represents a result in the field of economic, commercial management, which implies the efficiency, effectiveness and competitiveness of the companies. It is advisable to look at performance not just as a reduction of expenses and maximization of income, with the purpose of obtaining a profit. The reason is that there are cases in which the increase of the expenses can be generated by contracting new loans in order to make new investments, for the modernization of the manufacturing technology, the hiring of new employees due to the need to expand the activity, elements that reflect an economic entity. viable, in full progress. The directions of action, even if they focus more on achieving the performance from an economic point of view, nevertheless their influence is felt on the sustainable development as a whole. The increase of the expenses, as specified above, can be regarded as a direction of action, from the following perspectives:

- The increase of the expenses with the commissioning, with the depreciation, with the repairs, with the modernization of the machines, lead to the increase of the rate of return of the consumed resources, the condition being that these investments have a positive effect on the profit
 - Increased wage costs can lead to increased labor productivity
 - Reducing expenses is also an important aspect that can lead to increased performance:
 - Reducing the consumption of raw materials through their efficient use
 - Reduce electricity consumption by participating in different energy efficiency programs
 - Reduction of administrative and protocol expenses, through the efficient use of the entity's vehicles. Thus, it is possible to act directly on the performance by increasing the profitability (by reducing or increasing the expenses), respectively indirectly by increasing the productivity and efficiency.

From the variety of traditional and modern perspectives of the performance concept it can be systematized as follows:

A. Performance by achieving goals. Among the first to study organizational effectiveness were R. Tannenbaum and H. Shimdt, considering that performance represents the degree to which an organization, as a social system, with certain resources and means, achieves its goals (Tannenbaum and Shimdt, 1958). This implies that the reporting should be based on landmarks. The two made reference to achieving the objectives, focusing on labor productivity and net profit, as common goals for the entities. This approach has a high level of subjectivity and depends on achieving the objectives proposed by the entity, thus making the same level of performance differently appreciated. A similar approach has also G. Lavalette and M. Niculescu, who saw the performance as the achievement of organizational goals regardless of their nature and variety (Lavalette, Niculescu, 1999). The same approach to performance is also found by the definition proposed by another specialist: it is the performer who achieves his goals (Bourguignon, 2000). However, the achievement of goals does not always represent performance, they can be achieved at the expense of important aspects.

B. Approaching performance from the perspective of the value that the economic entity creates. Performance is all that, and only what, contributes to the strategic objectives of the entity, as well as everything, and only what, contributes to improving the value-cost couple, and not just what contributes to cost reduction or growth. value (Lorino, 2003). The value-cost couple can be optimized by reducing the costs, accompanied by the increase of the entity's value, both actions being necessary to be carried out simultaneously. According to this approach, the economic entity creates value only if the capital is paid at a rate of return higher than its cost. The importance of value creation comes from the fact that it actually leads to the achievement of performance, so that

achieving the goals without creating value cannot be considered performance. The overall performance of the enterprise is represented by all economic, social and environmental performances (Reynaud, 2003). Both financial and non-financial results contribute to the performance. This theory comes with an approach to new elements, namely the non-financial aspects. Even though the latter only highlighted the protection of the environment and the employees, this theory brought significant improvements on the concept of performance.

C. Performance from the perspective of the productivity and efficiency of the activity of the entity. Performance can only exist if it can be measured, and in no case can it be limited to knowing a single result. Thus, the obtained results will be evaluated by comparison with the expected results or with certain standard results (Bouquin, 2011).

This approach to performance focused on the efficiency, effectiveness, economics encountered in the literature as the three E's. Therefore, performance is seen as economics supplemented by efficiency and effectiveness, given that efficiency is linked to the increase of results per unit of resources, the economics of obtaining resources at a reduced cost and the effectiveness of the ratio between the obtained and expected results.

4. Global performance through sustainable development

The concept of sustainable development was born 30 years ago, in response to the emergence of environmental problems and the crisis of natural resources, especially those related to energy. Practically, The Stockholm Environment Conference of 1972 is the time when it is recognized that human activities contribute to the deterioration of the environment, which endangers the future of the planet. Sustainable development means meeting the needs of present generations, without compromising the ability of future generations to meet their own needs according to the World Commission for Environment and Development.

Entities must look at the concept of performance from a global point of view because the sustainability of the performance will be achieved only by establishing as the entity's goals social responsibility and environmental protection in addition to the financial ones. Financial indicators remain fundamental in an environment where profitability on the capital market is strictly profit or loss, this perspective generally involving actions that are focused on short-term results. Basically, a set of managerial tools composed only of economic-financial indicators available to the management of the entity would be incomplete.

There has been the transition from the concept of economic performance to the concept of global performance. Performance is paramount in the context of the current economic situation in which competition is tight, with non-performing entities even winding up. The global performance will take into account three aspects: the economic-financial performance, the social performance and the environmental performance. The performance measurement must be duplicated by elements established by the entity management regarding the design of the entity's future activity. The entities that identify and reduce the level of weaknesses and that detect the problems from the level of management, have the chance to face a market in which the competition has a high level.

The triple-bottom-line concept expresses the adoption, within the entity, of the three dimensions of sustainable development. Thus, competitiveness is achieved by highlighting the following objectives: an economic one (achieving wealth for as many as possible through optimum production and sustainable consumption), an ecological one (management and conservation of resources) and social (social equity). Lately, the research and business environment have increasingly studied the implications of social responsibility on economic benefits. Investors and other categories interested in the

performance of the entity, are attracted by the reporting that includes besides the financial side and the social component and the one regarding the environmental impact in which it operates. Sustainable development reporting is no longer just a communication exercise but also a tool to improve the performance of a company in the social, environmental and governance areas (ESG - Environmental, social and governance). The reasons for which sustainable development reports are used, respectively, are due to the fact that internal processes can be improved, they can be considered as tools for improving the performances in the social, environmental and economic fields, they can be effective tools in making commercial decisions, including by decide whether or not to use the products and services of a particular company.

Investors consider that the most important factor in increasing the confidence in a company is the data on its overall performance. The report on the sustainable development, is the main factor in the trust that the different categories have in the commitment of sustainable development assumed by a company. We are in a changing period, which requires transparency in the field of sustainable development, this process leading to an improvement in performance over time. Thus, it has never been more important for us now to understand the mindset of those who read and write reports. Changing the reporting mode leads to some information, some of them surprising even for the authors who created them.

The main impetus for sustainable development was represented by the multinational companies that implemented the organizational practices from the headquarters at the local level. Sustainable development involves the development of businesses that benefit the environment and / or communities, the products and services they provide, reflecting the responsibility that entities take on. As a result of its integration into the EU, Romania has experienced a development of the renewable energy and waste management industries, rural tourism and eco-tourism, as well as the marketing of organic or organic products.

A strong motivation to contribute to sustainable development was the opportunity to win the trust of customers. Sustainable development involves the integration of social and environmental concerns into the actions of the entities, voluntarily or imposed by legal regulations. To assume such a responsibility means that the entities fulfill more than the legal expectations, it means investing more in human capital, in the environment and in relations with other categories. All these elements, by increasing productivity, can enhance the competitiveness of an entity. The overall performance achieved by an entity reflects its competitiveness, achieved through a level of efficiency and efficiency that ensures a sustainable presence on the market. Investments to increase global performance are focused on strategic financial decisions, with economic entities increasingly pursuing two objectives: profit and social performance. Any entity tries to follow the proposed strategies in order to obtain the proposed results and to measure them, this being facilitated by the use of the key performance indicators (KPIs). The performance of entities should not be interpreted only using classical indicators, which derive from the specificity of accounting operations; a broader vision is needed, especially using other indicators, with a specific role, such as non-financial indicators.

5. Conclusions

In assessing the performance of the entity it is appropriate to approach not only by quantifiable monetary factors, but also by non-financial factors, impossible to quantify monetary, whose aggregate effect reflects performance to a better extent. The evaluation of the performance of the entity plays a very important role in assessing and improving the efficiency of the economic activity. The importance of the performance from the three

perspectives mentioned in the present paper can be viewed under the ethical aspects, the relations with third parties, the protection of the environment and the positive financial results over a long period of time. Global performance appraisal initiatives promote transparency, fairness, accountability over their actions, ensuring the success path for large entities and being a good example for small and medium-sized ones, even for insolvent entities.

The importance of the concept of global performance as an essential component for the sustainable development of the entity comes from the synthesis of the results of the evaluation of the non-financial performances in the short term, long term and of strategic type, regarding the impact felt at the level of the clients and the other categories involved. Financial constraints, present economic conditions, changing consumer behavior, lead to the adoption of new management policies that will lead to sustainable development based on the economic performance at entity level.

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IMPLEMENTATION OF UNIVERSITY SUSTAINABILITY MANAGEMENT BY MEANS OF UNIVERSITY PERFORMANCE STRATEGIES

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Abstract: *This paper addresses the basic aspects of ensuring sustainability in higher education institutions through the development and implementation of university sustainability management that serves as a basic pillar in cultivating sustainability in higher education institutions. The relevance of the research topic derives from the need for universities to be competitive, to attract and motivate students, but also to gain the trust of stakeholders that can be guaranteed, in the 21st century, only through effective programs focused on ensuring a balance between ecological-economic-social environment. The aim of the paper is to identify the possibilities of implementing the university sustainability management in higher education institutions. The research problem is to find solutions for overcoming the main challenges faced by higher education institutions. The research question is: what is the safest way to achieve sustainability in higher education institutions. Thus, in this context, we elucidate the fact that within the universities of the Republic of Moldova it is necessary to implement effective strategies to ensure sustainability by means of implementing an efficient management aimed at achieving sustainability. The research methodology focused on the use of several methods such as: analysis, synthesis, induction, deduction, abduction, documentation, scientific abstraction. In conclusion, we can reiterate that ensuring sustainability in higher education institutions is possible due to the implementation of viable and efficient instruments that place special emphasis on the implementation of university sustainability management. Stepping firmly on the path of sustainability is possible by grounding the activity of universities on successful sustainability strategies, which must be implemented in all subdivisions, faculties, university departments.*

Key Words: *sustainability, university sustainability management, strategy, university, principles of sustainability.*

1. Introduction

Sustainability, in the 21st century, is a bridge of ensuring competitiveness in higher education institutions, which are becoming increasingly vulnerable to the influence of various external factors, such as: reduced birth rates that determine the reduction of the number of students in higher education institutions, changing preferences of young people in choosing the profession, increasing students' expectations towards higher education institutions, along with the need to gain the trust of potential students in the chosen educational institution.

All these changes require universities to become more competitive, to identify successful ways to achieve sustainability. A real challenge for every higher education institution is to identify the tools that deserve to be applied in higher education institutions in order to achieve sustainability.

In this sense, universities are forced to identify a way to achieve sustainability, and in parallel to this, to identify the necessary measures and tools that must be applied in order to achieve sustainability.

Apart from this, higher education institutions must re-evaluate their activity in the direction of ensuring an effective collaboration with all stakeholders in order to achieve sustainable development.

This paper emerged from the need to outline a safe path, aimed at achieving sustainability in higher education institutions in the country in order to ensure an ecological-economic-social balance.

Sustainability in higher education institutions is the weapon employed by the universities in attracting students, in motivating them, but also in increasing the notoriety of the higher education institution.

The relevance of the research topic derives from the need for universities to be competitive, to attract and motivate students, but also to gain the trust of stakeholders that can be guaranteed, in the 21st century, only through effective programs focused on ensuring a balance between ecological-economic-social environment.

The general research objective is to identify the possibilities of implementing the university sustainability management within higher education institutions.

The research objectives, subsumed to the general objective, are:

O1: studying the theoretical milestones of sustainability;

O2: identifying the necessary instruments to ensure sustainability in higher education institutions;

O3: evaluating the possibilities of applying university sustainability management within higher education institutions.

The research problem is to find solutions to overcome the main challenges faced by higher education institutions.

The research question is: what is the safest way to achieve sustainability in higher education institutions.

Thus, in this context, we elucidate the fact that within the universities of the Republic of Moldova it is necessary to apply effective strategies to ensure sustainability by implementing an efficient management aimed at achieving sustainability. The research methodology focused on the use of several methods such as: analysis, synthesis, induction, deduction, abduction, documentation, scientific abstraction.

2. Contents

2.1. Conceptual milestones regarding sustainability

Sustainability is a concept focused on achieving human development goals and simultaneously supporting the capacity of ecosystems by providing natural resources and protecting life and nature, without diminishing the chances of future generations.

This concept is perceived as significant in ensuring social and economic development, as it was first defined by the United Nations World Commission on Environment and Development (WCED) in 1987.

The Report “Our Common Future” defined sustainability as “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report, 1987).

WCED sought to explore the causes of the environmental degradation, as well as the interconnections between social equity and economic growth. Sustainability objectives integrate the three economic, social and environmental aspects for ensuring the development of future generations. Given the current activities at the international level, the United Nations Agenda for Sustainability, based on the document “Transforming our World: The 2030 Agenda for Sustainable Development” was drafted in 2015. The new Sustainability Objectives, from the perspective of 2030, underline, among others, the relevance of higher education in the efforts for a better future (UNO, 2015).

The inclusion of the UN sustainability objectives within the curriculum will support the development of the future-oriented skills. This can be achieved by promoting social, economic and political change, which can be reinforced by professional leaders and specialists.

Recent developments also show that the European Union Strategy “Europe 2020: a strategy for smart, sustainable and inclusive growth” adopted in 2010 highlights, in this context, the crucial importance of innovation, education, digital society, training and lifelong learning (EU, 2010).

According to the Global Action Program on Education for Sustainable Development, adopted by UNESCO in 2014, we can stress the fact that political agreements, financial incentives and modern technologies are not enough to achieve sustainability (UNESCO, 2014).

Radical changes are indispensable, in particular, in the way we think and act when we shape relationships in a social context and in line with the ecosystem. In order to ensure sustainability that meets the needs of present and future generations, it is necessary to furnish all individuals with adequate knowledge and skills to form a system of values related to sustainability.

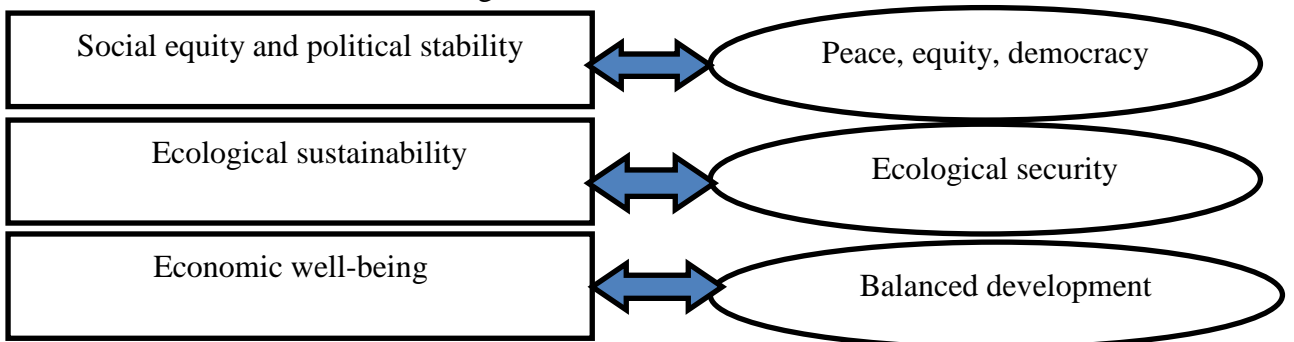
Researchers from the field of sustainability. Erpenbeck and Rosenstiel, point out that “sustainability requires a change in people’s consciousness and provides a framework for further decisions and actions”. Consequently, a “new culture of learning” is needed (Erpenbeck, Rosenstiel, 2003).

2.2. The role of education in ensuring sustainability

According to sustainability experts, such as Urbaniec, education should focus on self-organization and competence. The purpose of education is to support the development of the personality, in order to manage complex situations and make appropriate decisions, to respond and to have high ethical standards in accordance with the requirements of sustainability (Urbaniec, 2018).

Thus, in the 20th century, the foundation of the ideas of sustainability was laid as a vital orientation for the development of humanity in the 21st century.

We can distinguish three sustainability factors, which are closely linked to certain universal human values, shown in Figure 1.



Sustainability factors are closely interrelated and interdependent. For example, it is clear that economic development cannot be sustainable if:

- environmental requirements are neglected;
- lack of transition to more ecological technologies;
- neglecting the development of the health system, education, social security, etc.;
- lack of ensuring a fair distribution of resources among people;
- neglecting the needs of future generations;
- avoiding the development of democracy.

Ensuring *sustainable development* requires positive, balanced and concomitant changes in all factors. The Report “Our Common Future” of the Brundtland Commission recommends undertaking urgent actions in eight key areas:

- Population and human resources;
- Food safety;
- Urbanization problems;

- Energy;
- Industry;
- Biodiversity and ecosystems;
- Conflicts and environmental degradation;
- Unified ideology in management (Brundtland Report, 1987).

Solving problems in these areas will help to overcome contradictions and ensure sustainability, issues that aim to meet the needs of the current generation, without compromising the ability of future generations to meet their needs.

A fundamental pillar in ensuring sustainability in society is sustainable education, which focuses on ensuring an education based on a culture of sustainability, which strives to ensure a balance between ecological security, economic well-being and social equity.

Sustainable education is crystallized by changing the mentality of the present generation in order to ensure an ecological, social, economic balance, providing access to future generations to the planet's resources, using a culture of sustainability, through modern teaching methods focused on cultivating sustainability.

2.3. A sustainable university – the university of the future

One of the fundamental pillars of sustainability is the university education, represented by higher education institutions, which constitute the main players that contribute to the dissemination of the culture of sustainability in society, the formation of students' skills and habits related to sustainability and can ensure coherence between social, ecological and economic.

A sustainable university is the university that harmoniously combines education, research through a complex process of ensuring an interdisciplinary balance in the context of optimal use of the natural, social and economic environment by collaborating with stakeholders involved in this process.

According to the definition offered by Velazquez, a sustainable university always refers to the environmental, economic and social concerns it should have, regarding its activity and responsibility to "lead by example". The researcher states that a higher educational institution university "involves and promotes, on a regional or a global level, the minimization of negative environmental, economic, societal, and health effects generated in the use of their resources" (Velazquez et al., 2006).

The researcher, Cole, mentions that "a sustainable campus community acts upon its local and global responsibilities to protect and enhance the health and well-being of humans and ecosystems [...] to address the ecological and social challenges" (Cole, 2003).

On the other hand, the renowned researchers Alshuwaikhat and Abubakar, elucidate that "a sustainable university campus should be a healthy campus environment, with a prosperous economy through energy and resource conservation, waste reduction and an efficient environmental management, and promotes equity and social justice" (Alshuwaikhat și Abubakar, 2008).

In this context, the main mission of the sustainable university is to maximize the development of the creative potential of all members of the university community: academic staff, engineers, technical staff, and administration.

2.4. University sustainability management – a secure approach towards the sustainability of higher education institutions

2.4.1. The role and functions of university sustainability management

For the sustainable development of a higher education institution, we should develop a sustainable university development strategy that contributes to the transition to its sustainable functioning which, in turn, allows the accumulation of the university

potential and its direction towards creative and productive interaction with the social, economic and ecological environment.

Being a distinct field of study, the university sustainability management fulfills several functions, such as:

1. *University sustainability planning* – this function is performed by the university management team, on the one hand, but also by deans and department heads on the other hand. When planning activities related to achieving university sustainability, the university, in collaboration with the faculties and departments, plan the procedures, activities through which they can achieve university sustainability. The activities planned in this chapter are enclosed in 3 different areas, as:

– *the ecological sector* – involves planning the activities of the university related to ensuring concrete activities of the institution in this sector such as: energy security, the use of renewable energy sources, opportunities to reduce water consumption, the increase of green zones on the university campus, the use of green transport, etc.;

– *the social sector* – this sector includes such activities planned by the university in the social field, as: ensuring the health and safety of the academic staff, of other categories of employees, and of classrooms students, ensuring social ethics and equity;

– *the economic sector* – this sector includes the activities planned by the university in the economic sphere in order to increase the university economic growth, such as: ensuring the economic well-being, increasing the competitiveness, increasing the economic profitability, diversifying the university offer, a rational consumption of resources.

As a result of the planning process of the university activities related to achieving sustainability, the university sustainability strategy is developed.

The university sustainability strategy is a long-term plan developed by the university in the context of ensuring sustainability within the university by capitalizing on education and research based on a university culture oriented towards sustainability.

The strategy is elaborated by a commission oriented towards sustainability that has been appointed by the rector of the university. The Commission identifies the most relevant measures to achieve sustainability in the future. In this planning process, the activities meant to ensure sustainability within the university, must be focused on the sector of education – research – teaching, and involve the application of university performance management within these academic sectors.

2. *Organizing the accomplishment of university sustainability* – performing this function, the university must find the most relevant ways to organize its activities in order to achieve sustainability. Therefore, by collaborating with the academic environment, along with other universities, institutions, the private sector, agencies, the university identifies the measures that will be implemented in a certain time framework. Activities undertaken with the purpose of achieving sustainability must be simple and easy to implement, both within and outside the academic environment.

The university can carry out several activities at the level of departments, faculties in order to achieve sustainability:

– *organizing seminars, conferences, workshops* – these activities will help change the mentality and raise awareness of the need to address university sustainability.

– *organizing the sustainable university website* – this site may involve activities identified by students that can be applied to increase university sustainability, reinforced by the university management.

– *organizing the sustainability day at the university* – on this day, various educational activities could be carried out in order to conceptualize the need to achieve sustainability.

– *organizing the research, and the research projects with topics focused on sustainability* – this research will help raise awareness of the need to achieve sustainability within the university.

3. *Coordinating activities in achieving university sustainability* – the coordination of activities must be carried out in correlation with all the people involved in the process of ensuring sustainability within the university. Thus, depending on the stakeholders involved, but also in close correlation with students, academia, the university must coordinate the implementation of all planned activities. Obviously, the sustainability commission must find the best solutions in order to achieve university sustainability.

4. *Monitoring and controlling the achievement of university sustainability* – monitoring and control of achieving sustainability must be done both internally, inside the university, and externally, outside it. Consequently, within the university, the control must be focused on 3 basic directions:

- pre-control;
- control during the performance of activities;
- post-control.

From within the university, the people responsible for carrying out the control must be people such as the rector, the sustainability commission, the deans, the heads of the departments, the heads of the research laboratories, the librarians.

From outside the university, the people in charge can be the department heads, business managers, agencies, town halls, companies.

5. *Adjusting university sustainability* – the activities related to the adjustment of the achievement of university sustainability must be carried out continuously, because once some activities have not been carried out in time or have not brought the desired results, it is necessary to adjust the activities and make certain corrective measures.

The process of adjusting measures in the direction of achieving sustainability within the university must be continuous and include all those involved in achieving university sustainability. The adjustment measures will help the university to reach the path of sustainability and to step firmly in a sustainable and balanced world, manifesting a responsible activity towards itself and all its stakeholders.

Finally, the activities of a sustainable university must not only take into account the social, environmental and economic interests of the society, but also contribute to their fulfilment. This effect is exactly what the emergency can achieve when implementing a sustainable university management.

2.4.2. Applicability of university sustainability management

Sustainability involves such a way of organizing the activities of a higher education institution that all its subsystems function as harmoniously as possible, the potential of all members of the university community is fully and efficiently used. The transition to sustainable management and the functioning of the university is possible with a change in the development strategy of the university.

An analysis of the current situation has shown that, despite the fact that some universities introduce elements of the concept of sustainability, such activities aim to solve a variety of specific problems associated with the functioning of a university and this is not complex. Therefore, the management of the sustainable university aims to harmonize the entire internal activity of the university and is partially in line with the concept of sustainable university management.

A higher education institution differs from an enterprise in that it is mainly involved in educational and research activities. Among the activities carried out within the university, several major interrelated fields can be distinguished. If we imagine an

educational institution organised as an integral system, at that point these subsystems will correspond to the following areas:

1. *The material and technical subsystem of the university* includes everything related to the operation and maintenance of the material and technical base: buildings and structures, furniture, equipment, vehicles, infrastructure elements, the redistribution of funds;

2. *The educational and scientific subsystem* includes the following organization of the educational and research activities: the development and implementation of educational programs, the development of curricula, as well as everything directly related to the educational process itself; organizing and supporting scientific research, promoting innovation;

3. *The social subsystem* includes all participants in the university community, which comprises the administration, the engineers and the technical staff, faculty staff members and students; extracurricular agreement activities, cultural events, information assistance for the university life;

4. *The management subsystem* unites the administrative apparatus, the decision-making mechanisms, the elaboration and approval of the development programs.

Within the university system, these are closely interconnected, but, as a rule, when planning activities and developing strategic development plans, each is considered separately. The management identifies 2-3 of the most priority areas, the development of which will focus on capacity and key resources.

4.3. Principles of application of university sustainability management

The concept of the university sustainability management is based on certain principles, the performance of which constitutes an integral part of the sustainable development of any territory.

For the reason that the concept of sustainability expresses a certain vision of the world, it is manifested exactly in the following principles.

1. *The principle of responsibility for the future*: the training of the specialists, the research and development of applied projects within the sustainable university should be focused on the needs of future generations, i.e., specialties and research should be relevant at least in the medium term run;

2. *The managerial solution of environmental problems*: the introduction of environmental initiatives aimed at environmental protection should be recognized and supported by the university senior management;

3. *The principle of partnership* is realised when all the stakeholders achieve their interests. It can be manifested, for example, in the fact that for the development of educational programs, specialized boards of administration, teachers, graduates of similar programs and representatives from the business environment can be brought together;

4. *The principle of openness*: involves the free exchange of various information, including reporting about the university activities from different industries, research data and lectures;

5. *The principle of unity of objectives*: the unity of objectives must be respected by all the participants in the university community, and in all areas of its activity;

6. *The principle of greening all areas*: as environmental issues are manifested in all areas of sustainable university functioning; this should be taken into account when elaborating a university development strategy;

7. *The principle of complexity*: all decisions taken should be of a systemic and complex nature, i.e., the short-term and long-term consequences of certain decisions must be taken into account when planning the activities;

8. *The principle of environmental education*: the courses on ecology and sustainability should be included in educational programs in all areas of training;

9. *The principle of equality*: all areas of training and research are equally important and should aim to address sustainability issues.

5. Challenges in implementing university sustainability management

The implementation of university sustainability management is a complex process, which includes the realization of several activities related to planning, organization, coordination, control, evaluation of the efforts of the higher education institution in order to achieve sustainability.

The first priority for the emergence of achieving university sustainability is the harmonization of the university internal activities.

A modernized management of the classical instrument can help the institution in this respect. The sustainability strategy of the higher education institution is the best tool used in international arenas in order to achieve a sustainable university management.

Sustainable university strategy is based on the following basic principles: the principle of partnership, the principle of openness and transparency in work, the principle of taking into account the interests of future generations, the principle of combining environmental, economic and social objectives. The activities for the implementation of the sustainable university strategy are based on the creation of working groups, whose activities would aim at identifying and solving the internal problems of the university functioning.

At the same time, the preconditions for an effective activity are: the participation of all stakeholders in all stages of the implementation of the strategy; the faith in local specialists; revealing the internal potential of the participants in the process; self-updating of the participants throughout the process.

In order to identify the competitive advantages, universities have to implement the university sustainability management, which consists in managing the complex university system in order to ensure the economic, social, ecological balance through penetrating a culture oriented towards sustainability of teaching and research in a sustainable campus, training of sustainable skills integrated through curriculum, skills, values, practical activities.

3. Conclusions

To conclude, we would like to mention that by implementing the university sustainability management, the higher education institutions are able to increase their competitiveness, to have a responsible activity towards society, attracting new students based on the right attitude towards ecological, social and economic environment.

We can point out that operating in a fierce competition environment, higher education institutions constitute the poles of sustainability penetration throughout the society, given that higher education institutions are the catalysts for changing mindsets, cultivating values and skills focused on sustainability, and planting skills and abilities to promote responsible activity in the society.

In order to achieve sustainability, higher education institutions are required to:

1. *Implement university sustainability management* – from the carried-out research we noticed that the fundamental pillar of ensuring sustainability in higher education institutions constitute the implementation of university sustainability management, which is based on a viable, successful tool that is designed to ensure the sustainable development of universities and support the process of ensuring the strategic competitiveness in higher education institutions;

2. *Elaborate a strategy to ensure sustainability* – a sustainability strategy must be developed within the universities, with the aim of engaging all university subdivisions and generate synergistic effects;

3. *The concerns on ensuring sustainability must become systematic concerns for the whole academic environment* – in order to ensure the sustainability, it is necessary to apply effective measures to guarantee sustainability in higher education institutions to be implemented within the system, by involving the entire academic environment in order to achieve synergy and performance in this system;

4. *Ensuring the collaboration of higher education institutions with its stakeholders* – in order to streamline the sustainability assurance system in higher education institutions, it is necessary to ensure effective collaboration with university stakeholders, which could help universities in directing the implementation of university sustainability management therein.

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CONSIDERATIONS REGARDING THE DEPRECIATION METHODS OF THE ASSETS USED IN AGRICULTURAL PRODUCTION

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Abstract: Romania owns an important granary area especially located, but not limited to the Danube meadow, in the Southern and South Eastern part of the country, which tends to be increasingly affected by the draught, in the larger context of climate changes. In addition, an important share of the Romanian population continues to live and work in rural areas, having the agriculture as the main occupation. In order to increase their performance and profitability, these agricultural exploitations need informational, logistical and technological investments, amid their adaption to the requirements of the European agricultural market, featured by market-oriented agricultural production structures. From the accounting point of view, choosing of the adequate method for the depreciation of the assets represent a topical point. This paper aims to review the depreciation methods used in order to ensure, via the costing mechanism, the recovery of the investments in the assets used in agriculture, and ensuring of the economic extension. The conclusions try to outline the strengths and the flaw points of every examined method, considering their adequacy for the agriculture domain.

Keywords: depreciation method, accounting, digressive coefficient, agriculture.

JEL classification: M41.

1. Introduction

The role of agriculture within the Romanian economic context is widely emphasized in the literature (Andrei et al., 2017; Popescu et. al., 2009; Badea and Mieilă, 2008). This interest has been reinforced as result of the deployments in the last period, marked by the opportunities and challenges of climate changes, and the urgent shift towards the green economy. This veritable emergency implies outstanding efforts, aimed to ensure a “greener” production by computerization, smart farming, besides quasi-generalization to irrigation systems in the Romanian South area, through commissioning and reputing into operation of the existing irrigation systems, and by planting of forest curtains for water retention. The Romanian South area represents one of the outstanding granary areas in Europe, which is increasingly affected by the draught, which impose new solutions, in order to deal with the new conditions. Within this demarche, additional challenges arise from the fragmented character of the land properties, or as result of certain landscaping works which belong to certain individual owners (Ion and Andrei, 2014; Ciutacu et al., 2016; Popescu and Andrei, 2011), as the respective landscaping have to be properly recorded in the accounts.

By definition, the fixed assets represent the part of assets of whose operation duration exceeds one year, and a minimum purchase value of 2500 RON (Romanian New Leu) (according to the Romanian Tax Code, 2003, updated in 2014). Their main particularity is that they participate in several production cycles, through they keep unchanged their physical configuration, and gradually transmit their value towards the

goods and services of whose production they participate. (Cenar, Todea & Deaconu, 2003). From the scientific perspective, the depreciation express the modality the cost of non-current assets is transferred to the goods and services in the production of which they participate throughout the operating time of the former, and is recovered concomitant to their value diminution, as they accumulate physical and moral wear and tear (Todea, 2002).

The concept may incur difficulties especially in case of non-specialists, particularly because it represents a calculated expenditure. In order to facilitate the understanding and grasping of the concept, depreciation can be defined as the process of gradual recovery from both accounting and tax perspectives of all costs related to construction, purchase, assembly, production, improvement, installation or modernization of depreciable assets (Paliu-Popa, 2010).

Consequently, depreciation is the result of an accounting procedure of logical and systematic distribution of the cost of non-current assets, applied in a specific way as to charge part of this cost to each year which will benefit from the use of those non-current assets (Feleagă and Ionașcu, 1998).

In accounting, as in everyday life, all the revenues and expenditures are reported based on a certain period, and there is mandatory to measure the profit or loss for the respective time-range. With regards to the depreciation, there may be stated that it represents the fractional expenditures from the cost of depreciated assets, which are used throughout the specified accounting period.

In detail, there may be stated that the role of depreciation is to deduct that annual depreciable amount, calculated based on the total value of the asset over the total useful life. The role of calculating of depreciation expenditure is to preserve the resources of the company, in order to allow the latter in the process of the assets reconstitution, through the usage of the already existing assets.

According to the legislation in force, the depreciation registered according to the established rates is not subject to taxation. However, the additional depreciations, without the approval of the fiscal bodies, are considered profits and therefore are subject to taxation. Consequently, the depreciation represents the allocation of the depreciable amount of an asset through its operating period. (Romanian Tax Code, 2003).

Concerning this interpretation, there are various approaches in the literature, but the following three are of interest for the accounting purposes (Luta and Grigorescu, 2013):

- depreciation as a process of correction of the value of assets;
- depreciation as a process of transfer or distribution of the cost of assets towards the expenditures registered through the accounting year;
- depreciation as a source of financing the renewal of assets.

With regards to the accounting depreciation, the operating time-life is established within the company and is included accordingly the accounting policies. The accounting depreciation is calculated with respect to the operating period of the asset, that is, the time range that the asset is expected to produce economic benefits.

2. Depreciation methods

The depreciation methods based on which the depreciable amount is established annually, monthly, etc. are as follows:

- straight-line depreciation
- degressive depreciation
- accelerated depreciation

The recording of the depreciation in the financial accounting requires the distribution for each year of the amount calculated for the operating expenses by using the accounts:

- **6811** “Depreciation of non-current assets”
- **280** “Depreciation of intangible assets”
- **281** “Depreciation of tangible assets”

In order to exemplify the depreciation regime, the following example is considered:

On January 25th 2021, an entity purchased a machine in order to use it in its agricultural production activity. The entry book value is RON 50,000 plus VAT, which is depreciated during the operating period of 5 years.

The method for entering the purchase and depreciation of the machine in the accounts is the following:

| | | | |
|----------------------|---|------------------------------------|-------|
| % | = | | 59500 |
| | | 404 | |
| | | Suppliers of non-current assets | |
| 2131 | | | 50000 |
| Plant and machinery) | | | |
| 4426 | | | 9500 |
| Deductible VAT | | | |

Entry of the invoice payment operation through the current account in the accounting records:

| | | | |
|---------------------------------|---|-------------------|-------|
| 404 | = | 5121 | 59500 |
| Suppliers of non-current assets | | RON bank accounts | |

The calculation formula according to which the monthly depreciation will be calculated is:

Monthly depreciation = Book value of asset/Economic lifetime/12 months = 50,000/5/12 = RON 833.3

Entry of the monthly accounting depreciation in the accounts:

| | | | |
|------------------------------------|---|--|-------|
| 6811 | = | 2813 | 833.3 |
| Depreciation of non-current assets | | Depreciation of plant and machinery, motor vehicles | |

The annual straight-line depreciation (*Ad*) consists in the uniform allocation of the input book value over the entire normal operating period expressed in years and is calculated as follows:

- the depreciation rate (*Dr*) is determined

$$Dr = \frac{100}{OT} \cdot 100$$

- wherein *OT* represents the operating life of the asset.
- in order to determine the annual depreciation value, the depreciable amount of the asset, or the book enter value (*Bv*) is weighted by the depreciation rate:

$$D = Bv \cdot Dr$$

Example. The straight-line depreciation in case of a machine with a book value of RON 50,000 and operating period of 5 years. According to the above presented algorithm, it follows that:

1. depreciation rate $Dr = \frac{100}{5} \cdot 100 = 20\%$
2. annual depreciation: $Ad = 50000 \cdot 20\% = 10000$
3. monthly depreciation: $Md = \frac{D}{12} = 833.3$.

A variant of the straight-line depreciation is represented by the **depreciation calculated pro rata** to the volume of the activity being carried out. In this situation, the depreciation rate (Dr) is calculated upon:

$$Dr = \frac{Bv}{PA} \cdot 100,$$

in which, by PA , has been denoted the provisional activity volume of the considered fixed asset.

The value of the depreciation rate applies to the volume of activity performed in the period considered (usually the calendar month).

Table no. 1. Straight-line depreciation table

| No. of years | Asset entry book value | Depreciation rate (Dr) | Annual depreciation | Accumulated depreciation | Net book value |
|--------------|------------------------|----------------------------|---------------------|--------------------------|----------------|
| 1 | 50,000 | 20% | 10,000 | 10,000 | 40,000 |
| 2 | 50,000 | 20% | 10,000 | 20,000 | 30,000 |
| 3 | 50,000 | 20% | 10,000 | 30,000 | 20,000 |
| 4 | 50,000 | 20% | 10,000 | 40,000 | 10,000 |
| 5 | 50,000 | 20% | 10,000 | 50,000 | 0 |
| Total | x | x | 50,000 | - | - |

Source: authors' processing.

The **straight-line depreciation** has the advantage that it is simple to apply, being the most frequently used due to the uniformity of expenses for the year and costs over time.

The **annual degressive depreciation** is calculated as follows:

- the depreciation rate is calculated according to the operating life (Dr);
- the degressive rate to be applied (Rd) is calculated by multiplying the depreciation rate (Dr) by a tax coefficient (K) which can have one of the following values:
 - 1.5 if the normal operating time is between 2 and 5 years;
 - 2.0 if the normal operating life is between 5 and 10 years;
 - 2.5 if the normal operational time exceeds 10 years;
- the degressive depreciation is calculated until the straight-line depreciation is greater than or equal to the degressive depreciation.

Also, the degressive depreciation can be calculated:

- either without considering the impact of wear and tear (DD1);
- either by taking into account the wear and tear (DD2).

In case when the impact of wear and tear (DD1) is not considered, the annual depreciation is calculated by applying the rate (Rd):

- to the book enter value (Bv) in the first year;

- for the following years in the operating period, to the net book value (*NBv*) calculated as:

$$NBv = Bv - Accd$$

in which, by *Accd*, there has been denoted the accumulated depreciation.

Under these circumstances, based on the annual depreciation rate (*Dr*) equal to 20%, and considering that the machine is depreciable in 5 years, corresponding to a multiplicative tax coefficient (*K*) of 1.5, the degressive depreciation rate (*DDr*) follows that:

$$DDr = K \cdot Dr = 1.5 \cdot 20\% = 30\% .$$

The degressive depreciation table for the equipment in above considered example is presented in table no. 2.

Table no. 2. Degressive depreciation table

| No. of years | Asset entry book value | <i>DDr</i> | Annual degressive depreciation | Accumulated degressive depreciation | Net book value |
|--------------|------------------------|------------|--------------------------------|-------------------------------------|-----------------|
| 1 | 50,000 | 30% | 15,000 | 15,000 | 35,000 |
| 2 | 35,000 | 30% | 10,500 | 25,500 | 24,500/3 |
| 3 | 24,500 | 30% | 8,166.66 | 33,666.6 | 16,333.4 |
| 4 | 24,500 | 30% | 8,166.66 | 41,833.2 | 8,166.66 |
| 5 | 24,500 | 30% | 8,166.66 | 50,000 | 0 |

Source: authors' processing.

The accelerated depreciation consists in including an annual depreciation of 50% of the book entry value of the fixed asset concerned, in the operating expenditures of the first operating year. The annual depreciations for the following financial years are calculated at the value remaining to be depreciated, according to the straight-line regime, by relating it to the number of remaining operational years. The use of the accelerated depreciation regime is approved by the Ministry of Public Finance, at the proposal of the General Meeting of shareholders or associates for trading companies or the Board of Directors respectively for autonomous companies based on explanatory documents. The accelerated depreciation table for the equipment in above considered example is presented in table no. 3.

Table no. 3. Accelerated depreciation table

| No. of years | Input value of asset | R(a) | Annual accelerated depreciation | Accumulated accelerated depreciation | Net book value |
|--------------|----------------------|------|---------------------------------|--------------------------------------|----------------|
| 1 | 50,000 | 50% | 25,000 | 25,000 | 25,000 |
| 2 | 25,000 | 25% | 6,250 | 31,250 | 18,750 |
| 3 | 25,000 | 25% | 6,250 | 37,500 | 12,500 |
| 4 | 25,000 | 25% | 6,250 | 43,750 | 6,250 |
| 5 | 25,000 | 25% | 6,250 | 50,000 | 0 |

Source: authors' processing

From the data presented in the above table results that in the first operating year the machine is 50% depreciated, corresponding to a value of RON 25,000; in the remaining period, the machine it is depreciated according to the straight-line regime, from year 2 to year 5 by the amount of RON 6,250 annually.

A comparison of the three depreciation methods above is presented in Table 4.

Table no. 4. Comparison of annual values specific to the three types of depreciation

| No. of years | Input value of machine | Straight-line depreciation (RON) | Degressive depreciation (RON) | Accelerated depreciation (RON) |
|--------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| 1 | 50,000 | 25,000 | 15,000 | 25,000 |
| 2 | 25,000 | 31,250 | 10,500 | 6,250 |
| 3 | 25,000 | 37,500 | 8,166.66 | 6,250 |
| 4 | 25,000 | 43,750 | 8,166.66 | 6,250 |
| 5 | 25,000 | 50,000 | 8,166.66 | 6,250 |

Source: authors' processing

3. Conclusions

Based on the data presented in tables 1 and 4, it is noticed that, in the case of the straight-line depreciation regime, the recovery of initial investments for asset purchase implies the inclusion in the annual operating expenditure of a constant amount that is, RON 10,000.

In case of using the degressive depreciation regime, as presented in tables 2 and 4, there may be observed that, in the first two years of operation, under the operating costs enter significant amounts, in comparison to the book enter value of the asset, while the depreciation expenditures are relatively smaller in the remaining period.

The use of the accelerated depreciation, presented in tables 3 and 4, involves a much faster form of recovery of the value of the machine, considering the avoidance of obsolescence. This method affects the entity's profit in the sense of reducing it in the first year after the asset is put into operation, with a reduction in the corporate tax; for this reason, the use of this method is subject to prior approval by the tax authority. However, this depreciation regime has the advantage that it provides the premises for the company to use the cash resulting from the tax reduction for financing the renewal of the fixed assets. Not least, from an investments project perspective, using of the accelerated, besides the degressive depreciation method, have positive impact towards the discounted values of the cash flow, implying improved project feasibility (Mieilă, 2009). The choice of the degressive or accelerated depreciation system has the advantage of a positive impact on the treasury of the economic agents, by creating a temporary tax advantage, particularly in the case of investments made from own resources (Teodorescu & Mihai, 2015). Also, in inflation situations, the temporary tax advantage thus created allows obtaining a benefit through the effect of monetary depreciation (Teodorescu & Mieilă, 2018).

Based on the above, in our opinion, there may be considered that the degressive and accelerated depreciation are best fitted to the application of the prudence principle in accounting.

However, the enumeration of these advantages specific to the degressive and straight-line depreciation regimes does not mean that they are always appropriate. Considering that the major objective of financial management is to maximize the business or the company value, it is recommended that the depreciation regime to be chosen based on maximum efficiency, taking into account the specific objectives of each company and the decision of its owners.

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THE SCHOOL FINANCIAL AUDIT IN ROMANIA

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Abstract: *This paper aims to find out what is the school financial audit about, the role of the audits, the accountability offered by audit systems, especially in school administration, how to develop a school's financial audit model. The need for such a study stems from the desire to provide security to all stakeholders that the funding of school education is adequate and efficient and the school account is meant to be audited. This study reveals a lack of: technical competence of employees, responsibility assumption and ambiguous legislation. Also, the finding confirms that the school financial audit model consists of general audit standard and reporting standard. In order to avoid that the level of allocated resources directly affects the performance of the audit in schools, we recommend a regular training of accountants and auditors and to ensure a functional decentralization at the school level. An effective management system should also include internal reviews and a yearly basis—and on an as-needed basis audits to ensure accuracy and prevent fraud.*

Key words: *Financial audit; School audit; Accountability; Financial Management.*

JEL classification: *M42, M41, I22.*

1. Introduction

There is growing interest in the value of public sector audit, especially performance audits (Talbot and Wiggan, 2010).

In auditing the financial statements of schools (whether it is a statutory audit or any kind of financial audit), two categories of reference standards are used: accounting rules and audit rules.

Accounting rules (standards) are set by the regulatory bodies in the field of accounting which are, as a rule, autonomous public interest bodies. Accounting rules are common and mandatory for all those who establish, control and use the financial statements. The entities that have the obligation to establish financial statements are those provided in art. 1 of the Accounting Law no. 82/1991. Those who control are provided by the legislation (auditors) and have as reference in their activity the accounting rules (Figure no. 1). The financial statements are intended to meet the common information needs of a wide range of users. For many users, these financial statements are the only source of complementary information to meet their needs. These financial statements must be established according to one or more of the following references:

- international financial reporting standards;
- national accounting standards or norms;
- other well-specified and recognized accounting references, applied

for the preparation and presentation of financial statements.



Figure no. 1 – Audit rules

2. Literature review

As Ștefănescu & Trincu-Drăgușina (2020) say: „Public resources' management and use, public sector entities' performance, in the context of the economic environment turbulences and of the complexity and heterogeneity of the public services demand are of interest to a wide range of interested parties”.

Financial audit means the examination performed by a competent and independent professional accountant on the financial statements of a school (or parts of the financial statements) in order to express a reasoned opinion on the true, clear and complete picture of its financial position and position the results (performances) obtained by it.

Performance audit refers to an independent examination of a program, function, operation or the management systems and procedures to assess whether the school is achieving economy, efficiency and effectiveness in the employment of available resources.

Nwankwo (2006) affirms „efficiency is concerned with doing things right while effectiveness is doing the right thing. Efficiency and effectiveness are separate concepts and cannot be used interchangeably, in particular it is perfectly possible to have all effective organization which is inefficient and vice versa”.

3. Research objective

It is said that the school financial audit system has a constant weakness. The main objective of this research is that the school financial audit model consists of general audit standard and reporting standard which is the assurance and counseling, designed to improve the systems and activities of the public entity (Figure no. 2) and supporting the fulfillment of the objectives of public entities through a systematic and methodical approach, through which the effectiveness of the management system based on risk management, control and administrative process is evaluated and used.

The benefits of such a study could be:

- Determining the role of audit in school administration;
- Accountability of audited factors;
- Identifying the possibilities of fraud of school funds;
- The contribution of the audit to the proper use of resources;
- Correlation of the financial audit with the performance audit;

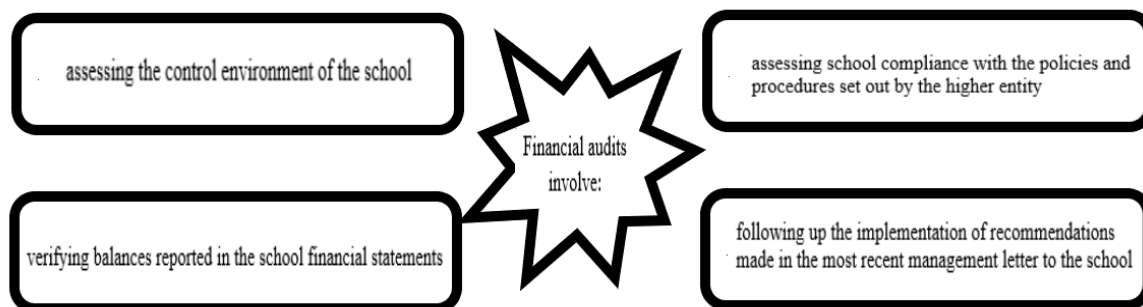


Figure no. 2 – Financial audits

4. Problem statements

In the pre-university education units from Romania, regular audit missions are carried out by the specialized departments of the territorial administrative units to which they are subordinated or by auditors of the Romanian Court of Accounts.

To ensure the continuous maintenance of a solid control system based on each area a responsibility it is necessary to:

- Evaluate the use of resources in pursuing the defined objectives of the school
- To assess compliance with budgetary provisions / operational guidelines
- To review compliance with legal and regulatory procedures
- Ensuring the continuous examination of accounting records and reports on when detecting fraud, errors and mistakes for corrective action
- Ensure that each transaction, especially of a financial nature, is properly approved and authorized before execution
- Advising on financial issues for effective decision-making by school management

Anyone who accepts the position of trust or responsibility becomes responsible for his actions and inactions regarding his position (Figure no. 3).

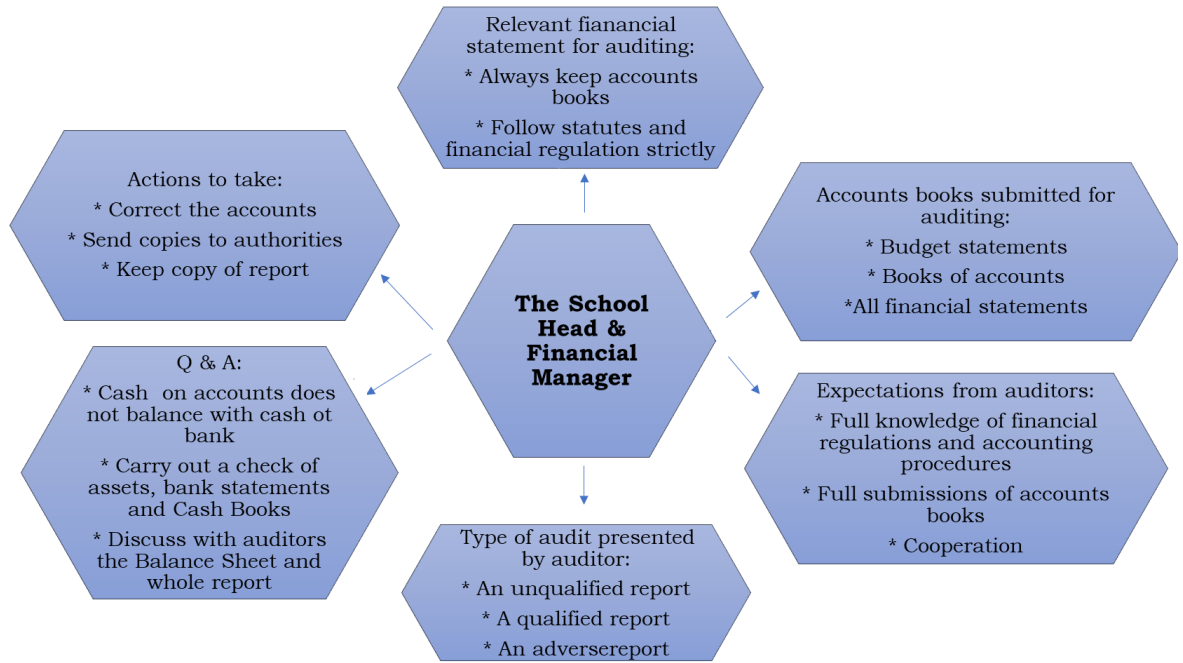


Figure no. 3 – Role of The School Head and Financial Manager

Descriptive approach to the role of accounting professional bodies in the field of education and development of professional accountants should include independence, objectivity and fairness. Accountants and auditors should maintain integrity and objectivity in fulfilling their professional responsibility. These principles help the school as the accountant to see himself as an independent person and also to be objectively a professional in the exercise of attributions.

Factors that militate against a successful audit:

- The ambiguous legislation regarding the subordination of schools (the financing of salary expenses is provided by the Ministry of Education from the state budget, and the financing of material expenses by town halls / county councils from local budgets) which does not allow a unitary audit;
- The tendency of auditors to verify financial reports not correlating with performance auditing resulting in an unfaithful picture of reality on the ground;
- Lack of technical skills of employees of pre-university education units;
- Inadequate internal audit;
- The ignorance of the schools board to manage responsible the resources;

5. Conclusions and recommendations

It is often argued that from the financial statement prepared by the management of the school

it may not actually represent its financial position, which is why it exists the need for an audit.

Auditing clearly contributes to greater efficiency in the use of public school budgets and also to:

- It will help ensure that the plans are realistic;

- It helps to protect the financial resources of the school, because an effective control is established;
- Ensure adequate, accurate and up-to-date recording in accounting, as this will be the first requirement of auditors;
- Eliminates divergences and establishes discipline because audit procedures require a clear definition of responsibilities;
- It obliges to comply with the established objectives (budgetary estimates), because the management will be forced to provide them reasonable and acceptable explanations;

To improve the financial performance of schools, we make the following recommendations:

- Opening up school management in terms of audit missions - perception as a factor of progress, not as a check;
- Ensuring a functional decentralization at the level of educational units;
- Administration of modern schools based on the delegation of responsibility and authority;
- Regular training of accountants and auditors;
- Adequate remuneration to avoid the temptation of fraud.

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PERFORMANCE OF THE EDUCATIONAL PROCESS CARRIED OUT IN THE ON-LINE ENVIRONMENT IN THE CONTEXT OF PANDEMIC

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Abstract: This is a topical theme that aims to objectively capture education in the online environment, taking into account the context in which we are (the pandemic and the existing restrictions). It was assumed that pupils' school performance is weaker during the pandemic period than in previous years, and the main cause is the online conduct of the educational process. For this purpose it was used as a research method - the observation sheet structured on several themes. The most important conclusions drawn from the theoretical and practical part of the article illustrate that there is a link between the school performance of the pupils and the way the classes are conducted (online or traditional).

Keywords: education, performance, instructional-educational process, pandemic.

Jel classification: I21.

1. Theoretical approach

Educational organisations play a key role in the development of a state. They are also an engine in determining economic and social progress. School performance illustrates the extent to which processes, products and human resources are of high quality.

Training and management of organisational performance is an important factor for the development of effective institutions. Finding ways to improve employee performance is an important task for today's leaders (Drucker P, 2007).

Organizational performance means not only defining the problem, but also solving it. Organizational performance is the ability of the organisation to achieve its objectives, but also its resource efficiency (Chenhall R (2005).

Performance management is a continuous process of identifying, measuring and developing performance in organizations by connecting them and each individual's objectives with the overall mission and objective of the organization (<https://www.ebsglobal.net/EBS/media/EBS/PDFs/Performance-Management-CourseTaster.pdf>)

Schools use performance management and evaluation methods in a number of ways and with the aim of: increasing the student's level of knowledge and improving the teacher's work.

2. Case study

2.1. Methodological context

This is a primary, direct (field) research observation of the behaviour of students in a terminal class with a technological profile, of an educational organization in Dambovita, towards the instructional-educational process carried out in the online environment.

The paper is intended to find answers to the following questions:

- 1. Are students satisfied with their online education?**
- 2. Is students' school performance weaker because of the instructional-educational process carried out online?**
- 3. Does the pandemic have repercussions on students' academic performance?**

It was used the personal observation method. The tool used was the observation sheet. This is the added value brought in the article because it was developed by the authors. The observation sheet comprises two general themes: communication and atmosphere during online hours and satisfaction with teaching-assessment carried out using electronic means. The time period analysed was November-December 2020.

Research objectives:

O1: Knowledge of students' level of satisfaction with the educational process carried out in the online environment;

O2: Highlighting the gap between students' school performance during the pandemic and previous years.

Research hypotheses:

H1: The atmosphere during the online hours is a calm one, corresponding to the conduct of the activity;

H2: The students show a positive attitude towards online teaching;

H3: The pandemic has effects on students' school performance

2.2. Analysis and interpretation of results

The results from personal observation can be seen below.

Theme 1. Communication and atmosphere during online classes

Table 1. Communication

| ANSWER | PROCENT |
|--------|---------|
| YES | 70% |
| NO | 30% |

Source: developed by authors

From Table 1 we can see that 70% of the students who were part of the observed community, communicate with the teachers, and the remaining 30% do not get involved.

2. Frequency of participation of the class of pupils in activities carried out in the online environment

Table 2. Frequency of participation

| ANSWER | PROCENT |
|-----------------|---------|
| Often | 70% |
| Average | 20% |
| Rarely or never | 10% |

Source: developed by authors

70% of students participate in online teaching activities often, 20% average and 10% rarely.

3. Atmosphere during online hours

Table 3. Atmosphere during the hours

| ANSWER | PROCENT |
|------------------------|---------|
| Very friendly and calm | 90% |
| Tense | 10% |

Source: developed by authors

90% of the time the atmosphere during the hours is calm and friendly. Conflict situations occur in 10% of the situations and the most common cause is when students have different opinions. Tensions also arise from the fact that some students only want to participate in activities because they want to receive praise.

Theme 2. Satisfaction towards the educational process in the online environment

4. Satisfaction towards the online educational process

- Satisfaction towards the educational platforms used by teachers

Table 4. Satisfaction towards educational platforms

| ANSWER | PROCENT |
|---------------|----------------|
| Satisfied | 60% |
| Indiferent | 30% |
| Unsatisfied | 10% |

Source: developed by authors

From the students' behaviour it is inferred that most of them (60%) are satisfied with the educational platforms used (classroom, zoom, 24 edu.ro, quiz)

- Satisfaction towards teaching online

Table 5. Satisfaction towards online teaching

| ANSWER | PROCENT |
|---------------|----------------|
| Satisfied | 80% |
| Indiferent | 15% |
| Unsatisfied | 5% |

Source: developed by authors

A considerable percentage of students show a contentment towards teaching online, and 5% are not satisfied.

- Satisfaction towards online evaluation

Table 6. Satisfaction towards online evaluation

| ANSWER | PROCENT |
|---------------|----------------|
| Satisfied | 80% |
| Indiferent | 10% |
| Unsatisfied | 10% |

Source: developed by authors

A considerable percentage of students show contentment towards teaching online and 5% are not satisfied.

5. Feedback on online teaching-evaluation compared to the traditional one achieved at the beginning of the school year.

Table 7. Feedback

| ANSWER | PROCENT |
|----------------|----------------|
| Good | 30% |
| Indiferent | 50% |
| Unsatisfactory | 20% |

Source: developed by authors

Comparing the feedback of today's online teaching-assessment with the traditional onsite one, shows that half of the students are indifferent and 20% unsatisfied.

6. School performance of students (online teaching-assessment vs traditional teaching-assessment)

Table 8. School performance

| ANSWER | PROCENT |
|---------------|----------------|
| Better | 10% |
| Constant | 50% |
| Weaker | 30% |

Source: developed by authors

Analysis of the school performance of the target group (pandemic versus previous years) reveals that half of the subjects (the observed persons) achieved the same results and 30% were weaker.

7. Gendre

Table 9. Gendre

| ANSWER | PROCENT |
|---------------|----------------|
| M | 40% |
| F | 60% |

Source: developed by authors

Of the students observed 60% were female and 40% male.

In order to improve the online educational process, we thought of the following remedial plan.

Table 10. Remedial plan applied to students

| Objectives | Ways of action | Resources |
|---|--|---|
| 10% reduction in the absenteeism of pupils in the observed class | Strengthening the partnership of teacher-schoolmaster-student parent through permanent informing on the situation of the beneficiary of the educational process. | -Materials (register) -Tehnological (electronic register, phone) |
| 50% increase in students' interest towards the educational instructional process by linking the themes of the economic modules with the economic environment, but also with the contemporary society. | Actively engaging students during classes by presenting examples/good practices of business success, failure, but also shaping the correlation between positive personal image and success in life and career. | Materials, ICT: -laptop, -video projector, -worksheets, videos and debates about businessmen or people with a successful career: Ana Aslan, Jeff Bezos, Elon Musk, Bill Gates, Jack Ma, Michael Jordan, Simona Halep, Ion Tiriac, Adelina Pestrițu, Cristina Ich and Adrian Mutu; - Power point presentations and exposure of the world's big businesses (Amazon, Tesla, Microsoft, Toyota); -motivational videos. |
| Maximising the participation in economic disciplines of more than 70% of students with poor learning outcomes | Stimulating pupils by raising awareness of the need for education, but also of economic disciplines in preparing them for life, but also in order to get jobs. | Materials, ICT: -worksheets (hexagon of interests, floating balloon); - Powerpoint presentations, videos and debates about business failure (Britney Spears, Jennifer Lopez, Sylvester Stallone), unethical actions, but also anti-competitive practices (e-mag, alibaba) |

Source: developed by authors

In order to have clearly measurable results, it is also necessary to outline the Gantt Chart by highlighting the main objectives aimed at addressing the identified shortcomings in the frequency of participation in the courses, as well as in terms of school performance.

Table 11. Gantt Chart

| STAGE | Period | | | |
|---|----------|-------|-------|-----|
| | February | March | April | May |
| 10% reduction in the absenteeism of pupils in the observed class | | | | |
| 50% increase in students' interest in the educational instructional process by linking the themes of the economic modules with the economic environment, but also with the contemporary society | | | | |
| Maximising participation in economic disciplines of more than 70% of students with poor learning outcomes | | | | |

Source: developed by authors

3. Conclusions

Performance is not one-dimensional, strictly speaking, the term should not be used exclusively to reflect the results of the organization. There is individual performance (student, teacher) and organizational performance (of the educational institution). Performance also exists at the curricular level.

By carrying out this study we found that most students have a good opinion about the instructional-educational process carried out online through various educational resources and platforms.

It was also found that a high percentage (70%) of students often participate in online activities. Students are indifferent in terms of the effectiveness of the instructional-educational process in the online environment. At 50% of the students observed, performance remained constant.

All three hypotheses set out in the research methodology part have been confirmed. In conclusion, the pandemic had repercussions on the students' academic performance.

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CREATIVITY STIMULATION METHODS USE IN BUSINESS DEVELOPMENT

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Abstract: *Defining a strategy at the level of an organization, with the role of determining the business development, is based on taking into account several determinants such as the political, social, economic, technological and commercial environment of the organization, but also the creative potential of the innovative organization. its available resources. The approach by which the employees of an organization generate useful, new, original ideas in relation to a given situation, defines creativity. In order to stimulate it, a series of methods can be used to stimulate creativity, which can be defined as a system of specific processes, oriented towards mental development, with a role in providing opportunities to try new ideas, new ways of thinking. and problem solving. These methods, widely used in innovation management, contribute to educating employees' creativity and ultimately lead to business development. This paper presents a series of theoretical and practical considerations related to the use of methods to stimulate creativity in business development.*

Key words: *innovation, business development.*

Classification JEL: *O3, O1.*

1. Introduction

Creativity is a characteristic structure of the psyche, which makes it possible to create new productions and works. It is revealed and defined as a particularly complex feature of the whole personality, which involves intellectual, affective, voluntary and character components.

By educating the intellect and some intellectual processes (imagination, thinking, memory) the education of creativity is achieved. Life, in all its fields, requires that almost every individual to perform some new operations, as a result of combinations and recommendations, associations of data of existing elements, which are objectified in certain useful and more efficient solutions (methods).

Creativity itself requires special endowments and intellectual capacities, which are objectified in new, original products, never seen before and which determine qualitative changes (of value and efficiency) in a certain field.

The degree of success of stimulating the creative imagination largely depends on informing the participants in the creative group with technical, economic, management and marketing data, as well as on previous successful or unsuccessful experiences in the field.

2. Integration of innovation management in the general management of the organization

In order to develop a sustainable and successful business, organizations must demonstrate an ability to quickly implement the new solutions offered by the market, to make firm decisions and to reorganize when necessary.

The concept of innovation management at the level of an organization is based on the development of a complex activity through which new, modern solutions are identified, in order to apply the knowledge acquired in economic and social activities at the level of specific activities.

Innovation is the key driver of growth in the market economy. The ability to innovate is crucial not only for the survival of organizations, but for the sustainability of the entire economy of modern society. In order to generate the stimulation of creativity and innovation, the manager must be connected to the evolution of the product life cycle in

order to identify the optimal moment when, by financing new research in the field, a sustainable and profitable development can be obtained.

The application of creativity and innovation in an organization can be manifested by:

- a) setting up a special team dedicated to this activity - they meet only when needed to use the ideas of employees to stimulate creativity in the organization;
- b) selection of a creativity group - it can meet at predetermined time intervals and analyze all the problems that have arisen in the activity of the respective organization
- c) the establishment of a specialized department with creativity - the activity of this department is permanent and the coordinator of this department receives, regroups, sorts and processes the new ideas which he then presents to the manager.

According to an IBM survey of more than 1,500 executives in 33 industries and 60 countries, the # 1 attribute a CEO looks for in employees is not discipline, integrity, intelligence or emotional intelligence.

It's creativity. Regarding our country, "given the speed and magnitude of technological change, 94% of CEOs in Romania consider creativity and innovation as key skills of employees for the organization."

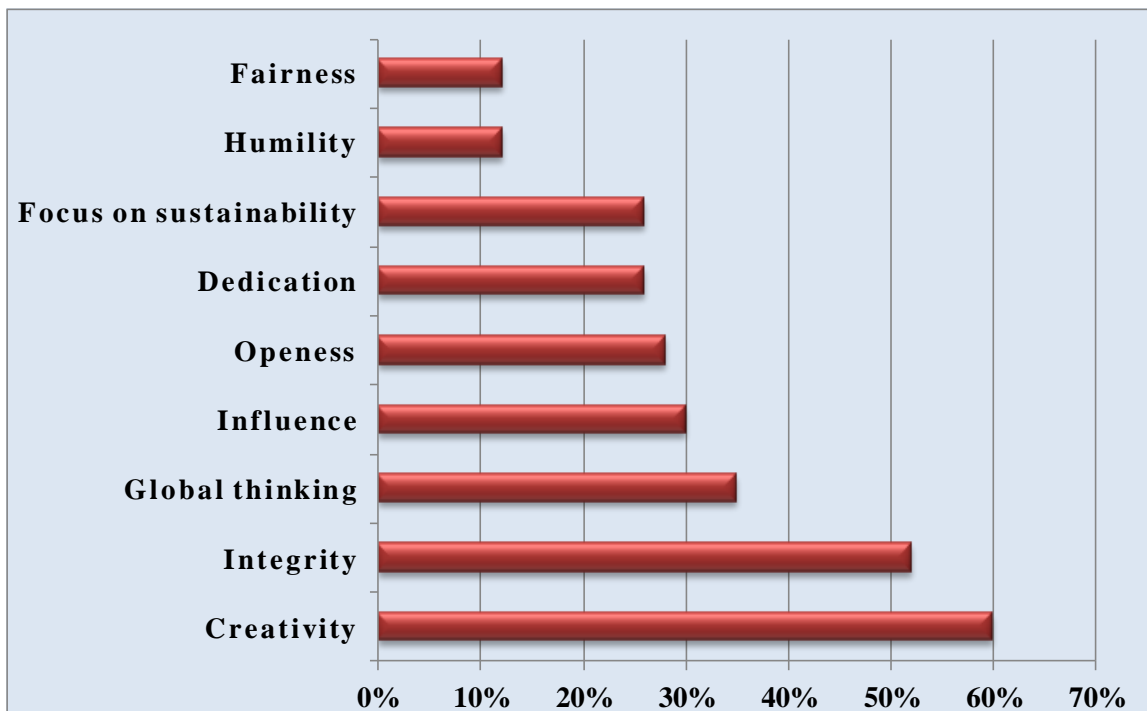


Figure no. 1. The share of attributes that the manager looks for in employees

Source: Processing after www.fastcompany.com

Many managers are capable and achieve expected results in the production or sales of products, but few know how to carry out a creative, innovative activity, or to stimulate the creativity and innovative spirit of the staff working in scientific research.

The implications are all the more obvious if we consider that the force of modern development lies in the ability to invent and then in the ability to create new products based on these inventions.

To meet these imperatives, the manager must seek to be receptive to all that is new. In order to obtain optimal results for the company, it is not enough for the manager to react to the new, but to "challenge" the new.

In trying to manifest in this field the manager must influence the development of innovation through fundamental and applied research, services and new products, new technological processes, new markets, diversification of production and services, new methods of managing scientific research activity.

Within the organization, innovation can materialize in various ways. It can be manifested by the assimilation of new products in existing industries, innovations of important new products that do not belong to an existing industry, process innovations in existing industries, penetration into new markets and to the realization of complex changes in the business model.

In all these cases, innovation cannot be considered as a simple event that occurs by itself, but involves a process of change that involves the exercise of management.

The effects of innovation on the organization depend on the ability of management to achieve their integration into a coherent strategy. Innovation management is a complex task of management, which through its strategic and operational elements determines a systematic process of change.

3. Illustrative example of using methods to stimulate creativity in business development - online brainstorming

Brainstorming can be considered an effective tool for the development of contemporary business. Regular organization of brainstorming increases the level of involvement of employees in the organization and reduces staff turnover.

In the current healthcare context when most employees work from home, online brainstorming has become a necessity.

Brainstorming is a group creativity technique, meant to generate a large number of ideas to solve a problem. As it has become almost impossible for a large number of participants to be gathered in one place, online brainstorming must be resorted to.

In most respects, online brainstorming is based on the same features as the classic one.

The major difference is given by the physical distance between the participants, respectively their placement in front of some devices.

The emergence of new online brainstorming programs and tools can be an opportunity for brainstorming sessions to grow your business.

Among the most well-known and used online brainstorming tools are:

- voice, video or shared chat only –
- there are several providers of such services, and most are cheap or free
- video conference - skype, google meet
- collaborative documents - there are free document editing sites that allow team members to write, edit, add comments

The online form of the brainstorming method can be used for both virtual teams and teams that include reluctant participants in direct meetings and can ask the team leader to send their ideas to a central location for analysis.

A common support in the online application of the brainstorming method is the creation of a mental map. This is done starting from the main concept that is placed in the center and the related topics next to it.

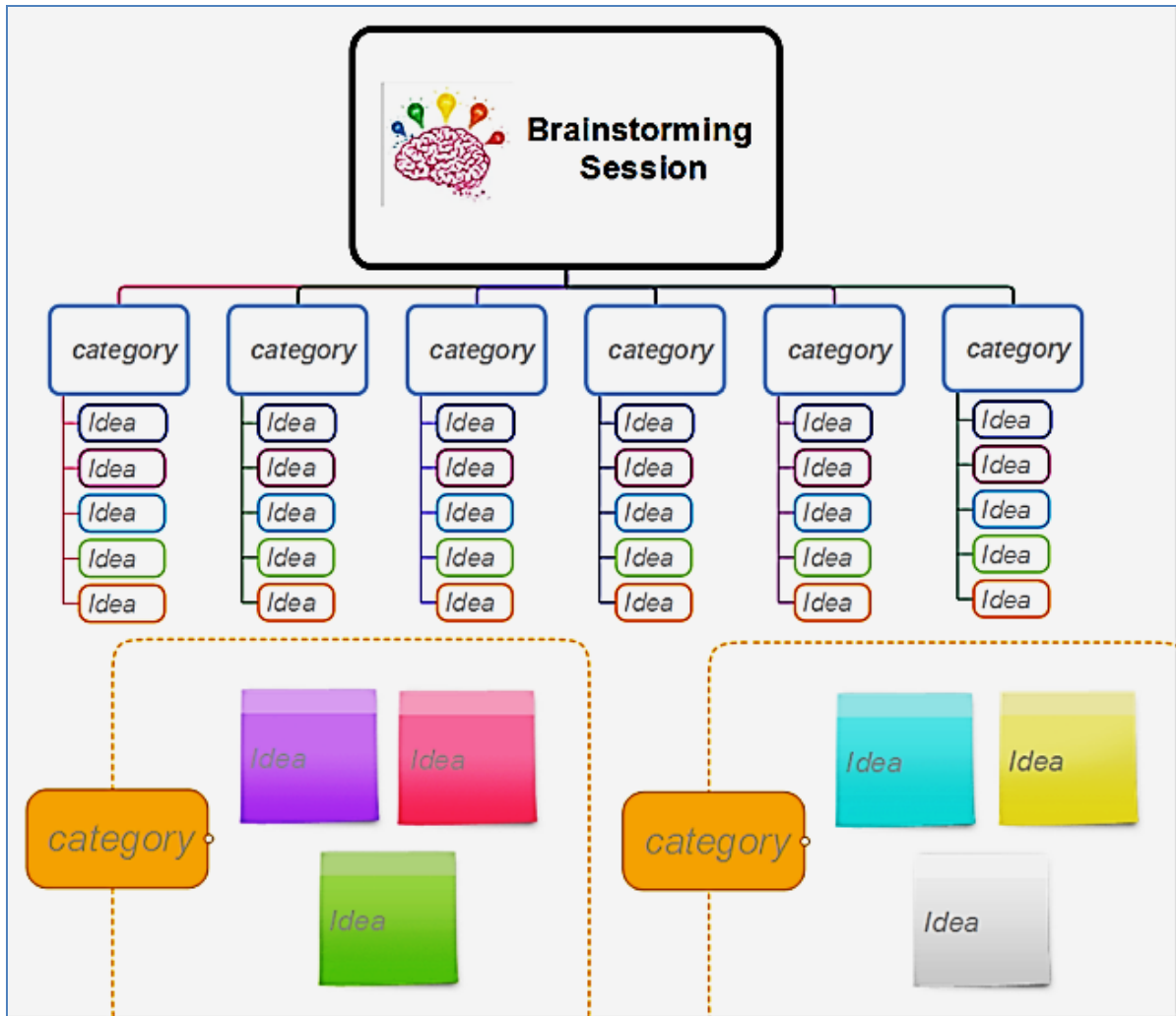


Figure no. 2. Mind Map Template for Online Brainstorming

Source: Processing after <https://www.biggerplate.com/mindmaps/fRCJHnXU/brainstorming-session-template>

Organizing an effective brainstorming session must go through several stages:

- It is defined as correctly as possible the problem that will be approached and whose solution is pursued by applying the method.

Defining the problem as relevant as possible can lead to an optimal solution and a maximum effectiveness of the brainstorming method.

For this, it is recommended to establish some questions that, by generating adequate answers to outline as clearly as possible the problem to be addressed.

Examples of questions:

- How can we reduce staff costs?
- How can we reduce losses on the production flow?
- How can we increase product quality?
- Establishing the team

A very important role is played by the moderator who records the ideas and ensures the continuity of the meeting.

The group leader has an extremely delicate and at the same time important mission characterized by:

- creating and maintaining an open climate throughout the creativity session, conducive to the manifestation of the brainstorm group specialists;
- ensuring the formulation of short, objective ideas, without digressions or demagogic discourses;
- encouraging participants to come up with new ideas, starting from some ideas already formulated; - prohibiting the evaluation of ideas issued during the meeting;
- accurate and complete recording of the debates and especially of the ideas formulated by the participants

The selection of participants and their nomination as members of the group must be done in such a way as to ensure a heterogeneous composition of the group.

- **Establishing the brainstorming agenda**

Sufficient time will be allocated to describe the problem and the limits of the solutions that will be generated.

In general, a time distribution is recommended as follows:

- generating ideas (approximately 30 minutes);
- discussion, sorting and filtering the ideas generated (20 minutes);
- completion of the brainstorming session (with totals, conclusions and decisions generated during the session).

- **Conducting the brainstorming session**

There are four rules in brainstorming, meant to reduce the inhibitions that appear in groups and therefore to stimulate the generation of new ideas.

The expected result is a dynamic synergy, which will significantly increase the creativity of the group:

- 1) Focus on quantity. The idea is that quantity can result in quality, this rule favors divergent creativity, because if the number of ideas increases, the probability of an effective solution to the existing problem would increase.
- 2) Without criticism. Criticism at this stage is discouraged; Instead of thinking about what would be bad about that idea, members are encouraged to think of ideas that are as unusual as possible and to create a constructive atmosphere.
- 3) Crazy ideas are welcome. In order to get a good and long list of ideas, unusual ideas are welcome as they could inspire better solutions than ordinary ideas, they can also create new perspectives or reduce prejudices.
- 4) Combines and improves ideas. Good ideas can be combined to get a very good idea, as the slogan "1 + 1 = 3" suggests. This approach leads to better and more complete ideas than individual work and it is believed that stimulating ideas is done through association.

4. Conclusion

Creativity itself requires special endowments and intellectual capacities, which are objectified in new, original products, never seen before and which determine qualitative changes (of value and efficiency) in a certain field.

In order to stimulate it, a series of methods can be used to stimulate creativity, which can be defined as a system of specific processes, oriented towards mental development, with a role in providing opportunities to try new ideas, new ways of thinking. and problem solving. In the current healthcare context when most employees work from home, online brainstorming has become a necessity.

Regardless of the tools used, the basic rules of brainstorming apply. If there are trained participants with sufficient technical and personal skills, it can be considered that the conditions for conducting online brainstorming are met.

By convening participants in a google meet, or using other online facilities, you can get the ideas that the organization needs at a given time. In order for the results to be as expected, the session leader must ensure that all participants understand the software used and respect the conditions of participation and use.

Under these conditions, the use of methods to stimulate creativity, methods that are characterized by the use of groups of people, can be successfully applied in the current conditions, in order to generate effective solutions for business development.

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ANALYSIS OF THE CORRELATION BETWEEN THE MARKET OF LONG CONSUMPTION GOODS AND SALES OF A COMPANY IN THE CURRENT SITUATION

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Abstract: *In the analysis we made turned its attention to analyzing the relationship comparative analysis model for recent years. In the analysis, a correlation model was developed between companies that supply consumer products and sales in different periods, under different conditions, including the current one, which is quite sensitive and difficult for us. Due to technological advancement, the business environment has radically transformed the lives of both organizations and customers. Each business must have a web page containing the activity object, the products and services offered. The purpose of the website is to cause potential customers to access it, determine its content and not least to purchase a product or service. Promotion is the techniques used by an enterprise to make its products / services known to current or potential consumers. The main role of promotion is to successfully develop the organization and make a profit.*

Key-words: *company, consumer goods, consumer market consumer products.*

Clasificare JEL: *R1, R3.*

1. Introduction

In this paper we focused our attention on the analysis of the last two years (2018, 2019 and the first quarter of 2020) at local and regional level of a company with activity field in the distribution of consumer products. These constitute a representative sample, as it generates over 85% of the total turnover registered at the level of the entire sector of activity.

Often we see that most of the time, companies succeed to a small extent to keep up with consumer requirements. Complexity seems to have entered a spiral that is likely to get out of control, and new business models are increasingly threatening traditional models. With a market of about 20 million consumers, Romania remains one of the most attractive markets Romania is still an emerging market with real growth possibilities in the short, medium and long term. Consumer expectations are becoming more complex and changing more and more rapidly. The market is very competitive. The sales of a company are the best indicator of how it works and the degree of innovation within it.

2. The actuality of research

In research conducted, the author has turned its attention to analyzing the relationship comparative analysis model for recent years.

3. Research method and techniques

The research methodology used in elaborating scientific achievement is evidenced by the following:

- The proposal aims in research;
- Making a plan of analysis;
- Analysis and interpretation of data;

To start scientific research sources used for research were studies and research based on a rich bibliography of articles and papers (attached work), consulting data taken directly from the company analyzed.

3.1. Macroeconomic context

Under the conditions of the competitive market economy, the economic balance is manifested in the form of a market-specific state, generated by the action of the economic agents in their capacity as producers - sellers and consumers - buyers.

Producing businesses aim to maximize their profits, while consumer businesses meet their needs. In this respect, it is known that Romania's economic growth model is mainly based on consumption.

The competitive economic balance appears in the form of the relationship between the demand and the supply that is manifested in the markets of the economic goods. Thus, optimal production implies the situation when the quantity of goods offered (consumer goods and capital goods) is equal to the quantity of goods demanded. This means that the rate of growth of production is equal to the rate of growth of expenditure, that there is neither overproduction nor underproduction. For these reasons, but also due to other similarities, the companies that will differentiate over a few years will be made at least part of the following:

1. Robotics Process Automation;
 2. implementation of Big Data and / or Business Intelligence;;
 3. new models of sales organization charts (Business-to-Business and Business-to-Consumer) adapted to consumers in the virtual environment;
- carrying out a change management to support the organization's excellence plans, etc.

However, the macroeconomic balance is a dynamic one and cannot be compensated in the form of a constant. The economic activities are continuously related to an objective tendency of adaptation, of dynamic correlation of supply to the demands of the demand and of achieving the necessary concordance between these sizes, each time at a different level.

3.2. *Microeconomic context*

All these actions cannot have a desired impact if we do not take into account the micro and macroeconomic context of Romania and how the players in this market are positioned.

The positive evolution of private consumption observed at the macroeconomic level is also reflected among the companies active in the market of consumer products. This evolution confirms the replacement of the traditional trade with the modern one.

4. **Research methodology**

The necessary condition for a national economy to be in a static equilibrium is:

$$Y = D \quad (1)$$

that is, the global supply (Y) is equal to the global demand (D), with no excess supply ($\Delta Y = 0$) and neither is global demand excess ($\Delta D = 0$).

The condition of the existence of the dynamic economic balance is:

$$Y \neq D, \quad (2)$$

excesses (ΔY and ΔD), respectively global demand or supply deficits ($-\Delta Y$ și $-\Delta D$) resolving, in a timely manner, by using fully and efficiently the existing production factors, attracting new factors (inside or outside the national economy) and redistributing resources by economic activities, depending on the fluctuations of market prices, as a concentrated expression, of modifying the relationship between the structures of the global supply and the structures of the requirements system

The condition of equilibrium in all markets of goods and services, within the perfect competition is:

$$p \cdot De = 0 \tag{3}$$

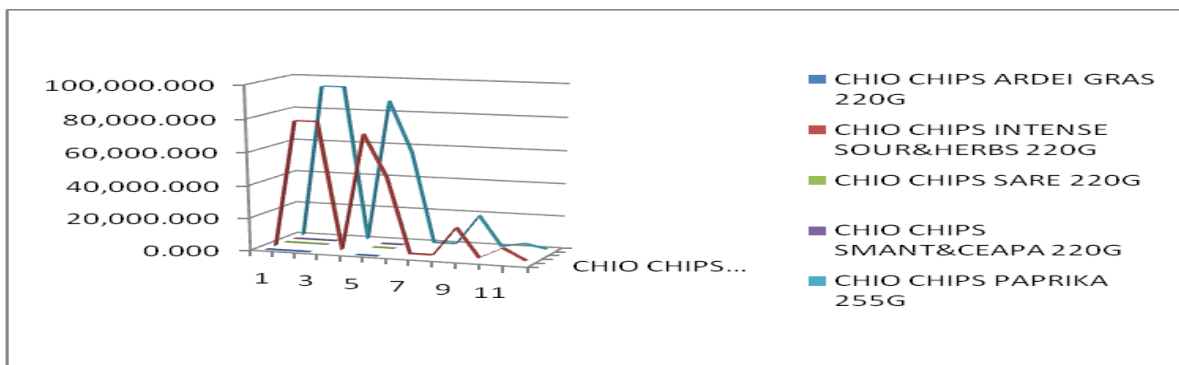
when

$$De \leq 0 \text{ and } p \geq 0,$$

where: p = the vector of prices in all markets

De = the vector of surplus demand in all markets.

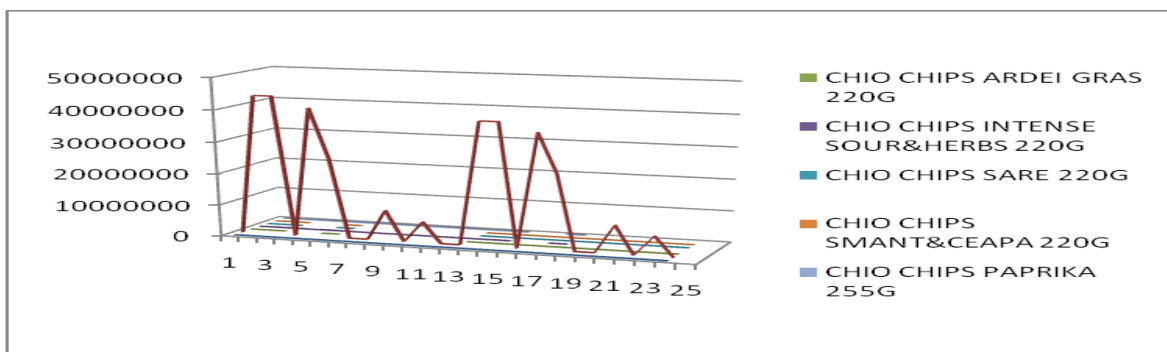
In the first quarter of 2018, the domestic consumer goods market in Romania registered a growth of 13% compared to the same period last year.



Graph 1. The growth of the consumer goods market in 2018 compared to 2017

In contrast to previous periods (according to graph 1), the volumes purchased have re-entered an upward curve (+ 7.4%).

Families went shopping more often and left on average a larger visit to the store. Both higher volumes were behind the market growth and inflation, which reached 3.8% (source: Eurostat). Families with children are the ones that have most intensified their spending on consumer goods. Large increases were also recorded among households in large localities, with over 150 thousand inhabitants. Modern trade formats remain the main channel for home shopping. Currently, they cover 62% of sales of consumer goods and are at the same level as in the first quarter of 2017. All modern trade channels (hypermarkets, supermarkets, discount stores, modern convenience stores) have increased double digits. However, we observe the most dynamic evolution in the area of proximity trade, which managed to attract almost 400,000 new buying families.



Graph 2. Increasing the consumer market for families with children

From the point of view of the region, Banat-Crișana-Maramureș and Oltenia had the most significant developments during the first quarter.

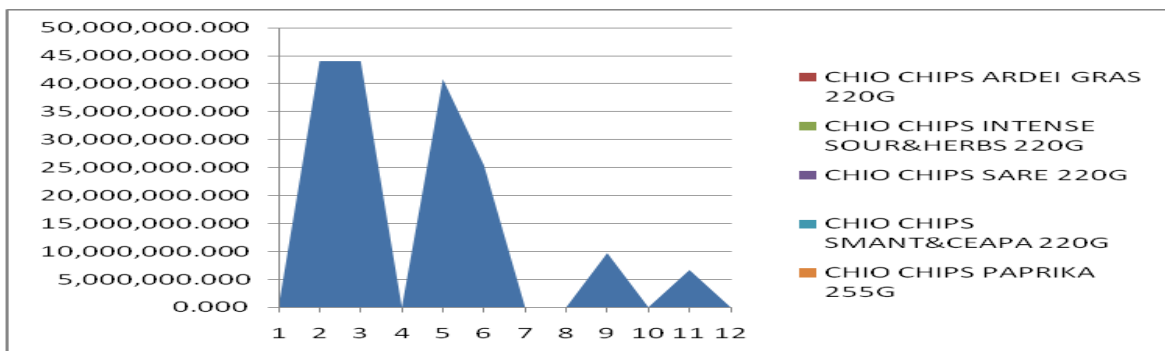


Chart 3. Sales evolution during the first quarter

The category with the fastest growth in the first quarter was that of personal care, the Romanians spending 17% more for it.

Drinks and home care products have been growing at a slower pace.

Average household spending increased most for categories such as eggs, butter, cider, beer with flavors or oral hygiene products (especially toothbrushes and mouthwash), while they fell for products such as tomato juice, food preservatives or sesame sticks.

Food products (fresh, but also packaged) also had increases above the market average, due to increased consumption.

4.1. *Private promotions and brands are no longer growing*

At the level of the entire consumer goods market, the share of products purchased at the promotion decreased slightly compared to the first 3 months of last year. Currently, 18% of sales that reach household consumption are covered by promotions.

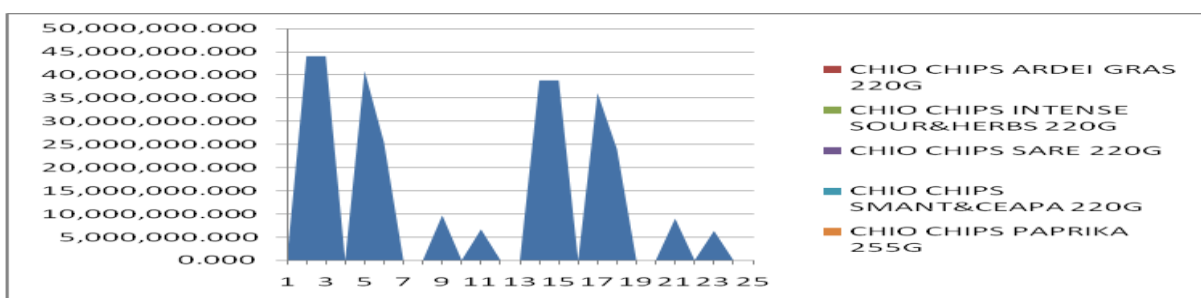


Chart 4. Analysis of the evolution of the purchase act in 2017 compared to 2018

We note a positive evolution of them in the local stores, while hypermarkets, supermarkets and discount stores sold less products at a discount. Private brands accumulate about 16% of household expenditures and are approximately the same level as in the first quarter of 2017.

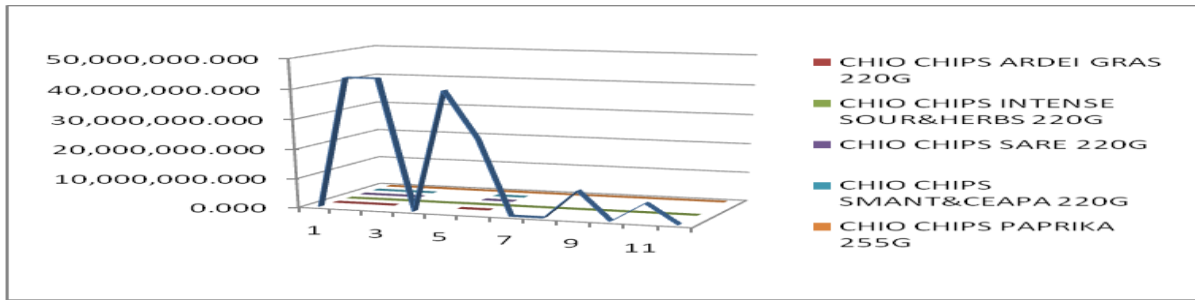


Chart 5. Sales evolution in the current year, 2020, in the first semester

Retail brands have lost importance in categories such as water, wine, laundry detergent or oral care products, in while gaining ground in snacks, canned goods, paper products (wipes, paper towels, paper rolls, etc.) or animal feed.

5. Conclusions

Consumer behavior reflects people's behavior in the purchase and / or consumption of material goods and services, as part of our analysis of consumer goods. In a broad sense, it encompasses the entire behavior of the end user of consumer goods, regardless of their type. In a broad sense, it encompasses the entire end-user behavior of consumer goods, regardless of their type. Consumer behavior is no longer considered as an exclusively "input" variable for the economic process. The consumer is no longer analyzed only in his capacity as buyer or decision maker of the purchase act, but also in his quality as a factor that distinctly influences the dynamics of the markets and even their conjunctural fluctuations. Consumers determine sales and ultimately profit from a company.

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PECULIARITIES IN THE ACCOUNTING OF THE PUBLIC INSTITUTIONS' EQUITY CAPITALS

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Abstract: *Capitals take into account the sources of formation of the material and monetary means of the public institutions. Equity capitals represent the residual interest of the state or of the administrative-territorial units in the assets of the public institution, after having deducted all debts. As a result, they are considered their own sources of funding at the level of public institutions. The motivation for approaching the topic was given precisely by the importance and necessity of the existence of self-funding sources, in order to ensure the necessary goods for the development and growth of the institutions, in an economic climate of crisis, uncertainty and pandemic. As a result, the aim of the research is to present the structure of equity capitals found at the level of public institutions, both theoretically by treating the components and the funds of the public institutions, of the patrimonial result, of the retained earnings and the revaluation reserves, and practically, by presenting individual studies that customize the approach to this component of the public institutions patrimony.*

Keywords: *public institutions, patrimony, equity, funds of public institutions, financing.*

JEL Classification: *M41.*

Capitals are permanent sources of financing for public institutions and consist of their own sources (equity) and long- and medium-term borrowed sources (borrowed or attracted capital). Equity takes into account the residual interest of the state or of the administrative-territorial units in their own assets, while medium and long-term borrowed capital is available to public institutions for at least one year, in order to ensure the necessary assets for development and progress of the activity of the institutions.

Equity represents the residual interest of the state or of the administrative-territorial units in the assets of the public institution, after deducting all debts.

Equity at the level of public institutions consists of: the institution's funds, the patrimonial result, the carried forward result, and the revaluation reserves.

The funds of the public institutions include: the fund of the goods that make up the public domain of the state, the fund of the goods that make up the private domain of the state, the fund of the goods that make up the public domain of administrative-territorial units, the fund of the goods that make up the private domain of the administrative-territorial units, the fund of intangible fixed assets, funds outside local budgets, etc.

The funds include those goods that make up the patrimony of the public institutions, indicating the right of possession, use and disposition of the state and of the administrative-territorial units over them.

The goods that are of public use or interest and they are acquired by the state or by the administrative-territorial units through different modalities established by the law, make up the public domain. These are represented by: the riches of public interest of the subsoil, the airspace, the waters with exploitable energy potential, the beaches, the territorial sea, the natural resources of the economic zone and of the continental plateau, etc.

According to OMFP 1917/2005, the goods in the public domain are inalienable, imperceptible and non-prescriptible, as follows:

- they cannot be alienated, they can be given only in administration, concession or rent, in accordance with the law;
- they cannot be subject to forced execution and no real guarantees can be established on them;

- they cannot be acquired by other persons by usufruct or by the effect of possession in good faith on movable property.

The goods owned by the state or by the administrative-territorial units that are not part of the public domain, form the private domain. They are subject to the common law legal regime and are not part of the public domain.

The goods can be transferred from the public domain, to the private domain, based on the normative acts.

The accounting operations regarding the highlighting of the funds of the public institutions will be approached in the following through the prism of several individual case studies.

We consider that a public institution acquires a non-depreciable intangible fixed asset, in the amount of 10,000 lei, from budget financing. Subsequently, the intangible fixed asset is removed from the assets of the public institution. These operations involve the following entries in the accounting of the public institution:

1. The acquisition of non-depreciable intangible fixed assets is recorded:

| | | | |
|--|---|--------------------------------|--------|
| 206 00 00 | = | 100 00 00 | 10.000 |
| “Recordings of cultural and sporting events” | | “Intangible fixed assets fund” | |

2. The debt to the supplier of intangible fixed assets is recorded:

| | | | |
|--|---|--|--------|
| 682 02 00 | = | 404 01 00 | 10.000 |
| “Non-depreciable intangible fixed assets expenses” | | “Providers of fixed assets under one year” | |

3. The supplier’s payment of non-depreciable intangible fixed assets is recorded:

| | | | |
|--|---|-----------------------------|--------|
| 404 01 00 | = | 770 00 00 | 10.000 |
| “Providers of fixed assets under one year” | | “Financing from the budget” | |

4. The non-depreciable intangible fixed asset is recorded:

| | | | |
|--------------------------------|---|--|--------|
| 100 00 00 | = | 206 00 00 | 10.000 |
| “Intangible fixed assets fund” | | “Recordings of cultural and sporting events” | |

With regard to non-depreciable tangible fixed assets, we start from the following reason:

A public institution acquires a plot of land, worth 250,000 lei, which it then transfers to another public institution. The land is included in the public domain of the state. These operations involve the following entries in the accounting of the public institution:

1. The acquisition of land is recorded:

| | | | |
|-----------|---|---|---------|
| 211 01 00 | = | 101 00 00 | 250.000 |
| “Lands” | | “Fund of subscriptions that make up the public domain of the state” | |

2. The debt to the land supplier is recorded:

| | | | |
|---|---|--|---------|
| 682 01 09 | = | 404 01 00 | 250.000 |
| “Expenses with non-depreciable tangible fixed assets” | | “Suppliers of fixed assets under 1 year” | |

3. The payment of the land supplier is registered:

| | | | |
|--|---|-----------------------------|---------|
| 404 01 00 | = | 770 00 00 | 250.000 |
| “Suppliers of fixed assets under 1 year” | | “Financing from the budget” | |

4. The transferred land is highlighted:

| | | | |
|---|---|-----------|---------|
| 101 00 00 | = | 211 01 00 | 250.000 |
| “Fund of subscriptions that make up the public domain of the state” | | “Lands” | |

Regarding the inventory of fixed assets, we can encounter two situations, both in terms of intangible fixed assets and tangible fixed assets: a situation in which pluses are found in the inventory and another one, in which minuses are found in the inventory. Since non-depreciable intangible fixed assets are specific only to public institutions, we will further address inventory treatment only through their prism:

- A public institution finds after the inventory an increase of the non-depreciable intangible fixed assets, amounting to 15,000 lei. The addition to the inventory will be reflected in the accounting of the public institution, as follows:

| | | | |
|--|---|--------------------------------|--------|
| 206 00 00 | = | 100 00 00 | 15.000 |
| “Recordings of cultural and sporting events” | | “Intangible fixed assets fund” | |

- A public institution finds, after the inventory, a non-imputable lack of depreciable intangible fixed assets, amounting to 12,000 lei. The deficit not attributable to the inventory will be reflected in the accounting of the public institution, as follows:

| | | | |
|--------------------------------|---|--|--------|
| 100 00 00 | = | 206 00 00 | 12.000 |
| “Intangible fixed assets fund” | | “Recordings of cultural and sporting events” | |

Another peculiarity in capital accounting, in terms of public institutions, is given by the fact that goods can be transferred between them. Next, we will address these issues taking into account a transfer of tangible fixed assets from the public domain of the state, in its private domain, respectively a transfer from the public domain of the state, to the public domain of an administrative-territorial unit, as follows:

- A public institution transfers from the public domain of the state, to the private domain, a building worth 500,000 lei. This operation involves the following records in the accounting of the public institution:

1. The transfer of the building from the public domain to the private domain is registered:

| | | | |
|---|---|-----------------|---------|
| 101 00 00 | = | 212 00 00 | 500.000 |
| “The fund of goods that make up the public domain of the state” | | “Constructions” | |

At the same time the registration is made:

| | | | |
|-----------------|---|---|---------|
| 212 00 00 | = | 102 00 00 | 500.000 |
| “Constructions” | | The fund of goods that make up the public domain of the state | |

- A public institution from the central level, transfers from the public domain of the state into the public domain of a county, a piece of land, worth 90,000 lei. This operation involves the following accounting records:

a) In the accounting of the institution which transfers the land by transfer:

| | | | |
|---|---|-----------|--------|
| 101 00 00 | = | 211 01 00 | 90.000 |
| “The fund of goods that make up the public domain of the state” | | “Lands” | |

b) In the accounts of the institution receiving the land by transfer:

| | | | |
|-----------|---|-----------|--------|
| 211 01 00 | = | 103 00 00 | 90.000 |
|-----------|---|-----------|--------|

“Lands”

“The fund of goods that make
up
the public domain of the
administrative-territorial units”

The patrimonial result is determined at the end of the period, monthly, or at most at the preparation of the financial statements, as the difference between the public revenues realized, respectively financing and the public expenses incurred.

The collection of public expenditures, respectively of public revenues and of the financings of a public institution, in order to determine the patrimonial result, is presented as follows.

| | | | |
|--------------------------|---|--------------------------|---------|
| 121 00 00 | = | 6XX | To |
| “The patrimonial result” | | Expense accounts | am |
| | | | ount of |
| | | | ex |
| | | | penses |
| 7XX | = | 121 00 00 | T |
| Income accounts | | “The patrimonial result” | otal |
| | | | v |
| | | | alue of |
| | | | i |
| | | | ncome |

The current patrimonial result will be transferred in the following year, as the **carried forward result**.

The accounting of the carried forward result is kept by financing sources, the public institutions being able to self-finance, partially or fully financed from the budget. To illustrate the accounting of the carried forward result we will consider the following situations:

- A public institution financed entirely from the state budget, takes over the carried forward result of the previous year in the amount of 15,000 lei, as follows:

| | | | |
|---|---|-------------------|--------|
| 489 00 00 | = | 117 00 00 | 15.000 |
| “Settlements on the completion of the execution of the state budget in the current year” | | “Reported result” | |

- An administrative-territorial unit, at the closing of the settlement account, in the amount of 20,000 lei, at the beginning of the following financial year will make the following registration:

| | | | |
|-------------------|---|---------------------|--------|
| 117 00 00 | = | 481 09 00 | 20.000 |
| “Reported result” | | “Other settlements” | |

- A public institution financed entirely from the local budget, proceeds to close the settlement account, in the amount of 11,000 lei, at the beginning of the following financial year, by registering:

| | | | |
|---------------------|---|-------------------|--------|
| 481 09 00 | = | 117 00 00 | 11.000 |
| “Other settlements” | | “Reported result” | |

Revaluation reserves are a component of the capital of public institutions, resulting from the revaluation of the fixed assets.

The revaluation of the fixed assets must be performed regularly, so that the book value is permanently close to the fair value. With the annual inventory of assets, fixed assets are brought to their present value based on fair value. The fair value is determined

on the basis of evaluations carried out by authorized evaluators or by technical commissions set up, in accordance with the law.

The two values are compared, the fair value and the book value, and for the difference found, the following entries will be made in the accounting.

- when the fair value (present value) is greater than the carrying amount (the carrying amount in the accounts), the difference in revaluation increases the revaluation reserve;

- when the fair value (present value) is less than the carrying amount (the carrying amount in accounting), a decrease in the revaluation reserve is recorded.

According to OMFP 3471/2008, the following fixed assets are re-evaluated:

a) tangible fixed assets in the patrimony: land and landscaping, constructions, technical installations, means of transport, animals and plantations, furniture, office equipment, equipment for the protection of human and material values and other tangible fixed assets;

b) tangible fixed assets given in concession, with rent, for free use to legal persons without patrimonial purpose, as well as those given in the administration of autonomous utilities;

c) capacities put into partial operation, of the nature of tangible fixed assets for which the forms of registration as tangible fixed assets have not yet been drawn up;

d) tangible fixed assets for which investment works have been carried out (modernizations, capital repairs, rehabilitations, consolidations, etc.) which have increased their accounting value, regardless of the source of investment financing;

e) tangible fixed assets acquired by public institutions under financial leasing contracts;

f) tangible fixed assets located at diplomatic, commercial, military representations abroad, in conflict areas. They are inventoried and re-evaluated by the public institutions in whose patrimony they are registered.

According to the same regulation, OMFP 3471/2008, the following categories of tangible fixed assets are not re-valued:

a) tangible fixed assets that entered the patrimony of public institutions during the year in which the revaluation is performed and that were recorded in the accounting at acquisition, production or fair value, as the case may be;

b) tangible fixed assets that at the date of revaluation have an expired normal operating period;

c) tangible fixed assets in conservation, as well as mobilization reserves that are recorded in the accounts as tangible fixed assets;

d) the tangible fixed assets for which the documents were drawn up, but the legal decommissioning approvals were not obtained, and which were not dismantled, demolished or taken apart;

e) tangible fixed assets in progress.

The accounting of the revaluation reserve, as well as the treatment of positive or negative differences, from the revaluation of the fixed assets will be analyzed by us in the light of the situations below.

To illustrate the recording in the accounts of a positive revaluation of tangible fixed assets, we start from the situation where a public institution, at the end of year N on the occasion of the first revaluation of constructions found that the fair value of the tangible assets (constructions) is 20,000 lei higher, compared to the registration value of 40,000 lei. The calculations and accounting entries are as follows:

In exercise N:

- the book value of the tangible assets: 40,000 lei

- the fair value of the tangible assets: 60,000 lei
- the positive difference from the revaluation of tangible assets: 20,000 lei

| | | | |
|-----------------|---|--|--------|
| 212 00 00 | = | 105 02 00 | 20.000 |
| “Constructions” | | “Reserves from the revaluation of constructions” | |

At the same time, the fund of goods that make up the public domain of the state is increased:

| | | | |
|--|---|---|--------|
| 105 02 00 | = | 101 00 00 | 20.000 |
| “Reserves from the revaluation of constructions” | | “The fund of goods that make up the public domain of the state” | |

In order to illustrate the recording in the accounting of a negative revaluation after previously having had a positive revaluation, we resume the previous situation with the mention that in the year N+1, for the same depreciable tangible fixed asset, there is a depreciation of 22,000 lei.

In N+1, the revaluation difference is recorded:

- book value: 60,000 lei
- fair value: 38,000 lei
- differences from revaluation: - 22,000 lei
- revaluation reserves set up: + 20,000 lei
- depreciation adjustment expenses: 2,000 lei

| | | | |
|--|---|-----------------|---------------|
| % | = | 212 00 00 | <u>22.000</u> |
| 105 02 00 | | “Constructions” | 20.000 |
| “Reserves from the revaluation of constructions” | | | 2.000 |
| 681 03 00 | | | |

“Operating expenses on adjustments for impairment of fixed assets”

At the same time, the fund of goods that make up the public domain of the state is diminished:

| | | | |
|---|---|--|--------|
| 101 00 00 | = | 105 02 00 | 20.000 |
| “The fund of goods that make up the public domain of the state” | | “Reserves from the revaluation of constructions” | |

If a new revaluation is carried out at the end of N+2 and an increase of 10,000 lei of the fair value is found, the procedure is as follows:

In N 2, the revaluation difference is recorded:

- book value: 38,000 lei
- fair value: 48,000 lei;
- differences from current revaluation: +10.000 lei;
- depreciations (adjustment expenses) registered in the previous years: - 2,000 lei;
- revaluation reserves to be set up: 8,000

| | | | |
|-----------------|---|---|---------------|
| 212 00 00 | = | % | <u>10.000</u> |
| “Constructions” | | 781 03 00 | 2.000 |
| | | “Revenue from adjustments for impairment of fixed assets” | |
| | | 105 02 00 | |
| | | “Reserves from the revaluation of constructions” | 8.000 |

At the same time, the fund of goods that make up the public domain of the state is increased:

| | | | |
|--|---|---|-------|
| 105 02 00 | = | 101 00 00 | 8.000 |
| “Reserves from the revaluation of constructions” | | “The fund of goods that make up the public domain of the state” | |

Conclusions:

The accounting of the capitals of the public institutions presents a series of particularities and differences compared to the accounting of the own capitals of the economic entities. A first peculiarity is given by the existence of funds of public institutions, an element that is not found in the equity of any other category of entities. From here derives a second peculiarity represented by the fact that any inflow of non-depreciable fixed assets automatically leads to the increase of equity, by increasing the funds of the public institutions. Another peculiarity is given by the method of accounting for the revaluation reserves which, in the case of non-depreciable fixed assets, lead to the increase or decrease of funds of public institutions, depending on the meaning of the revaluation. Yet another peculiarity is the fact that the patrimonial result, unlike the result of the exercise in the case of the economic entities, is represented, except for the situation when it is zero, by the surplus or the deficit.

Given all the above particularities, we can conclude that the equity of public institutions differs fundamentally from the equity of other entities in the economy.

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ANALYSIS OF TRADING PARTNERS' PRACTICES FOR IMPROVING THE COMMERCIAL POLICY OF THE REPUBLIC OF MOLDOVA

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Abstract: *The main trading partners of the Republic of Moldova are Romania (member state of the European Union), the Russian Federation (member state of the Eurasian Economic Union) and Ukraine. The trade policies promoted by these states have particular characteristics, some of them have positive effects on national economy, but another negative effects. The object of research is the trade commercial policy. The main purpose of the study is the elaboration of recommendations for streamlining commercial policy of the Republic of Moldova based on experiences of the main trading partners. In order to achieve this aim, the following research methods were used: the method of ascending from the abstract to the concrete, comparative analysis, systemic approach. Economic growth, competitiveness and foreign trade are interdependent. Therefore, the relationship between trade policy and theories related to competitiveness was analysed for explain the theoretical aspect of the research object. According to the results of the analysis of trading partners' practices was developed recommendations for improving the commercial policy of the Republic of Moldova.*

Key words: *commercial policy, foreign trade, free trade, protectionist policy, competitiveness.*

JEL Classification: *F13, F15, F40.*

1. Introduction

Economic growth is on the agenda of any state, regardless of its geographic location and development model. On the one hand, the trade policy of the state is an important tool influencing the economic development of the country. On the other hand, achieving and maintaining a high level of competitiveness creates favourable conditions for solving the strategic task of sustainable development of the national economy.

At the same time, economic and political instability, corruption in the echelons of state power, monopolization of trade in certain goods reduce the competitiveness. To solution these problems is impossible without improving economic policy. One of these policies is trade policy. Therefore, the study of the commercial policy of the main trading partners of the Republic of Moldova is relevant. Justly set priorities in the trade policy of the state will expand sales markets, increase the volume of exports and reduce the trade deficit.

2. Aims of the research and methods applied

The main purpose of the study is to develop proposals for the development of trade policy of the Republic of Moldova.

Reaching this goal is ensured by realising the following research objectives:

- Studying the relationship between commercial policy and theories of competitiveness to identify the type of trade policy, the promotion of which would theoretically provide benefits for the economy of the Republic of Moldova;
- Realizing comparative analysis of commercial policy of the main trading partners of the Republic of Moldova to identify strengths and weaknesses;
- Elaboration of measures and recommendations in order to streamlining trade policy of the Republic of Moldova.

In this study were used scientific methods for realise these objectives, such as: the method of ascending from the abstract to the concrete, quantitative and qualitative analysis, comparative analysis, systemic approach etc. The analysis of the evolution of foreign trade

of the main trading partners of the Republic of Moldova was performed based on statistical data available on the websites of the National Institute of Statistics (Romania), the Federal State Statistics Service (Russian Federation), the State Statistics Service of Ukraine.

3. Relationship between trade policy and theories related to competitiveness

The theoretical approach to competitiveness can be found in the theories of foreign trade, intra-industrial trade, especially in theories focused on studying the specialization of countries. According to these theories, the main criteria underlying countries' participation in international trade are: absolute advantage, comparative advantage, competitive advantage. In the literature, these theories (except Michael Porter's theory) are not called competitiveness theories, but called international trade theories. These theories can be divided into two groups: classical & neoclassical and modern. The most theories from the first group consider that their implementation can be effective only in terms of promoting free trade policy. The theories from the second group promote both types of trade policy (free trade, protectionist) depending on the level of development of the national economy, or according to other criteria.

According to the Swedish economist Steffan Linder, the country should export the goods it produces in excess, and the target external market should be the market in which the preferences of potential consumers coincide with the preferences of domestic consumers, therefore the theory is called the country similarity theory. The application of this theory in the case of the Republic of Moldova is not rational, because the given theory does not take into account the difference between the disposable incomes of citizens from different countries.

The analysis of the foreign trade of the Republic of Moldova casts doubt on the validity of the above theory. According to this theory, goods are produced for the domestic market, and after domestic demand is saturated, the surplus is exported. However, when the price on one of the foreign markets is much more favourable compared to the price on the domestic market, first the surplus is exported, and then a significant share of production. At the same time, deficit is created on the domestic market and this good is already imported. By the time, volume of import of this good would be more than volume of domestic good.

Unlike neo-classical scholars, authors of non-technological theories argue that a perpetuum mobile for development of foreign trade is the technical-scientific revolution but not the procuring with production factors. Namely, the monopoly on high-tech products, new advanced technologies ensures a competitive advantage of new products, their realization in the world market at monopolistic prices, until the moment when these technologies are distributed in the world, and until these products go into the stage of maturity and saturation.

The most notorious non-technological theories are Product Cycle Model which is elaborated by R. Vernon and the theory of Technological Gap or Imitation Gap Model, the author of which is M. Posner. The last theory explains that when countries are assured with the same amount of production factors, namely technical progress in one of the branches of an economy will initiate the development of international trade (Posner, 1961, pp. 340).

John Dunning has presented his theory as a combination of three categories of advantages (table no. 1), the availability of which ensures infiltration through foreign direct investment (FDI) on the foreign market. According to the OLI paradigm, if the enterprise possesses more advantageous resources compared to those of the host country, and if the host country accords more favourable conditions for doing business compared to the conditions offered by its own country, then it is convenient to open up own business on the

target market, as well as the acquisition of an existing enterprise on the foreign market for the purposes of management and control.

Table no. 1. Conceptual delimitations of modern theories related to competitiveness

| Author | Conceptual delimitations | Factors / indicators used to estimate competitiveness | Economic effects | Relationship between theory and trade policy |
|--|---|--|--|---|
| Hans Martin Staffan Burenstam Linder (1931-2000) | According to the country similarity theory: “necessary conditions for obtaining the comparative advantage in the production of a good are: this good has to be demanded on the home market and trade has to be most intensive among countries with similar demand structures” (Linder, 1961, pp. 17). | Consumer preference, the domestic demand for goods. “A particular good will not be produced at a comparative advantage unless there is an internal market for it” (Linder, 1961, pp. 90). | A specialization in producing high quality goods. An increase of production and export of goods. | As stated by this theory, a protectionist trade policy is relevant to a developing country, and free trade - to a developed country (Linder, 1961, pp. 81). |
| Michael Vivian Posner (1931-2006) | In line with the Technological Gap Model of International Trade: “the comparative advantage is caused by the distinction between technological processes, between new and old goods, the distribution of investments” (Posner, 1961, pp. 341). | “A quota of innovation embodied in a product”, „expenditure on innovation-generating research, i.e. the rate of investment” (Posner, 1961, pp. 339). | Economic growth. | Applying the theory will be more effective under the following conditions: “zero tariffs, zero barriers” (Posner, 1961, pp. 326). |
| John Harry Dunning (1927-2009) | The OLI paradigm explains competitive positions in foreign direct investment flows and the economic rationale of international production. | Ownership (O), Location (L), Internalization (I) (Dunning, 1988, pp. 60). | Enterprises enter on the external markets through foreign direct investment. | As claimed by this theory, protectionism promotes the substitution of imports using foreign investment (Dunning, 2008, pp. 177). |
| Michael Eugene Porter (born in 1947) | The theory of competitive advantage reflects the determinants of the competitive advantage of the nation in terms of the advantages of the domestic enterprises (Porter, 1990). | “Determinants of National Competitive Advantage: factor conditions; demand conditions; related and supporting industries; firm strategy, structure and rivalry” (Porter, 1990, pp. 82-83). | Increasing production volume in export-oriented branches, economic growth and welfare growth. | According to this theory, the purpose of trade policy is to create open markets in all branches where the country has a competitive advantage (Porter, 1990, pp. 89). |

Source: systematized by the author

The theory of the Competitive Advantage of Nations (M. Porter) elucidates the role and importance of internal competition in forcing enterprises to innovate, to modernize, to improve quality and to create new products. It is the state's role to be a catalyst for the economic activity growth and the state's obligation to ensure a high degree of competition.

All of the described theories, except Linder and Porter's one, have explained international trade, country specialization, comparative and competitive advantages, basing on the specifics of the supply. The country similarity theory and Porter's Diamond are some of the few demand-based theories. Therefore, economic science feels lack of theories of international trade related to competitiveness, which are based on demand.

In the modelling process, competitiveness is the endogenous variable; exogenous variables are the determinants of competitiveness, which can be divided into two groups: factors influencing the competitiveness of the research object (goods, enterprises, national economy, etc.) and factors influencing the economic policies. Trade policy, fiscal policy and other economic policies have to aim to increase competitiveness. Not only economic policies have a direct impact on competitiveness, but competitiveness also influences policies by dictating the promotion directions. The author's position is that economic policies, such as trade and fiscal policy can be considered as determinants or causal factors as they influence the change in competitiveness. Increasing taxes, excise duties and other taxes will increase the cost of production and the price, which in turn will reduce the competitive advantage. Summarizing the results of the study, we consider that the Republic of Moldova should promote a free trade policy with major trading partners.

4. Analysis of the experience of the main trade partners of the Republic of Moldova on the promoted trade policy

In the struggle to sales markets, countries use various instruments of economic policy, the ultimate goal of which is veiled. Protectionist policies, trade wars do not imply specialization of countries according to comparative advantages. Consequently, the promotion of trade policy in accordance with the classical theories of foreign trade is irrational, it is logical to use modern theories. Before proceeding with a comparative analysis of trade policy, it is necessary to identify the main trade partners of the Republic of Moldova. For this it is necessary to analyse the geographical and commodity structure of the foreign trade of the Republic of Moldova.

An analysis of the dynamics of exports by country in 1997-2019 shows that in 1997-2007 and 2009-2013 the main trading partner of the Republic of Moldova was the Russian Federation. In 2008 and 2014-2019, Romania has already become the main partner. In 2019, Romania is ranked first, followed by Italy, both member states of the European Union, followed by the Russian Federation. Exports of goods to Romania decreased by 3.34% in 2019 compared to the previous year, and their share in total exports increased by 8.9 percentage points over ten years. Since 2016, the volume of exports to Romania exceeds the volume of exports to the CIS countries. The Republic of Moldova has reoriented its exports to the countries of the European Union (EU). But in 2019, the share of exports to these countries decreased by 2.93 percentage points over the previous year. Exports of goods to the CIS countries increased by 11.8%, while their share increased slightly - by 0.3 percentage points. Summarizing the above, the author will focus on the study of the experience of the main trading partners of the Republic of Moldova on trade policy, namely Romania and the Russian Federation, because during last 23 years these two countries took the first places in the structure of exports, in different periods of time.

A study of imports by groups of countries showed that the largest share in 2019 belongs to the EU countries - 49.46%, which corresponds to a value of US \$ 2.9 billion. The CIS countries account for 24.26% of total imports. In the reporting year, Romania occupied the first place in the structure of imports, followed by the Russian Federation, China and Ukraine. In the period 1997-2019, Russian Federation (1997-1999, 2010-2013), Ukraine (2001-2009) and Romania (2000, 2014-2019) topped the list of major import partner countries. Therefore, it is logical to expand the list of main trading partners, whose

experience in trade policy should be studied. In addition to Romania and the Russian Federation's trade policy, Ukraine's one will be researched. Furthermore, Romania is a member of the EU, the Russian Federation is a member of the Eurasian Economic Union, and Ukraine, like Moldova, has signed an Association Agreement with the European Union. Romania is a member of the EU since 2007, and it is subject to the general trade policy, according to which member states do not have the right to conclude trade agreements with third countries, this right belongs to the European Union. Trade policy is regulated by various legislative acts. The basic rules are described in table no. 2.

Table no. 2. Regulation of the European Union trade policy with third countries

| Regulations | Distinctive features | Recent changes | Date |
|--|--|--|--------------------|
| „Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff” (EUR-Lex, 1987). | 1. A unified product coding system has been introduced; 2. Contains customs duties; 3. Does not contain national taxes (VAT, etc.). | „Commission Implementing Regulation (EU) 2018/396 of 13 March 2018 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff” (EUR-Lex, 2018a). „Commission Implementing Regulation (EU) 2018/507 of 26 March 2018 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff” (EUR-Lex, 2018b). | September 10, 1987 |
| „Regulation (EU) No 978/2012 of the European Parliament and of the Council of 25 October 2012 applying a scheme of generalised tariff preferences and repealing Council Regulation (EC) No 732/2008” (EUR-Lex, 2012). | In the case of the GSP, approximately $\frac{2}{3}$ of import duties were reduced for low-income developing countries. In the case of GSP +, more than $\frac{2}{3}$ of import customs duties have been eliminated for low-income countries that meet two criteria (vulnerability and sustainable development). In the case of the EBA, import duties and quotas on all goods except weapons are abolished for underdeveloped countries. | „Commission Delegated Regulation (EU) 2020/128 of 25 November 2019 amending Annex II to Regulation (EU) No 978/2012 of the European Parliament and of the Council applying a scheme of generalised tariff preferences” (EUR-Lex, 2019a). | January 1, 2014 |
| „Regulation (EU) 2019/287 of the European Parliament and of the Council of 13 February 2019 implementing bilateral safeguard clauses and other mechanisms allowing for the temporary withdrawal of preferences in certain trade agreements concluded between the European Union and third countries” (EUR-Lex, 2019b). | It is used to protect domestic producers of certain sensitive goods. It applies to goods that are imported in such large quantities that they harm domestic producers. | – | March 14, 2019 |

Source: systematized by the author

The promotion of a common trade policy brings benefits to the EU member states, including Romania:

- Romanian producers are protected from unfair competition from producers and importers from third countries thanks to the entry into force of Regulation (EU) 2019/287;
- The trade power of the Union, which includes 28 countries, is much higher than in the case of a single state. Thus, each participant wins;
- Investors in each Member State have the same rights, obligations and conditions for the allocation of investments;
- The increasing of the export of Romanian goods, the expansion of sales markets to third countries.

The author analysed the series of statistical data available on the website of the National Institute of Statistics (Romania) on the evolution of foreign trade (1991-2019); the dynamic for 2006-2019 is showed in figures no. 1 and 2, it includes one year before accession and the years after accession the EU.

The assay of the evolution of the extra-community and intra-community export and import in the period 1991-2019 showed that since 1993 Romania has reoriented its foreign trade towards the countries of the European Community. As a result, since 1995, exports and imports with EU countries prevail over foreign trade with other countries. After Romania's accession to the EU, both intra-EU and extra-EU exports have increased, with the exception of 2009, 2012, 2015, 2019 (fig. no. 1), in general, the share of intra-EU exports in total exports varies between 69-77%.

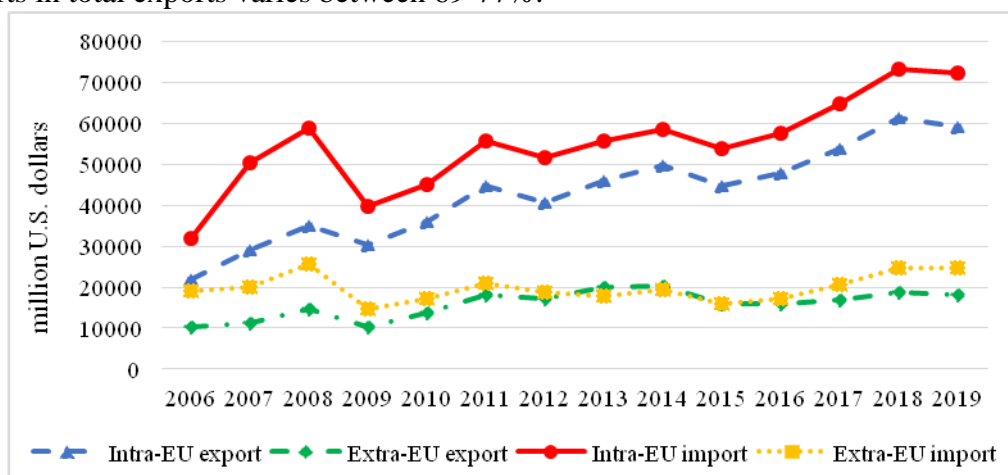


Figure no. 1. Evolution of Romanian foreign trade, 2006-2019

Source: processed according to the data of the National Institute of Statistics (Romania)

As known, the effects of economic policies, of decisions at state level, of promotion strategies can be both positive and negative, differ only in which of these two categories of effects prevails. In order to draw correct conclusions regarding the advantages that Romania received as a result of accession, let us analyse the dynamics of the index of the physical volume of exports.

During 2002-2006, the physical volume of exports increased, but in the period after the accession there was a decrease in evolution of this indicator in 2009, 2010, 2012, 2015 and 2019, which was caused by the economic crisis at the end of 2008 and natural disasters in 2012 (drought) and 2015 (heavy rainfall). In 2016, the decline was not significant. The accession brought advantages to Romania, but did not give it stability in the event of natural disasters. As in the case of the Republic of Moldova, which is not a member of the EU, the economy of the Romanian state is vulnerable to natural disasters. Over the past

five years, the share of exports in GDP has been declining, while the share of the trade deficit has been growing (fig. no. 2).

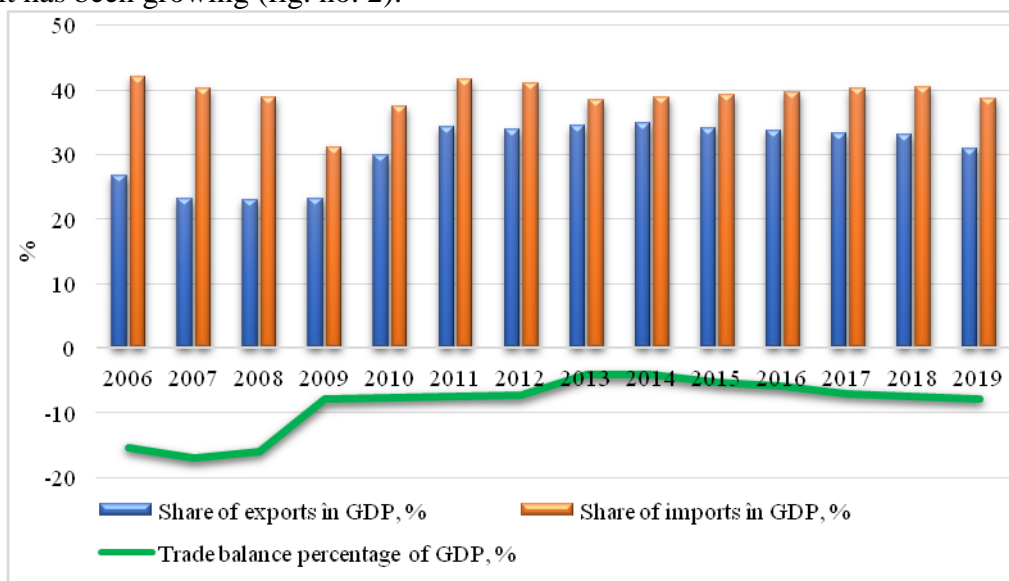


Figure no. 2. Share of foreign trade in Gross Domestic Product, Romania

Source: processed according to the data of the National Institute of Statistics (Romania)

In figure no. 3, there is performed the comparative analysis of Romania's export structure by sections for the years 2006 and 2019. The choice of 2006 is dictated by the fact that this year is the year before EU accession. In 2019 the share of exports (FOB) of vehicles, machinery and equipment was 47.3%, i.e. 17.4 percentage points more than in 2006. On the second place are the processed products, followed by miscellaneous manufactured articles.

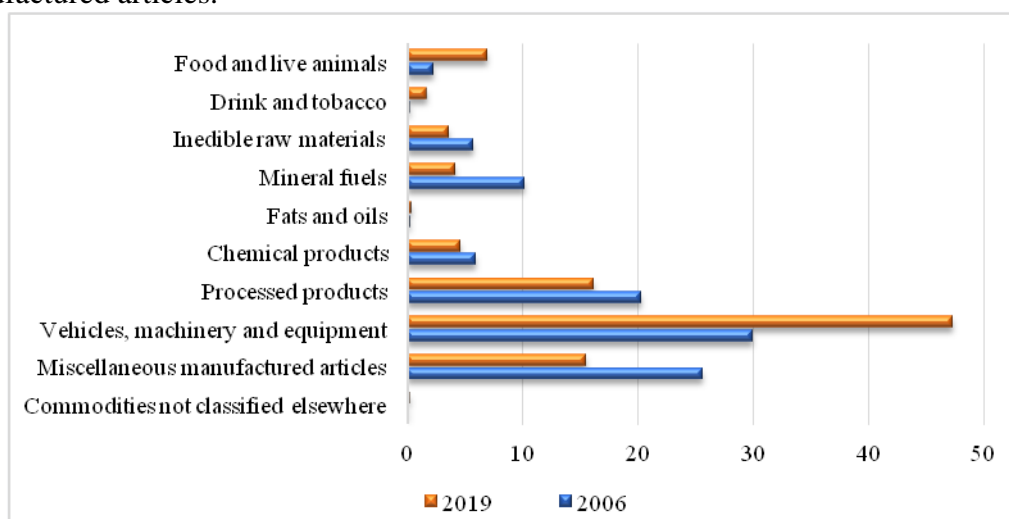


Figure no. 3. Export structure by sections according to SITC Rev. 4, Romania, %

Source: processed according to the data of the National Institute of Statistics (Romania)

The comparative analysis of the changes in the structure of exports by sections according to Standard International Trade Classification (SITC) in 2019 in relation to 2006 (the year prior to accession) found another advantage that the Romanian state obtained; the share of processed goods with a high degree of added value has increased.

In addition to strengths and opportunities, weaknesses and threats were identified:

- the trade deficit is growing;

- Romania's foreign trade is aimed at the European space, but the risk of some states leaving the European Union remains.

On 29 May 2014, in Astana, during the meeting of the Supreme Economic Council, “The Treaty on the Eurasian Economic Union” was signed, ratified by the federal law of 03.10.2014 N 279-Φ3, which entered into force on 01.01.2015. In accordance with Article 102 of the Charter of the United Nations, the Treaty was registered with the United Nations Secretariat on 24.07.2015. The Treaty unifies the legal framework of the Customs Union (CU) and the Single Economic Space (SES) of the Member States, the Eurasian Economic Union (EAEU) regulatory framework, provisions and regulations aimed at deepening integration into the CU and SES. The basic principles of the functioning of the EAEU members' market and the regulation of international trade relations between the EAEU and third countries are described in Article 25 (1) of the Treaty:

- “Internal markets operate autonomously;
- Following are applied:
 - the Common Customs Tariff of the Eurasian Economic Union (CCT EAEU) and other measures governing foreign trade with third countries,
 - common measures regulating foreign trade with a third party,
 - unified customs regulation,
 - free movement of goods between Member States without customs declaration and State control (veterinary, phytosanitary, transport, etc.), except as provided in this Treaty” (Eurasian Economic Commission, 2014).

This treaty has been perfected during this period, on 01.10.2019, during the meeting of the Supreme Economic Council of the Eurasian Economic Union, three protocols were approved:

- Protocol on the amendment to the Treaty, aimed at closing the normative gap, and which includes the technical adjustment of some provisions;
- Protocol on anti-dumping, countervailing duties and the possibility of using financial means, received as an advance payment, to pay customs duties on imports;
- Protocol specifying the rates of distribution of customs duties on imports between the budgets of the Member States of the Eurasian Economic Union: Armenia - 1,220%; Belarus - 4.860%; Kazakhstan - 6.955%; Kyrgyzstan - 1,900%; Russian Federation - 85.065% (Eurasian Economic Commission, 2019). This protocol entered into force on 01.01.2020.

The period of activity of the EAEU is not long enough for an in-depth analysis, so initially we will analyse the dynamics of the basic indicators of foreign trade, then we will move on to the analysis of the trade policy objectives of the Russian Federation and of the National Project “International Cooperation and Export”.

Statistical data on the dynamics of Russia's foreign trade for 1995-2019 are available on the website of the Federal State Statistics Service (Russian Federation). The author analysed the available data series, but the charts show trends for the same period like in the case of Romania. During the years 2006-2019, the volume of exports and imports of the Russian Federation (RF) did not evolve uniformly, decreased sharply in 2009, due to the financial crisis at the end of 2008, and during 2014-2016 after the application of sanctions by the United States of America (USA), Canada, the EU member states, etc. (fig. no. 4). The periods of increase and decrease in imports are the same as analogical periods in exports (except 2019), therefore the balance of trade was active throughout the analysed period.

The economic crisis from 2008 caused the diminution of the physical volume of exports in 2008-2009; the sharp decline of this indicator in 2011 is explained by the reduction in demand for Russian gas in Europe, demand for metals in Kazakhstan, etc.

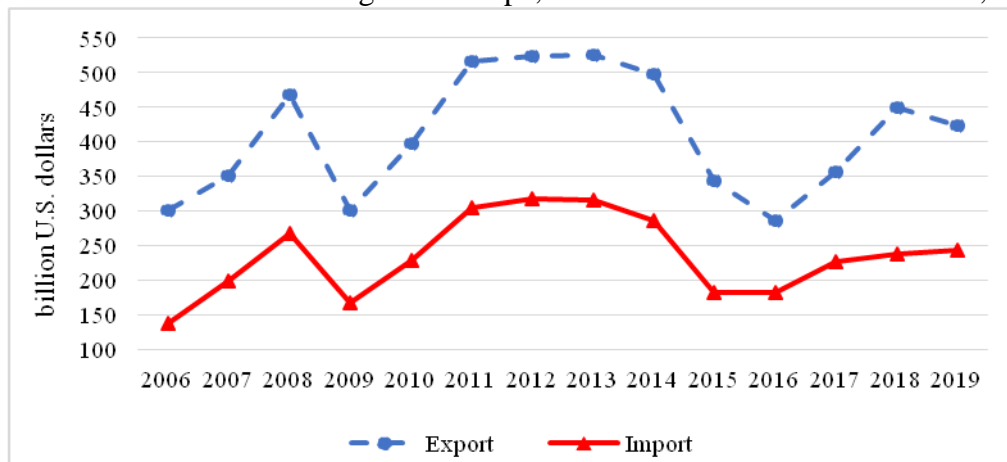


Figure no. 4. Evolution of Russian foreign trade, 2006-2019

Source: processed according to the data of the Federal State Statistics Service (Russian Federation)

In 2013, the Federal State Statistics Service of the Russian Federation proceeded to estimate the Gross Domestic Product (GDP) according to the calculation methodology of the United Nations System of National Accounts, version 2008 / European System of Accounts, version 2010 (UN SNA-2008/ESA-2010). GDP for 2011-2012 was recalculated according to the new methodology. In figure no. 5 the share of exports, imports and trade balance (net exports) of the Russian Federation in GDP (SNA-1993) are shown for the years 2006-2011, and the share of foreign trade in GDP (SNA-2008) - for the years 2011-2019.

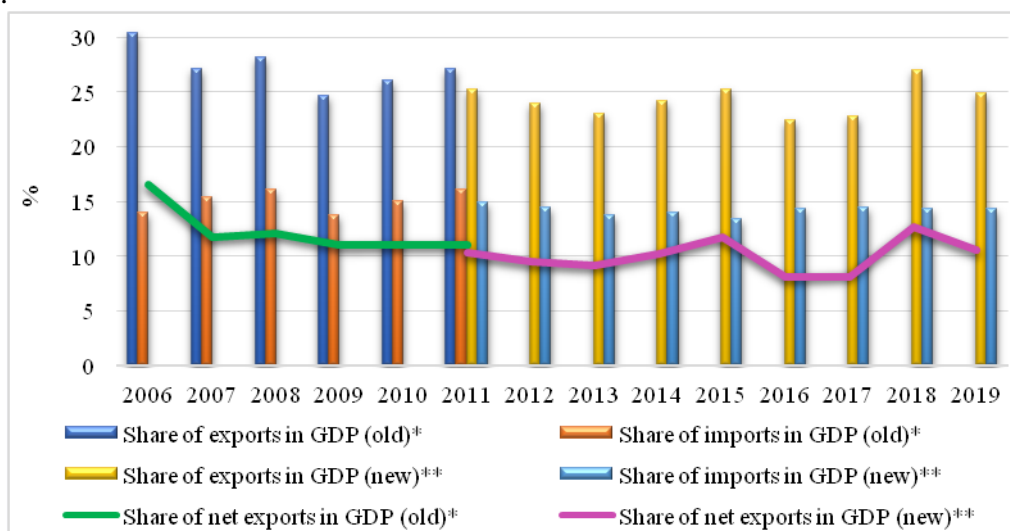


Figure no. 5. Share of foreign trade in GDP, the Russian Federation

Source: processed according to the data of the Federal State Statistics Service (Russian Federation)

Note: *) GDP is estimated in accordance with the old methodology of the System of National Accounts - SNA 1993;

***) GDP is estimated in accordance with the new methodology of the System of National Accounts - SNA 2008.

The lowest share of exports in GDP (22.37%) and the least trade balance percentage of GDP (8.08%) were reached in 2016, but the smallest ratio of imports in GDP (13.42%) – in 2015. The comparative analysis of the Russian Federation and Romania showed that Romania surpasses the RF only in terms of the share of exports in GDP. The opposite situation was created with regard to the trade balance; in this case the Russian Federation already surpassed Romania, Russia trade balance is active, and Romania's one is passive. The degree of independence in promoting the trade policy of the Russian Federation is comparatively higher than of Romania, because Romania must comply with the decisions of the European Union.

The comparative analysis of the structure of exports by groups of goods in 2019 compared to 2006, showed that the share of mineral fuels exports gradually decreased by 2.57 percentage points, the share of agri-food products and the share of chemicals increased by 4.05 and 0.79 percentage points (fig. no. 6).

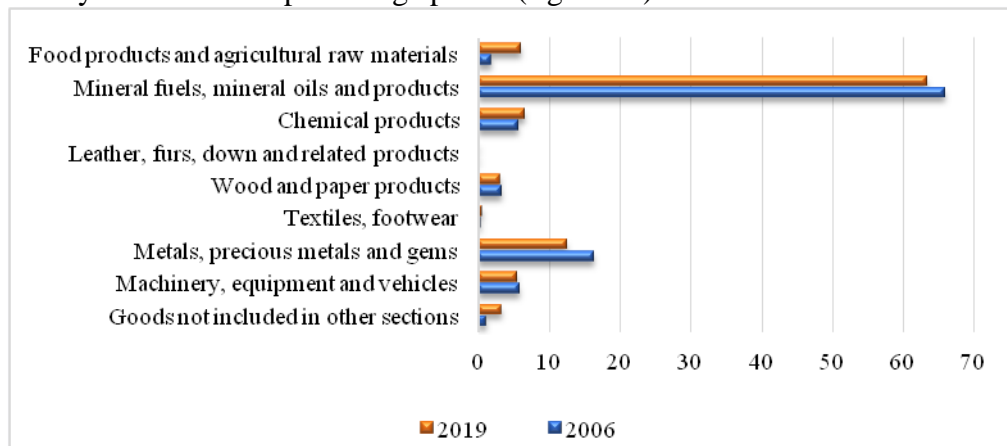


Figure no. 6. Export structure by sections, the Russian Federation, %

Source: processed according to the data of the Federal State Statistics Service (Russian Federation)

The trend to reduce the share of natural gas and other mineral fuels is linked to the implementation of the National Project “International Cooperation and Export”. The main strategic objectives of the Russian Federation in order to streamline trade policy are:

- „To increase, within five years, the share of finished goods exports to 45% in total exports and, accordingly, reduce the share of mineral fuel exports;
- The share of exports of manufactured goods (excluding fuel), agro-industrial products and services should be 20% of GDP in 2024;
- In 2024, the export of products of the machine industry should reach \$50 billion, and the export of agro-industrial products and services are expected to reach respectively \$45 billion and \$100 billion;
- To increase the number of exporters of goods by 1.5 times, by 2024” (Russian export centre, 2019).

The analysis of Ukraine's foreign trade is carried out for 2010-2019, because for the previous years 1996-2009 the statistical data are not comparable with those for the years 2014-2019, and include Crimea, the city of Sevastopol, Donetsk and Luhansk regions. The indicators have not been recalculated for the whole of Ukraine for 2014-2019. Only for 2010-2013 there are both statistical data that include and those that exclude Crimea, the city of Sevastopol.

After the political crisis in 2013-2014, Ukraine has reoriented its foreign trade to the west. The Association Agreement between the EU and Ukraine entered into force on 01.01.2016. It provides for reduce customs duties, approximation of legislation. On

11.07.2016, Ukraine and Canada signed the Free Trade Agreement (CUFTA), which analogously provides for the reduction customs duties on some goods. The analysis of the dynamics of Ukraine's foreign trade showed that after the implementation of the agreements, both exports and imports have increased, but this growth is very slow and the level of 2012 has not been reached (fig. no. 7).

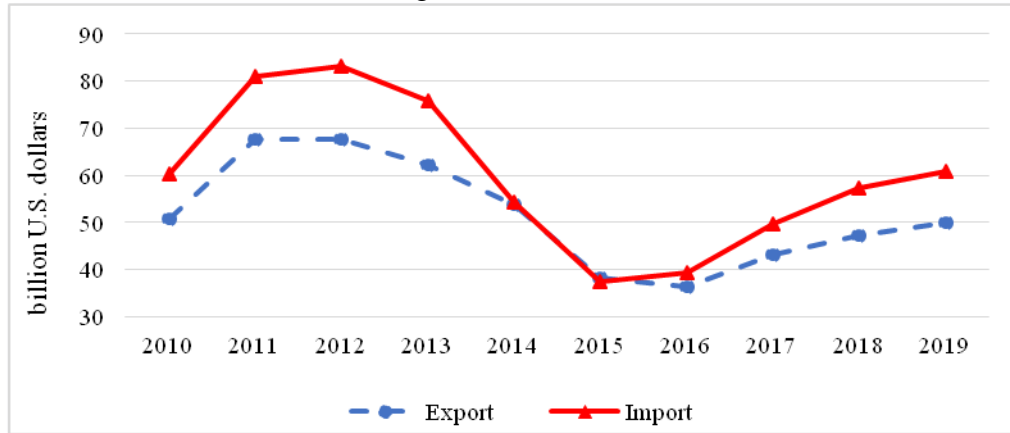


Figure no. 7. Evolution of Ukraine's foreign trade, 2010-2019

Source: processed according to the data of the State Statistics Service of Ukraine

During the analysed period, the physical volume of exports decreased sharply in 2013 and continued to decrease in 2014-2016. In 2017 there was an insignificant increase of this indicator (102.7%), followed by a reduction in 2018 (97.9%), in the last year of analysed period the index of the physical volume of exports reached the level of 104.7 %.

Despite the fact that exports and imports have increased in value, their share in GDP decreases (fig. no. 8). The most significant decline in the share of exports in GDP (in value terms) was recorded in 2019, which shows us that goods that are mainly exported do not create high added value.

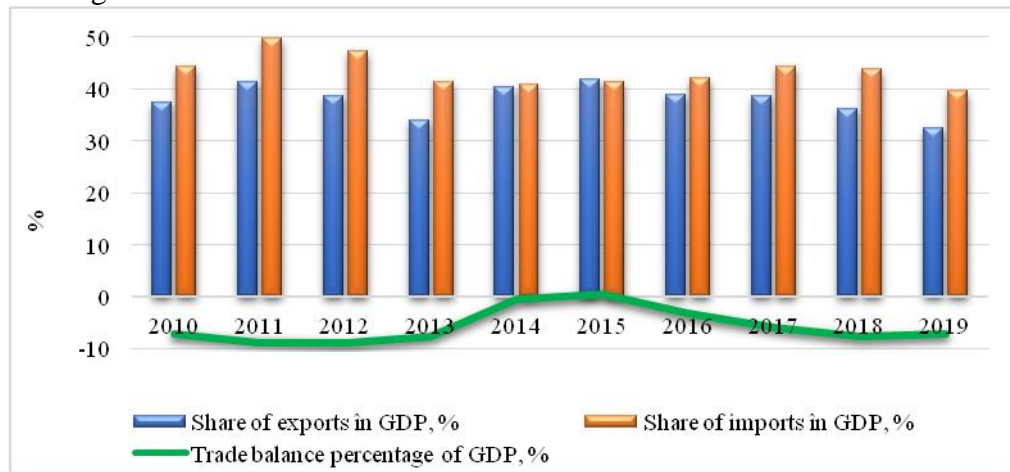


Figure no. 8. Share of foreign trade in Gross Domestic Product, Ukraine

Source: processed according to the data of the State Statistics Service of Ukraine

The analysis of the geographical structure of the export showed that starting with 2014 Ukraine has set itself the goal of replacing the Russian market with the European one. In 2015, exports to the Russian Federation decreased twice compared to the previous year. However, this decrease has not been replaced by an identical increase in exports to the European Union. In this year (2015) Ukraine were delivered goods on the EU market by 23.45% less than in 2014.

For an equivalent reorientation of exports from east to west, it is necessary to produce competitive goods, which are in demand on the European market, and which meet European standards. Achieving this goal requires innovation, technical and scientific progress, time, investment, highly qualified staff.

During the years 2010-2019, the share of exports of food products and agricultural raw materials increased by 24.9 percentage points, while the share of goods with high added value, such as machinery, equipment and vehicles decreased by 6.6 percentage points (fig. no. 9).

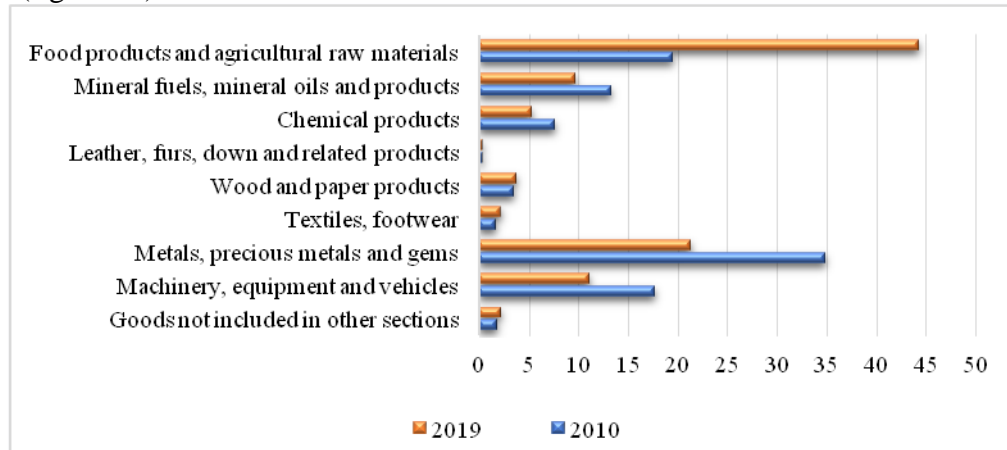


Figure no. 9. Export structure by sections, Ukraine, %

Source: processed according to the data of the State Statistics Service of Ukraine

The analysis of the dynamics of the export structure showed that the share of exports of unprocessed goods increased, i.e. goods with low value added are exported, which cannot ensure the increase of gross value added and GDP. Therefore, the effectiveness of trade policy promoted by Ukraine is comparatively low.

Generalizing the results obtained, we conclude that the trade policy promoted by Ukraine has the most weaknesses compared to Romania and the Russian Federation. The trade policy promoted by Romania has both strengths and weaknesses, and the number of strengths prevails over the number of weaknesses. An accurate analysis of the effectiveness of trade policy pursued by the Russian Federation is impossible due to the short time elapsed since the start of implementation the National Project “International Cooperation and Export”. Theoretically, the full implementation this Project would mainly bring benefits to the economy of the Russian Federation.

5. Analysis the trade policy of the Republic of Moldova

In 2019, the largest volume of export (without re-export) was accounted for food and live animals in the export structure (without re-export) by sections according to Standard International Trade Classification, Revision 4. Crude materials, inedible, except fuels also have a significant share in total exports (excluding re-exports), which attests to the fact that the Republic of Moldova exports a relatively large volume of unprocessed goods compared to those processed. *This trend is an obstacle to the development of a competitive economy.*

The analysis of the foreign trade of the Republic of Moldova shows that the share of exports in GDP decreased during 2016-2019 and reached the level of 23.22% in 2019, which is lower compared to the level reached by Ukraine (32.55%), Romania (30.89%), the Russian Federation (24.87%). By analogy, the Republic of Moldova has not advanced in terms of the share of the trade balance in GDP compared to the main trading partners. In

2019, the share of the trade deficit in GDP was 3.7 times higher than in Ukraine and 3.3 times higher than in Romania. *The sensitivity of the national economy of Moldova to imports is relatively higher, and the degree of independence in promoting trade policy is relatively lower than that of the main trading partners.*

The degree of openness of the economy of the Republic of Moldova is very high, in a.2019 the level of 72% was reached, which attests the importance of trade policy in regulating the national economy. *Increasing the volume of foreign trade, mainly exports, increasing the competitiveness of domestic goods, diversifying exports and the structure of regional trade would ensure the sustainable growth of the national economy.* Given that a large part of the goods produced in Moldova do not meet European standards, and are not competitive on the market of EU countries, but meet the market requirements of the Russian Federation, it is necessary to establish a trade balance with both the Eurasian Economic Union and the European Union.

An analysis of the goods from Annex XV-A of the Association Agreement with the EU on annual tax breaks shows that the exempt volume is less than the export potential, even if the goods are mainly exported to the CIS market. Therefore, *the withdrawal from the eastern market is not reasonable to the Republic of Moldova in pursuing the purpose of promoting the export of these goods.*

The implementation of the “National Strategy for Attracting Investments and Promoting Exports for the years 2016 - 2020” did not result in reaching all the intermediate and final targets of the result and impact indicators (Gutium, 2020). *It is therefore necessary to initiate programs, strategies, which would create conditions for increasing the positive effects on the target groups and would reduce the action-result interval.*

6. Conclusions

Recommendations for improving the trade policy of the Republic of Moldova:

- Promoting the policy of import substitution to reduce the degree of sensitivity of the national economy to imports;
- Promoting trade policies, which would change the structure of exports to increase the share of high value-added products, highly processed products and high-tech products;
- Diversification of exports and of the structure of regional trade;
- Granting of tax incentives for investments in innovations, developing the production of competitive goods, with a high degree of added value, know-how products;
- It is necessary to increase the active financial guarantees for exporters and the share of investments allocated in export-oriented sectors in total investments.

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THE FUTURE OF EDUCATION AND THE LABOR MARKET IN THE CONTEXT OF INDUSTRY 4.0

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Abstract: *The article presents an overall picture of the latest technological trends altogether referred to as the Fourth Industrial Revolution (Industry 4.0), their impact on the education and on the changing structure of the labour market, the demand for prospective skills, as well as emerging policy challenges. In order to prepare graduates for the future life and work done by Industry 4.0, where intelligent robots will replace people in certain divisions of activity, education should use relevant information and skills that cannot be replaced with robots. The paper analyzes the main trends in the labor market and formulated conclusions for future systemic approach to education, labor market and major technical and technological changes.*

Keywords: *Industry 4.0, Education 4.0, Labour market 4.0.*

JEL Classification: *J21, J24.*

1. Introduction

At the beginning of the 20th century we together are witnesses of fundamental changes to the labor market. Automation of professional tasks, robotics and artificial intelligence totally change companies' activity. As cardinal changes to the company's expectations of employees, these changes pose new challenges for human resource services, stimulates unexpected decisions and forces companies to work under unprecedented risks. The pace of change is continually increasing, as well as a fierce competition in the fight for "talent". Moreover, the meaning of the word "talent" and "valuable employee" means much more than skills required 5 -10 years ago, it means knowledge and professional roles of tomorrow, today unknown exactly by anyone, but needed to be anticipated, discovered. In this context, there are several questions to which we must find an answer? How can the business environment prepare for an uncertain future? What is the role of vocational and higher education institutions in the context of preparing the new workforce? How will staff management change: attracting, developing, retaining, motivating employees? Which information technology will be used to form human capital?

It is certain that there is no time to track from a distance the continuous transformation of the labor market and to expect answers to be generated. Technological development is an ongoing work that profoundly changes today's way of life. Ensuring people's employability (ability to find, keep or change a job using skills and abilities required by the labor market) in a society where robots, drones and 3D printers take a large part of repetitive tasks traditionally performed by people, creates new challenges and opportunities (Kergroach, 2017). Artificial intelligence and cyber security are key areas because these technologies are necessary for the proper functioning of robotic systems. They must be part of the knowledge base of all future employees.

2. What is Industry 4.0?

In industry 4.0, the ultimate objective is to create 'smart factories', which indicates on the automation of industrial processes, the use of intelligent systems throughout the

production cycle, from the beginning of the value chain to end of (Gert, 2017). This is possible through advances in data collection techniques that have increased and will continue to grow in the near future. The exponential increase in the volume of stored data illustrates the importance of data creation, collection and handling.

There are four main features of the Industry 4.0: vertical integration, horizontal integration, engineering integration and technological integration.

Vertical integration requires an increased connection in the Smart Factory chain, allowing manufactories to react quickly and adequately to variables such as demand levels, stock levels, machine defects or unexpected delays. Intelligent vertical integration systems can predict when machine or equipment failures will occur.

Horizontal integration facilitates value-adding networks such as business partners and customers around the globe. For example, a delivery of goods is scheduled to depart from an airport. While goods are transported from the factory to the airport, the airport closes urgently. Through advanced technologies, the company receives the information and immediately implements "plan B" - goods are quickly redirected to the next nearest airport and distributed on time.

Engineering integration means that companies no longer look only production or isolated aspect of the production process, but rather look at a product from the beginning of its manufacture to its production and final delivery. For example, a clothing company that was previously achieving its goods through intermediaries, with these technologies, now controls the process on the entire value chain and distribute clothing items in the final market.

Technological integration refers to the use of new, advanced and improved data collection technologies, which form an integral part of the fourth and final feature of Industry 4.0. The clothing company (mentioned above) collects and analyzes consumer data to understand the consumer market, as a result produces the number, quantity and model requested by the customer.

3. Benefits of Industry 4.0

The impact of Industry 4.0 will not affect only production companies. This will affect the entire value chain, including manufacturers, suppliers and employees. The education sector will have to focus on producing talent with the skills sets in necessary in Industry 4.0. Software and technology developers will also need to look at newer, better and larger deals. Governments, on the other hand, are expected to do their part, especially when it comes to infrastructure needed for a successful and smooth function of systems. A special note are smart infrastructures, which include those involving smart mobility and smart logistics.

In this context, main benefits of the Industry 4.0 relate to the following (Cleverism, 2015):

a) *Enhancing the competitiveness of enterprises.* In fact, the implementation of industry 4.0 leads to increase organizational, national and global competitiveness. In this view, even those countries known to have low labor costs and wages will be analyzed by large industries as areas of their production.

b) *Augmentating productivity.* Increasing efficiency will generate productivity improvements in manufacturing sectors. Feasibility studies carried out in Germany show that productivity in the manufacturing sector will grow by over 60%. In fact, with the full implementation of Industry 4.0, in the automotive industry, productivity is expected to increase by 10-20% .

c) *Increased incomes.* Industry 4.0 is seen as one of the main factors in increasing revenue levels, even if its implementation will also require significant investment from

businesses. The cost-benefit analysis will show later that revenues will grow faster and higher than the costs incurred in automation and digitization of the manufacturing process.

d) *Increased employment opportunities and increased management of human resources and IT resources.* Employment rates will also grow with increased demand for talent and labor, especially in the field of engineering and mechanical work. But it will not be limited to the field of mechanical engineering, because, depending on the industry or manufacturing sector, many types of skills will be required.

e) *Optimization of manufacturing processes.* Using computerized systems in the production process will simplify the working procedures and there will be increased a cooperation between producers, suppliers and other stakeholders along the value chain. The time required to produce a unit of product will be visible shortened, as the process will be streamlined without compromising quality, and decision-making will be made in real time.

f) *Development of exponential technologies.* Industry 4.0 will serve as a foundation for the development of future technologies. For example, companies that adapt the use of 3D printing technology. At their turn, developers are focused on creating enhanced 3D printing technologies.

g) *Delivering a better customer service.* Monitoring and feedback mechanisms, traditionally takes time. Through Industry 4.0 methods, logistics and statistics will be automatically generated and collected, so the answer will be faster generated. The company will immediately know, if it is necessary to make any adjustments, and will respond more quickly to customer needs.

4. Challenges of the Industry 4.0

Any automation process is free of obstacles that need to be overcome in order to be fully, operationally and successfully implemented. Industry 4.0 is facing a number of key challenges that need to be addressed and adapted to the manufacturing sectors around the globe.

1) *The Implementation of industry 4.0 requires large investments.* For example in Germany, manufacturers have to invest EUR 250 billion over the next ten years, as they adapt the manufacturing process to industry 4.0.

2) *Demand for a modernized workforce.* Manufacturers and other enterprises in the manufacturing sectors will need to take a closer look at the workforce training, especially knowledge and skills they demonstrate. It is necessary a strategic workforce planning with increased emphasis on IT skills

3) *Lack of skills needed to implement Industry 4.0:* Vocational and higher education institutions should revise curricula to address this issue and to form the skills needed for future employees.

4) *Some jobs will disappear, some new ones - will be created.* The new jobs will be related to technology and digitization. Labor factor will be replaced with capital factor. Employees will have to show a lot of creativity and flexibility to adapt to new labour market requirements.

5) *Considerable differences will arise between employees of generation X (birth years 1966-1976), generation Y (birth years 1977-1994), generation Z (birth years 1995-2012) and Alpha generation (birth years 2012-present), due the specific of each category [4].* Differences can be viewed in the infographic in Figure 1.

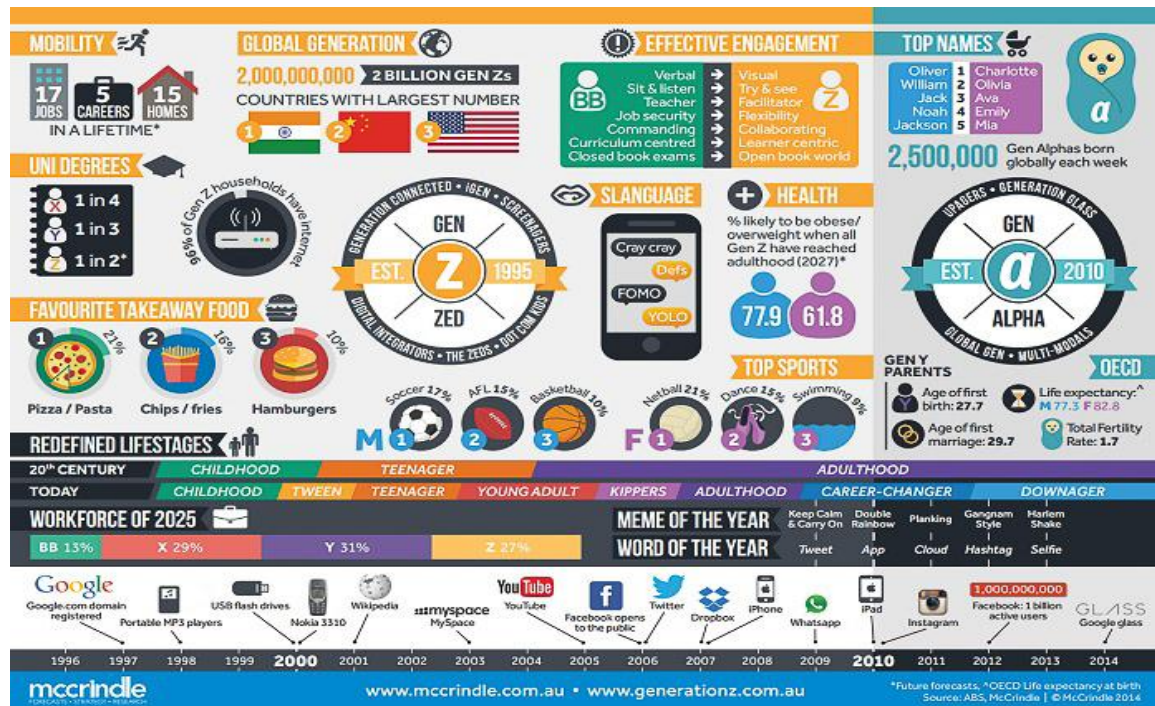


Figure 1. Differences between X, Y, Z and Alpha generations

Source: McCrindle, M. and Fell, A., 2019. *Understanding Generation Z: Recruiting, Training and Leading the Next Generation*, McCrindle Research Pty Ltd. Available at: <https://generationz.com.au/wp-content/uploads/2019/12/Understanding_Generation_Z_report_McCrindle.pdf>.

6) *Demand for systems and machines compatible with industry 4.0.* Suppliers and developers of manufacturing systems need to intensify their work to keep up with demand for specific Industry 4.0 machines and systems. This means that current suppliers and developers have to reconfigure their production processes.

7) *Standardization in industries.* While it is true that not all industries are the same, a certain degree of standardization is needed. A global connection of Industries 4.0 is required. The first steps towards standardization have already been taken by Germany through the creation of Plattform Industrie 4.0, followed by Dialogplattform Industrie 4.0. The United States created the Industrial Internet Consortium (IIC), which brought together telecommunication and IT companies, manufacturers and suppliers of manufacturing systems.

8) *Data security risks.* Since the Internet of Things is used on a global scale, there are certainly great risks to data security. Cybersecurity providers need to increase their vigilance and develop high-performance security systems to protect Industry 4.0 from potential viruses and other cyber attacks.

9) *General reluctance to change.* Although changes in the production process are geared towards achieving higher profits or increased productivity, not all companies will adapt quickly and easily to changes. Thus, convincing all manufacturing sectors to automate their production processes will not be an easy process

5. Education 4.0

The impact of Industrial Revolution 4.0 on the major industries is undoubtedly also affecting the jobs. This implies that Industry 4.0 will not only affect the industries, but,

consequently, it will transform the way we perceive education and professional integration. This will require educational institutions to produce workforce adapted to technological changes (Futurereadyedu.com, 2020). In addition, it will also require the current workforce to improve their skills and knowledge to fit these new professional roles. Therefore, a revolution in education is essential to enable people around the world to take advantage of the opportunities created by the emergence of these technologies.

Education 4.0 is a response to Industry 4.0 requirements. In the learning process, human and technology are correlated in skills and knowledge that are needed, but also determines them to identify the reason for learning these skills and knowledge (Fisk, 2016).

Education 4.0 has the following features:

a) *Accelerate Remote Learning*. Education 4.0 will allow learning anytime, anywhere, as e-learning tools and applications will provide opportunities for distance and self-paced learning. Classrooms role will change considerably. Theoretical knowledge will also be offered outside the classroom, while practical or experiential knowledge will be offered face to face.

b) *Personalized Learning*. Education 4.0 will also allow personalized learning for students, according to their capacities. Thus, there will be individual learning programs for each student. This fact will certainly have a positive impact, as it will allow students to learn at their own pace, as result will produce better effects according to their own pace of knowledge assimilation. At the same time, this method will help teachers to identify each student's strengths and weaknesses and to guide them.

c) *Choice of education tools*. Education 4.0 will be achieved through modern technologies / devices. Techniques such as blended learning, BYOD (Bring Your Own Device) and flipped classrooms are just a few examples.

d) *Project-based learning*. Independent economy is growing and will continue to do it. This means that today's students will have to adapt to project-based learning and working styles. Next, they will improve their skills and learn how to apply them and shape them according to the situation. This part of Education 4.0 will learn organizational management, time management and collaboration skills, which they can still use in their educational and professional career.

e) *Field-specific Experience*. As the integration technology into specific fields generates higher results; curricula will form more skills that require human knowledge and personal interaction.

f) *Data Analysis*. Various information software will be used for data storage and analysis, these ones will facilitate statistical processing, generate interpretations of the data and develop forecasts. Education 4.0 will train students to apply theoretical knowledge and to use human reasoning for examining models and predicting trends.

g) *Changes in Pattern and Assessment Exam*. Current models of student assessment based on tests and exams will be replaced by practical or experimental projects based on learning or working in the field. Impact of technology on education industry will not only transform the way of teaching, but also learners' manner of perceiving education. Education 4.0 or the future of education, as many call it, will change teaching-learning methodologies in order to make ready future students. This will create premises for a progressive, intellectual, knowledge-based and future-ready world.

6. Labour market 4.0

Progress in the field of robotics and artificial intelligence will inevitably result in the automation of production processes and will generate changes in the structure of labor demand [8]. However, automation will no longer be limited to physical or manual tasks,

but may endanger many intellectual, cognitive or analytical jobs, starting with transportation, office assistance and various services. The OECD has estimated that 9% of jobs in OECD countries could be automated and 25% of jobs could change significantly as a result of the automation of 50% -70% of the associated tasks (Arntz, Gregory and Zierahn, 2016).

Reflecting on the future of work, we inevitably ask ourselves about the place of the human being in the context of technology, automation and artificial intelligence (AI). The image of a future employee is formed as a result of the complex effect of the influence factors (OECD, 2019). The specific character is determined by the way that the people will respond to the challenges and opportunities that the global trends of Industry 4.0 bring. We can identify 4 possible situations:

1) Collectivism vs. individualism. The analysis of this model will determine what prevails in society: the principle "I am the principal" or the collective responsibility.

2) Integration vs. fragmentation. Technology has opened small companies with access to a huge volume of information, professional and financial resources, which were previously only available to large companies. Due to the use of technology, small businesses become powerful. At the same time, large companies manage to significantly reduce internal and external costs.

According to the research "The future of the labor market", by 2030, the professional environment will know 4 dimensions:

| Fragmentation | |
|--|--|
| <p>The yellow dimension - the central value is the human individual.</p> <p>Social entrepreneurship is booming. Collective financing and crowdfunding with high ethical principles and impeccable reputation are practiced. Great importance is given to the individual's debt to society. Many craftsmen appear. Human qualities are highly appreciated.</p> | <p>The red dimension - the central value is innovation</p> <p>Companies and individuals compete for consumer attention. Regulatory processes are slower than the pace of innovation. Digital technologies provide elite circles with unlimited access to the information and modes of influence. Niche services are in high demand.</p> |
| Colectivism | Individualism |
| <p>The green dimension - the central value is social responsibility</p> <p>The topics related to social responsibility are on the agenda, along with the demographic, ecological and climatic problems, constituting the driving force of the business.</p> | <p>The blue dimension - the central value is the corporation</p> <p>As the size of the company increases, individual needs become a priority over social equity.</p> |
| Integration | |

Figure 2. The dimensions of the labor market of the future

Source: developed by the author according the source (PWC, 2020).

In a survey conducted in 2017, about 37% respondents worry about their job because of the increased pace of automation.

About 60% of respondents believe that very few people will have a stable and long-term job in the near future.

About 70% of respondents say they will not refuse to take drugs to stimulate physical and mental activity if this will increase their prospects for employment in the future.

To the question „What I feel when I think about the future professional environment?”, the answers were distributed as follows:

- a) 37% - azart - I see many opportunities;
- b) 36% - safety - I am sure that I will be successful;
- c) 18% - restless - my future is uncertain;
- d) 8% - indifference - I do not make any plans for the future.

These opinions are due, on the one hand, to the technological and digital transformations of the industries, on the other hand, the specificity of the workforce is also determined by the characteristics of the Z generation and the Alpha generation that has recently left or is about to exit the labor market.

7. Conclusion

All industrial revolutions have had a profound impact on global society, and Industry 4.0 is no exception. Education and the labor market are undergoing dramatic changes and must adapt very quickly to these changes. To meet the challenges of Industry 4.0, mankind must have a successful strategy. Developing technologies such as big data and AI will replace most processes. The next generation is more attracted to the use of smartphones and applications. New technologies are transforming our lives, and with that, generations of people are transforming.

In the 21st century, the advanced skills, for example Artificial Intelligence (AI), the huge information and examination, distributed computing and portable arrangement, online networking, the Internet of Things (IoT), Virtual Reality (VR) and Augmented Reality (AR), must change the flow of education into a new computerized teaching method and smart classroom.

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