



FACULTY OF FINANCE - ACCOUNTING

**THE JOURNAL
CONTEMPORARY ECONOMY**
Volume 7, Issue 3/2022

REVISTA ECONOMIA CONTEMPORANĂ
Vol. 7, Nr. 3/2022

**"Independența Economică" Publishing
2022**

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“Constantin Brâncoveanu” University, Faculty of Finance-Accounting.
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Pitești, Calea Bascovului no. 2A, Argeș County, Romania, Phone/Fax: +00248-216427.
The Journal is currently indexing in the following international databases:
EconPapers (RePEc), IDEAS, BASE, SCIPHO, OAJI, ResearchBib,
CEEOL (Central and Eastern European Online Library),
Index Copernicus International – ICI Journals Master List.

The views expressed in these articles are the sole responsibility of the authors.
ISSN 2537 – 4222, ISSN-L 2537 – 4222

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The article will be sent to:

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DISPUTES CONCERNING THE RESOLUTION OF LABOR CONFLICTS. COURT MAY REPLACE DISCIPLINARY SANCTION APPLIED BY EMPLOYER

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Abstract: *Disciplinary misconduct is an act related to work and consists of an act or inaction committed with guilt by the employee, in which he violated the legal rules, the internal regulations, the individual employment contract or the applicable collective bargaining agreement, orders and provisions of hierarchical leaders. Work discipline is an objective, necessary and indispensable condition for the activity of each employer. The need to observe a certain order, of some rules that coordinate the conduct of individuals, in order to achieve the common goal, is imposed by the force of evidence, reasoning valid for any human activity carried out in the collective. Based on this principle, work discipline objectively means a system of norms that regulate the behavior of employees in the development of the collective work process. From the subjective point of view, of the employee, the work discipline constitutes a legal obligation of synthesis, which includes and summarizes the totality of the obligations assumed by concluding the individual employment contract.*

Keywords: *disciplinary violation, work discipline, labor dispute.*

JEL Classification: *K31.*

1. Introduction

In the interpretation and application of art. 252 para. (1) of the Labor Code, the employer orders the application of the disciplinary sanction by a decision issued in writing, within 30 calendar days from the date of notification of the disciplinary violation, but not later than 6 months from the date of the commission the date from which the period of 30 calendar days for the application of the disciplinary sanction begins to run is the date of registration of the final report of the preliminary disciplinary investigation at the registry of the unit (Decision of the High Court of Cassation and Justice no. 16/2012 in the file no. 15/2012 was published in the Official Gazette. no. 817/5 December 2012).

Under the sanction of absolute nullity, the decision must include:

- a) the description of the deed that constitutes a disciplinary violation;
- b) specifying the provisions of the staff statute, the internal regulations, the individual employment contract or the applicable collective labor contract that have been violated by the employee;
- c) the reasons for which the defenses formulated by the employee during the preliminary disciplinary investigation were removed or the reasons for which, under the conditions of art.251 par.3, the investigation was not carried out (Art. 251 of the Labor Code)¹;
- d) the legal basis on which the disciplinary sanction is applied;

¹ Under the sanction of absolute nullity, no measure, except the one provided in art. 248 para. (1) lit. a), cannot be ordered before carrying out a preliminary disciplinary investigation. In order to carry out the disciplinary investigation, the employer will appoint a person or will establish a commission or will call on the services of an external consultant specialized in the labor legislation, which he / she will empower in this respect. In order to carry out the preliminary disciplinary investigation, the employee will be summoned in writing by the designated person, by the chairman of the commission or by the external consultant, empowered, specifying the object, date, time and place of the meeting. Failure to present the employee at the summons made under the conditions provided in par. (2) without an objective reason gives the employer the right to order the sanction, without carrying out the preliminary disciplinary investigation. During the preliminary disciplinary investigation, the employee has the right to formulate and support all defenses in his favor and to offer the commission or the person authorized to carry out the investigation all the evidence and motivations he deems necessary, as well as the right to be assisted, at his request, to an external consultant specializing in labor law or by a representative of the trade union of which he is a member.

- e) the term in which the sanction can be challenged;
- f) the competent court where the sanction can be challenged.

The sanctioning decision is communicated to the employee within 5 calendar days from the date of issue and takes effect from the date of communication.

The communication is handed over personally to the employee, with a signature of receipt, or, in case of refusal of receipt, by registered letter, at the domicile or residence communicated by him.

According to the provisions of art. 252 paragraph 5 of the Labor Code, it is provided that the sanctioning decision may be challenged by the employee at the competent courts within 30 calendar days from the date of communication (Decision no. 11/2013 RIL pronounced by the HCCJ published in the Official Gazette no. 460 / 25.07.2013)¹.

According to art.269 of the Labor Code, the judgment of labor disputes is within the competence of the courts, established according to the law (Law no. 53/2003 Labor Code, republished in the Official Gazette no. 345 / 18.05.2011, amended by law no. 76/2012 for the implementation of Law no. 134/2010 on the Code of Civil Procedure, published in M.Of.nr.365 / 30.05.2012, by Law no.2 / 2013 published in M.Of.nr.89 / 12.02.2013, amended by Law 187/2012 for the implementation of the Criminal Code, published in M .Off.nr.757 / 12.11.2012, by Law no.255 / 2013 for the implementation of the Code of Criminal Procedure, published in the Official Gazette no.55 / 14.08.2013, amended by Law no.12 / 2015 published in the Official Gazette no. 52 / 22.01.2015).

Requests relating to the above cases shall be addressed to the competent court in whose constituency the applicant has his domicile or residence or, as the case may be, his seat. If the conditions laid down in the Code of Civil Procedure for active procedural co-participation (Art.59 of the Code of Civil Procedure, republished in the Official Gazette no.247 / 10.04.2015)² are met, the application may be made to the court competent for any of the applicants (Law no.76 / 2012 for the implementation of the Code of Civil Procedure, published in the Official Gazette no.365 / 15.07.2012, amended by GEO no.44 / 2012 published in the Official Gazette no.606 / 23.08. 2012, approved by Law no.206 / 2012 published in the Official Gazette no.762 / 03.11.2012). According to the provisions of art. 208 of Law no. 62/2011, individual labor disputes are resolved in the first instance by the court. According to art.210 of Law no.62 / 2011, the requests regarding the settlement of individual labor disputes are addressed to the court in whose constituency the plaintiff has his domicile or place of work (Law no. 62/2011 on social dialogue, republished in Official Gazette no. 625 / 31.08.2012 amended by Law no. 2/2013 published in Official Gazette no. 89 / 12.02.2013).

From the analysis of the legal texts it results that the courts competent to judge requests regarding the settlement of individual labor disputes are the Tribunals.

Emphasizing the importance of the employees' duty to respect the work discipline, the Labor Code stipulates in art.39 paragraph 2 letter b) the obligation to respect the work discipline this being a distinct obligation of the employees. This obligation corresponds to

¹ It admits the appeals in the interest of the law formulated by the Management Board of the Bucharest Court of Appeal and by the general prosecutor of the Prosecutor's Office attached to the High Court of Cassation and Justice and, consequently: In the interpretation and application of the provisions of art. 252 para. (5) referred to in art. 250 of the Labor Code states that: The court competent to resolve the employee's appeal against the disciplinary sanction applied by the employer, finding that it is wrongly individualized, may replace it with another disciplinary sanction. Mandatory, according to the provisions of art. 517 para. (4) of the Code of Civil Procedure. Delivered in open court today, 10 June 2013.

² Several persons may be plaintiffs or defendants together if the subject-matter of the proceedings is a common right or obligation, if their rights or obligations have the same cause, or if there is a close connection between them.

the employer's right to apply disciplinary sanctions to employees whenever he finds that they are committing disciplinary offenses. Taking the measure of disciplinary sanction being the exclusive attribute of the employer, according to art. 247 paragraph 1 of the Labor Code, namely "the employer has a disciplinary prerogative, having the right to apply, according to law, disciplinary sanctions to his employees whenever he finds that they have committed a disciplinary offense."

Disciplinary misconduct is an act related to work and consists of an act or inaction committed with guilt by the employee, in which he violated the legal rules, the internal regulations, the individual employment contract or the applicable collective bargaining agreement, orders and provisions of hierarchical leaders.

Work discipline is an objective, necessary and indispensable condition for the activity of each employer. The need to observe a certain order, of some rules that coordinate the conduct of individuals, in order to achieve the common goal, is imposed by the force of evidence, reasoning valid for any human activity carried out in the collective.

Based on this principle, work discipline objectively means a system of norms that regulate the behavior of employees in the development of the collective work process. From the subjective point of view, of the employee, the work discipline constitutes a legal obligation of synthesis, which includes and summarizes the totality of the obligations assumed by concluding the individual employment contract.

At the same time, this obligation is of a contractual nature, because, although it is generically provided in the law, it arises concretely, in charge of a person determined by his employment in the work team of a unit, as a result of concluding the employment contract.

The conclusion of the employment contract has the effect of hierarchical subordination, an objective condition of the organization and efficiency of work.

The direct link between the individual employment contract and the disciplinary liability determines both the persons entitled to apply the disciplinary measure and the conditions and limits of the application of this measure.

Disciplinary liability is incurred by the commission of an act in connection with the work and which consists in an action or inaction committed with guilt by the employee, by which he violated the legal norms provided in the internal regulations, the individual employment contract or the applicable collective bargaining contract, orders and legal provisions of hierarchical leaders. Thus, the disciplinary liability is attracted *ope legis* when the employee has committed an act with guilt and in connection with his work, by violating the aforementioned legal norms.

The analysis of the text of the law shows that the prerogative of the application of disciplinary sanctions belongs to and is the exclusive attribute of the employer, because he has the disciplinary prerogative, having the power to individualize the applicable disciplinary sanction in relation to the seriousness of the disciplinary violation, that the deed was committed, the degree of guilt, the consequences of the disciplinary violation, the general behavior of the employee and any sanctions previously suffered by him. Thus, according to art.250 of the Labor Code, the employer establishes the disciplinary sanction applicable in relation to the gravity of the disciplinary misconduct committed by the employee, taking into account the following:

- a) the circumstances in which the deed was committed;
- b) the degree of guilt of the employee;
- c) the consequences of the disciplinary violation;
- d) the general behavior of the employee in the service;
- e) any disciplinary sanctions previously suffered by him.

In resolving the appeal filed against the disciplinary sanction decision, the courts have the power to analyze not only the legality but also the validity of the sanctioning measure ordered by the employer, in which case it will verify the manner in which the employer applied the criteria for individualization and disciplinary sanction.

This attribute of the court is enshrined in the principle of finding out the truth in the civil process, provided by art. 22 of the Code of Civil Procedure, namely "the role of the judge in finding out the truth".

Because in judicial practice there is no unitary point of view regarding the interpretation and application of the provisions of art. 252 para. (5) referred to in art. 250 of the Labor Code regarding the possibility of the court, notified with an appeal against the decision by which a disciplinary measure was taken against the employee, to replace the disciplinary sanction applied by the employer and because in the case of actions concerning appeals against the decision by that a disciplinary measure has been taken against the employee, when the appeal is admitted, the pronounced solutions are divergent in terms of the possibility of the court to replace the applied sanction with another milder one.

Thus, in an opinion it was considered that the application of a disciplinary sanction is the exclusive attribute of the employer because he has the disciplinary prerogative, having the power to individualize the disciplinary sanction applicable in relation to the seriousness of the disciplinary violation, taking into account the circumstances the act was committed, the degree of guilt, the consequences of the disciplinary violation, the general behavior of the employee and the possible sanctions suffered by him.

On the other hand, it was argued that the application of the disciplinary sanction does not constitute the attribute of the court which can exercise only a control of legality and validity of the act of disciplinary sanction.

Insofar as the judicial control finds that the employer did not respect the proportion between the act committed by the employee and the sanction applied to him, it is necessary to conclude the illegality of the disciplinary sanction measure in its entirety, with the consequence of annulling the decision and not reindividualization of the sanction. If the opposite thesis were accepted, the court would end up replacing the employer, which cannot be accepted.

It is the opinion that we do not agree with, in this opinion, the court, competent to resolve the employee's appeal against the disciplinary sanction applied by the employer, can not replace the sanction, taking disciplinary action being the exclusive attribute of the employer, according to art. 247 of the Labor Code, namely "the employer has a disciplinary prerogative, having the right to apply, according to law, disciplinary sanctions to his employees whenever he finds that they have committed a disciplinary offense."

We consider that the application of the disciplinary sanction does not constitute the attribute of the court, which can exercise only a control of legality and validity of the act of disciplinary sanction. If the judicial control finds that the employer did not respect the proportion between the act committed by the employee and the sanction applied to him, the court will annul the decision of disciplinary sanction as illegal, and will establish another sanction by the pronounced decision.

The employee's free access to court would be illusory if the role of the court were limited to verifying the legality of the disciplinary measure without censoring the circumstances in which this sanction was taken, leaving the employee to the employer's discretion in establishing and applying individualization criteria.

In the present case, the reasoning that the High Court of Cassation and Justice made in Decision no. 16/2012, regarding the existence of reasons of analogy regarding the way in which the legislator understood to regulate, within the special laws, is fully applicable,

the issue under discussion also regarding the way in which the courts resolved the appeals against the disciplinary measures taken by the employer under the special laws.

Thus, art. 536 of the Administrative Code provides that the cases having as object the service report of the civil servant are within the competence of the administrative and fiscal contentious section of the court, except for the situations for which the competence of other courts is expressly established by law. And according to art. 495 of the Administrative Code, it provides that the civil servant dissatisfied with the applied sanction may address the administrative contentious court, requesting the annulment or modification, as the case may be, of the sanctioning order or disposition (GEO no.57 / 2019 regarding the Administrative Code published in the Official Gazette no.555 / 05.07.2019).

In the same sense are the provisions of art. 89 para. (4) of Law no. 567/2004 on the status of specialized auxiliary staff of courts and prosecutor's offices attached to them and of staff working within the National Institute of Forensic Expertise, which states that: "The sanctioning decision may be challenged within 30 days of the communication, to the labor and social security court in whose territorial district the appellant has his domicile. "

In the same sense are the provisions of art. 51 para. (3) of Law no. 317/2004 on the Superior Council of Magistracy, stipulates that "against the decisions provided for in paragraph (1) an appeal may be exercised within 15 days from the communication by the sanctioned judge or prosecutor or, as the case may be, "The competence to resolve the appeal belongs to the Panel of 5 judges of the High Court of Cassation and Justice. The panel of 5 judges cannot include the voting members of the Superior Council of Magistracy or the disciplinary sanctioned judge".

Although all these special laws did not provide for the possibility of the court seised with an appeal against the decision by which a disciplinary action was taken against the employee to replace the disciplinary sanction applied by the employer, the practice of the courts is uniform, in the sense that when the sanction applied does not respect the principle of proportionality, the pronounced solutions are to reindividualize the sanction.

Obviously, proceeding to replace the sanction, the court will apply the principle of non reformatio in pejus, enshrined in the provisions of art. 481, respectively art. 502 of the Code of Civil Procedure¹.

By doing so, the court balances the relationship between the parties, in the sense that the employee is not created a worse situation than the one before the disciplinary measure, but also ensures the achievement of the purpose of disciplinary liability, in the sense that if only the right of the court to annul the sanction applied, the employee would remain unpunished, as a new sanction could not be applied for the same deed.

This solution is in accordance with the jurisprudence of the constitutional contentious which ruled that "the sanctioning decision can be challenged by the employee in the competent courts ..., in this way the appellant having the possibility to benefit from all procedural guarantees provided by law, by administering evidence necessary before the jurisdictions handling such requests" (Decision no. 63/2004 of the Constitutional Court, published in the Official Gazette no. 211 / 10.03.2004).

¹ Art.481 of the Code of Civil Procedure

Not making the situation worse on its own.

The appellant may not create in his own appeal a worse situation than the one in the contested judgment, unless he expressly consents to it or in the specific cases provided by law.

Art.502 of the Code of Civil Procedure

At the judgment of the appeal, as well as at the retrial of the process after the quashing of the decision by the court of appeal, the provisions of art. 481 are applicable accordingly.

The High Court of Cassation and Justice noted that this solution is also in line with the jurisprudence of the European Court of Human Rights regarding the application of Article 6 para. 1 of the European Convention on Human Rights on effective access to a fair trial and the right to a fair trial, as a positive obligation of states in private litigation proceedings between either individuals or between individuals and the state, through bodies or its institutions (Law no. 30/1994 on the ratification of the Convention for the Protection of Human Rights and Fundamental Freedoms, published in the Official Gazette no. 135 / 31.05.1994)¹.

The European Court of Human Rights, in examining the observance of the effective right of access before a higher court of a litigant, has ruled that the protection of individual rights means "the protection of concrete and effective rights, not theoretical and illusory" (*Airey v. Ireland*), and the positive obligation of the signatory states is an obligation to do, traditionally associated with economic and social rights, being to "take reasonable and appropriate measures to protect the rights of the individual" (*Lopez Ostra v. Spain*).

From a procedural point of view, the positive obligation of the signatory states also includes the obligation to ensure a fair judicial procedure, which would allow the settlement of any dispute between private persons (*Sovtransavto Holding v. Ukraine*).

The national law of the signatory states must not contain provisions that violate the rights protected by the European Convention on Human Rights or allow third parties to conduct contrary to the provisions of the Convention, which the literature has called the "horizontal effect" of the Convention (*Ghibusi v. Romania* judgment, published in Official Gazette no. 700 / 16.08.2006)².

The European Court also ruled that within the scope of art. 6 of the Convention also includes labor disputes, including the so-called disciplinary litigation before disciplinary courts, and the courts have the prerogative to carry out a proper examination of allegations, reasons and evidence (*Buzescu v. Romania*, published in the Official Gazette no. 210 / 08.03.2006).

In this last opinion, the appeal filed by the employee was admitted, the decision of disciplinary sanction was partially annulled and the measure of the sanction applied by the employer was replaced with another disciplinary sanction, according to the degree of guilt and the concrete danger of the deed.

In pronouncing this solution, the theory was taken into account that the employer's disciplinary prerogative is not absolute, discretionary, such as to remove the court's prerogative to verify the manner in which the employer applied the criteria for individualization and disciplinary sanction. Such an intervention of the court is related to the finality of the act of justice, to the effective resolution of the dispute brought before the

¹ Article 6, paragraph 1, of the Convention

Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him. on the merits of any criminal charge against him. The verdict must be pronounced in public, but access to the courtroom may be denied to the press and the public for the duration or part of the trial in the interests of morality, public order or national security in a democratic society, then when the interests of the minors or the protection of the privacy of the parties to the trial so require, or to the extent deemed absolutely necessary by the court when, in special circumstances, publicity would be likely to harm the interests of justice.

² 61. The Court points out that a judgment finding an infringement entails for the defendant State a legal obligation to bring the infringement to an end and to remove the consequences so that, as far as possible, the previous situation can be restored [*Metaxas v. Greece* no. 8,415 / 2002, paragraph 35, May 27, 2004, and *Iatridis v. Greece*, Fair Satisfaction (GC), no. 31.107 / 1996, paragraph 32, ECHR 2000-XI].

62. The Court found a violation of the applicant's rights by failing to enforce a final judgment ordering her reinstatement.

Consequently, the Court considers that the applicant has suffered non-material and material damage and that that damage has not been sufficiently compensated by the finding of an infringement.

court, because the court cannot be limited only to a finding of the legality or illegality of the contested act or legal fact.

It has been argued that there can be no question of an interference of the jurisdictional bodies in the disciplinary prerogatives, which by their nature belong to the employer, because his right to order the sanction ceases with the application of the sanction. From this moment on, the prerogatives of the bodies vested by law with the jurisdictional control of the sanctioning act begin, namely the courts. This control, in the absence of any express limitation, is devolving and includes the right of the court to rule on its own.

It was noted that the court, in practice, only partially modifies the contested decision, replacing the sanction applied with another, noting that partially, in terms of individualization, respectively the dosage of the sanction, the decision is illegal in relation to art. 250 of the Labor Code, which imperatively establishes the criteria that the employer must take into account cumulatively when establishing the disciplinary sanction.

Such solutions were given by the courts when they overturned the decision issued by the employer and replaced the sanction applied. Thus, according to art. 61 lit. a) of the Labor Code, the employer may order the dismissal for reasons related to the person of the employee in case he committed a serious violation or repeated violations of the rules of labor discipline or those established by the individual employment contract, the collective agreement applicable labor law or internal regulations as a disciplinary sanction. The violations committed by the appellant are not particularly serious, leading to the termination of the employment contract, the appeal filed will be admitted and the contested civil sentence will be modified in part, in the sense that reduction of the basic salary by 10% for 3 months (Decision no. 496 / R / CM / 2008 of the Pitesti Court of Appeal, Civil Section, Labor Conflicts, Minors and Family).

By the civil sentence no. 1033/2002, the Timiș Tribunal rejected the action filed by the plaintiff T.I., in contradiction with the defendant S.N.T.F.C. CFR Călători SA Timișoara, having as object the annulment of the disposition to terminate the employment contract. The Timișoara Court of Appeal allowed the appeal declared by the applicant and partially amended the sentence, in the sense that it partially admitted the action filed and replaced the sanction of termination of the employment contract with the sanction of reducing the basic remuneration by 10% for 3 months.

The applicant, as a train driver, was caught by the control body on the route Arad - Vâlcani on 25.07.2002 having on him the amount of over 346,000 lei collected from passengers, to whom he did not issue travel tickets until at the time of control. In the present case, there was no evidence by the defendant that the applicant had previously been sanctioned for other offenses. Due to the specific nature of the applicant's work, the Court held that these categories of misconduct were of a general nature; on the other hand, in view of the fact that the applicant was no longer sanctioned, he considered that he had been excessively sanctioned by the defendant and ordered the replacement of the sanction applied with that of the reduction of the basic remuneration by 10% for 3 months (Timișoara Court of Appeal, Civil Decision no. 70 of 2003).

The General Prosecutor expressed the opinion showing that, in resolving this labor dispute, the court exercises a devolutionary control of a jurisdictional nature, because it verifies the legality and validity of the measure taken, not only in terms of the administered material, but also has the possibility of additional evidence. To the extent that it finds that the sanctioning measure is unjustified in relation to the gravity of the disciplinary violation, the court will order the admission of the appeal, the partial annulment of the contested decision and the replacement of the disciplinary sanction applied by the employer with another sanctioning measure. In doing so, the courts do not become disciplinary bodies, because they do not ex officio conduct administrative inquiries to establish acts and legal

acts that violated the discipline of work, but only censor the sanctioning measure already applied by the employer, ensuring a framework for the protection of the employee in his relations with the employer, respecting the principle of proportionality.

As a result of this legal issue, the High Court of Cassation and Justice was appealed in the interest of the law, resolved in the sense that it ruled by the decision of the appeal in the interest of the law that "The competent court to resolve the employee's appeal against to the employer, finding that it is wrongly individualized, may replace it with another disciplinary sanction (Decision no. 11/2013 of the HCCJ appeal in the interest of the law, published in the Official Gazette no. 460 / 25.07.2013, regarding the appeals in the interest of the law formulated by the Board of the Bucharest Court of Appeal and in addition to the High Court of Cassation and Justice regarding the interpretation and application of the provisions of art. 252 para. 5 of the Labor Code regarding the possibility of the court, notified with an appeal against the decision by which a disciplinary measure was taken against the employee, to replace the disciplinary sanction applied by the employer)".

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BUDGET EXECUTION, A TOOL FOR SUBSTANTIATING THE FINANCIAL RESOURCES FOR FUNDING SUSTAINABLE DEVELOPMENT PROJECTS

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Abstract: *The epistemological positioning of the scientific research takes a constructive approach and tries to answer the research hypothesis: "Does the analysis of the budget execution bring its contribution to the substantiation of the financial resources that are needed to carry out regional and local sustainable development programmes and projects ?". This research study is based on the analysis of the budget execution accounts of the ministry that manages the financial resources for supporting the sustainable development at regional and local level.*

Keywords: *financial resources; budget execution; accounting information system; sustainable development.*

JEL Classification: *M41, M42, H83.*

1. Introduction

The purpose of this approach is to examine the information which the budget execution account provides, as a component of the public institutions' accounting. The budget execution account is the synthesis accounting document that includes all the financial operations during a financial year in terms of the revenues that are being received and the payments that are being made within the approved budget structure.

2. Problem Statement

In this context, the analysis of the budget execution accounts was carried out to determine the representative execution indicator, i.e. the "Budget execution rate" (BER), for every year in the analysis. Thus, the "Budget execution rate" was quantified as the ratio between the amount of payments/expenditures incurred within a budget year and the budget appropriations amount that is approved for the same budget year:

$$BER = \frac{\text{Expenditures}_n}{\text{Appropriations}_n} \times 100 \quad (\%)$$

Expenditures n = amount of payments/expenditures incurred within the "n" budget year

Appropriations n = amount of budget appropriations that is approved for the "n" budget year

The interpretation of the economic and social phenomenon under review was made based on the calculation formula of this indicator in order to confirm or refute the research hypothesis.

3. Research Question

To prove the research hypothesis "Does the analysis of the budget execution bring its contribution to the substantiation of the financial resources that are needed to carry out regional and local sustainable development programmes and projects?", an analysis of the

budget execution for 2016 - 2021 period was performed (a case study based on the example of the ministry that is the object of the research).

4. Research Methods

The approach of the expenditures/payments' evolution in the 2016 - 2021 period involved the use of chain-based index and fixed-base index in order to observe the consumption trend of the financial resources.

Therefore, the calculation formulas required the determination of a ratio between the expenditures/payments amount in the year under review and the expenditures/payments incurred in the previous year to determine the chain-based variation.

The fixed-base variation involved the calculation of the indicator as a ratio between the value of payments/expenses within the last year under analysis and the value of payments/expenses within the first year under analysis.

5. Analysis of the budget execution related to the categories of expenditures allocated for sustainable development

The analysis of the approved categories of expenditures in the 2016 - 2021 annual budgets highlighted the fact that financial resources were allocated only for certain categories of expenditures to implement sustainable development programmes and projects: "Transfers among public administration units", "Projects financed from external non-reimbursable funding within the 2014 - 2020 financial framework", "Other transfers", "Subsidies", "Capital expenditures", "Projects financed from external non-reimbursable funding within the 2007 - 2013 financial framework", "Expenditures on reimbursable funding programmes".

The 2016-2021 budget execution accounts for the expenditure categories above provided relevant information on the payments under the development programmes and projects which were approved within the annual budgets.

In this respect, the table below shows the cumulative budget execution related to the sustainable development expenditures, in relation to the approved annual budgets:

Table 1. Budget execution for the regional and local development expenditures 2016-2021

Categories of expenditures	2016 - 2021 Budget execution		
	Total amount (lei)	Total expenditure (lei)	BER (%)
Transfers among public administration units	18,277,798,000	29,681,946,908	162.39%
Projects financed from external non-reimbursable funding within the 2014 - 2020 financial framework (FEN 2014-2020)	9,785,845,000	3,884,110,785	39.69%
Other transfers	5,602,633,000	4,244,466,475	75.76%
Projects financed from external non-reimbursable funding within the 2007 - 2013 financial framework (FEN 2007-2013)	1,560,588,000	744,398,565	47.70%
Subsidies	1,009,572,000	70,084,532	6.94%
Capital expenditures	522,450,000	425,597,948	81.46%
Expenditures on reimbursable funding programmes (FR Projects)	375,000,000	240,928,842	64.25%
Total	37,133,886,000	39,291,534,055	105.81%

Source: Data processed by the author based on information from the COFOG3_MDRAP_2016-2021, Budget Implementation Reports

The analysis of the 2016 - 2021 budget execution accounts showed that the financial resources in the budgets were fully spent in case of the "Transfers among public administration units" category.

In relation to the "Capital expenditures" category, 81.46% of the financial resources were spent, as approved in the investment lists, as annexes to the annual revenue and expenditure budgets.

Also, the representative indicator "Budget execution rate" (BER) recorded 'attractive' values also for "Other transfers" and "Reimbursable funding programmes", i.e. 75.76% out of the total budget allocated for other transfers, and 64.25% out of the total budget allocated to reimbursable funding programmes aiming at the housing construction for young people.

At the opposite end, the "Projects financed from external non-reimbursable funding within the 2014 - 2020 financial framework" had a budget execution ratio of only 39.69%. This indicates that the ongoing and/or partially completed projects/programmes, which were granted non-reimbursable funding, would be continued in the next financial framework, i.e. 2021-2027.

Structurally, the situation of budget execution in terms of the expenditure categories which were provided for the 2016-2021 regional and local sustainable development is the following:

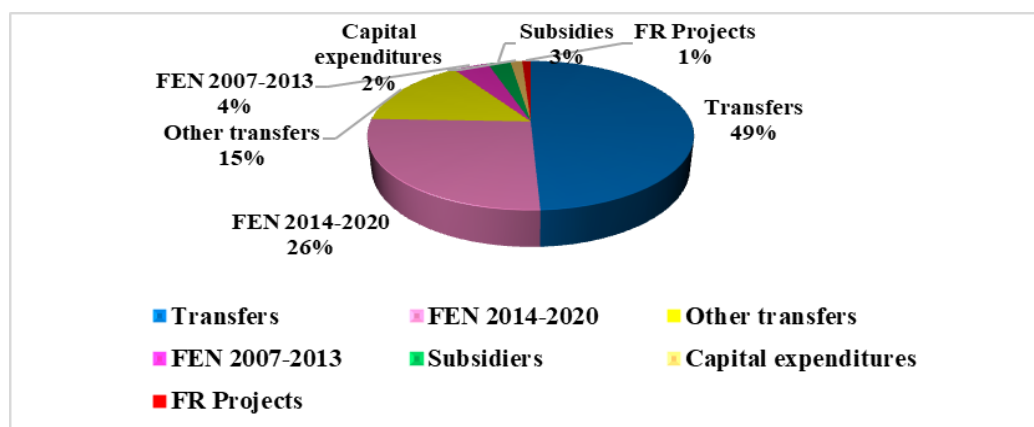


Figure 1. Structure of the 2016-2021 budget execution in terms of the regional and local sustainable development expenditures

Source: Data processed by the author based on data from the 2016-2021 budget execution accounts

In relation to the period under the scientific research, it was found that 49% out of the financial resources were spent. They were used to support the programmes/projects the public administration carried out and they are recorded in the budget accounts at "Transfers among public administration units".

As mentioned before, this expenditure category recorded in its turn 'nonuniform' variations throughout the budget execution process. The variations were measured by the calculated value of the expenditure indices for the period under review.

Another category of expenditure, that is noteworthy for this analysis, is the "Projects financed from external non-reimbursable funding for the 2014-20 financial framework" category, which reaches 26% of the budget execution structure for the period under review.

This expenditure category consumed financial resources to a lesser extent due to the public authorities' inability to attract this class of "appropriate" funding for the regional and local development.

The opportunity to fund programmes/projects arises from the non-reimbursable nature of the EU funding - in high percentages, and the co-financing, although to a lesser extent, from national public resources.

However, the economic and social phenomenon, which is analysed in relation to the public funding consumption, that is quantified in the budget execution process, indicates that the 'task' of implementing programmes and projects which aim at developing the local and regional communities is also supported by the state budget and to a lesser extent from external non-reimbursable funding.

The comparative analysis of the expenditure category "Transfers among public administration units" and of the category "Projects financed from external non-reimbursable funding within the 2014-2020 financial framework" emphasizes the trend of the economic and social phenomenon related to the implementation of development programmes/projects which are implemented mostly from national funding resources.

Although external non-reimbursable funding is a development opportunity that should not be 'missed', this study demonstrates the inability of the public authorities to access these types of funding, which involve zero funding costs through the value of the calculated indicators.

The expenditure category "Other transfers" reaches 15% of the total budget execution for the period under review. Together with the two expenditure categories above, it aggregates 90% of the total public funding consumption in the period 2016-2021.

The remaining expenditure categories reach 10% of the total budget execution within the period under review. This means that the development programmes and projects that were implemented with the reimbursable funding, subsidies from the state budget, and non-reimbursable funding within the 2007-2013 financial framework are not as 'significant' as the development projects and programmes which benefited from funding under the expenditure categories presented above.

6. Conclusions

The dynamics and structure analysis of the expenditure categories related to the sustainable development reveals that, in the period 2016-2021, "Transfers among public administration units" was the category that benefited from substantial financial resources. It was followed by the "Projects financed from external non-reimbursable funding within the 2014-2020 financial framework" category.

The comparative analysis of the expenditure categories "Transfers among public administration units" and "Projects financed from external non-reimbursable funding within the 2014-2020 financial framework" pointed out that the financial resources allocated from the state budget were consumed in a higher proportion higher than the financial resources allocated from the EU budget on a non-reimbursable basis.

The expenditure category "Transfers among public administration units" is "detailed" at the level of the administrative-territorial units and other entities in the public administration, in budgetary and financial accounting, namely in accounts associated with assets under construction.

In terms of the funding source, this expenditure category is financed from the state budget for the scope the annual budgets provide.

Although it is the state budget to provide with the financial resources which are needed to achieve the investment objectives included in the regional and local development programmes/projects, this funding source of is not sufficient to complete the development investment objectives.

Consequently, the state budget funding source is complemented by the EU budget funding. Thus, the latter is an opportunity for the public administration to access this sort of non-reimbursable funding.

The consumption of financial resources allocated to this expenditure category from external non-reimbursable funding shows the capacity and ability of the ministry under review to access and consume such financial resources.

Under these circumstances, the value of the "Budget execution rate" (BER) of 39.69%, shows that the ministry was unsuccessful in spending the non-reimbursable funding within the allocated annual budgets, and this led to delays in achieving the investment objectives intended within regional and territorial development programmes/projects.

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AMENDMENTS TO LABOR LEGISLATION WITH AN IMPACT ON THE BUSINESS ENVIRONMENT

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Abstract: *The field of occupational safety and health is regulated by the Occupational Safety and Health Law no. 319/2006 and the Methodological Norms for the application of the provisions of this law, approved by the Government Decision no. 1425/2006, with subsequent amendments and completions. Improving the legal framework in the field of occupational safety and health is an important objective of the competent authorities with responsibilities in this field. Interinstitutional consultations have identified the need for changes in the legal framework in the field of occupational safety and health, both as a result of changes in the labor market and in the situations identified in the implementation process.*

Keywords: *employee, employer, occupational health and safety, occupational disease.*

JEL Classification: *K31.*

The field of occupational safety and health is regulated by the Occupational Safety and Health Law no. 319/2006 and the Methodological Norms for the application of the provisions of this law, approved by the Government Decision no. 1425/2006, with subsequent amendments and completions.

Improving the legal framework in the field of occupational safety and health is an important objective of the competent authorities with responsibilities in this field. Interinstitutional consultations have identified the need for changes in the legal framework in the field of occupational safety and health, both as a result of changes in the labor market and in the situations identified in the implementation process. By Law no. 208/2021 for the approval of the Government Emergency Ordinance no. 36/2021 on the use of advanced electronic signature or qualified electronic signature, accompanied by electronic time stamp or qualified electronic time stamp and qualified electronic seal of the employer in the field of labor relations, and for amending and supplementing some normative acts amendments were made to the Security Law and occupational health no. 319/2006.

Taking into account the provisions of Law no. 208/2021, changes are also needed regarding the training of workers in the field of occupational safety and health in the Government Decision no. 1425/2006, in the sense of completing it to cover the situation of using the electronic signature in the training of workers.

Regarding the communication / research and recording of events occurring outside the borders of Romania involving workers of Romanian employers, performing state tasks, public interest or duties, these are regulated in Section IV of Chapter VII of the Government Decision no. 1425/2006, with subsequent amendments and completions.

Regarding the communication, this is the procedure by which the employer communicates the occurrence of an event, immediately, but not later than 24 hours from the occurrence of the event, to the authorities provided in art. 27 para. (1) of the law.

Until now, events occurring in another EU / EEA Member State and Switzerland or in a state with which Romania applies a bilateral legal instrument in the field of social security, involving Romanian workers posted by a Romanian employer, have been investigated according to the law of that Member State. In current practice in EU countries, these events are usually investigated by insurers specializing in areas of activity, often decentralized institutions such as police, gendarmerie or prosecutor's office. For this reason, the documents required for the preparation of a research file, by the commission appointed by the employer or by the territorial labor inspectorates according to art. 144 of

the Government Decision no. 1425/2006, with subsequent amendments and completions, are difficult to obtain. to the Romanian employers, by the representatives of Romania in the state where the event took place or are made available only after the completion of the investigations by the institutions authorized to investigate the criminal cases.

The Labor Inspectorate has no jurisdiction outside Romania for investigating events, in which case the circumstances and causes of events are based on “copies of the original investigation documents issued by the competent bodies in the country in whose territory the event occurred, copies of medical documents to the health units that provided specialized care to the victim ”, being inevitable the blocking of these research files that cannot be completed under the conditions provided by the current law.

Regarding occupational diseases, according to the provisions of art.155 paragraph (1) of the Government Decision no.1425 / 2006, with subsequent amendments and completions, in case the employer or his representative or, as the case may be, the natural person authorized in the case of liberal professions or the labor inspector or the worker or insurer does not agree with the conclusions established in the research report or with the technical or organizational measure formulated, drawn up by the occupational medicine specialist within the county public health directorates, may be addressed, in written, within 30 days from the date of receipt of the report of the investigation of the case of occupational disease, the Commission of Occupational Medicine Experts. The composition and attributions of the Committee of Experts are established by the joint order of the Minister of Public Health and the Minister of Labor, Family and Equal Opportunities no. 1256/443/2008, as subsequently amended.

The decisions of the Commission of Experts have the quality of a legal act of an administrative nature and produce full effects in the legal relations, because they result in the confirmation or refutation of occupational diseases and the payment of medical benefits and services from the budget of the Single National Health Insurance Fund. insurance for accidents at work and occupational diseases. Decisions taken by members of the commission can be challenged in the competent court by the dissatisfied party (employer, worker etc.).

Currently, the members of the Commission of Occupational Medicine Experts do not have the right to be represented in court, and this Commission does not have the specialized legal capacity or its own budget to pay legal fees and expenses as a result of final court decisions resulting from appeals. of the Commission.

Also, at present, a simplified procedure for declaring cases of occupational disease is not regulated, in exceptional epidemiological situations (pandemics or epidemics), with the exception of the procedure for reporting-researching-declaring cases of occupational disease, provided in art.149 -art.158. Consequently, it appears necessary to amend the Methodological Norms for the application of the provisions of the Law on safety and health at work no. 319/2006, approved by Government Decision no. 1425/2006.

The main changes that have emerged as a result of the changes taking place on the labor market, the situations identified in the implementation process, as well as the enactment of Law no. 208/2021 for the approval of the Government Emergency Ordinance no. 36/2021 on the use of the advanced electronic signature or the qualified electronic signature, accompanied by the electronic time stamp or qualified electronic time stamp and the qualified electronic seal of the employer in the field of labor relations, and for amending and supplementing regulations and the interinstitutional consultation process; concerning the Government Decision no. 1425/2006 for the approval of the Methodological Norms for the application of the provisions of the Law on safety and health at work no. 319/2006, are:

Chapter V - Training of workers in the field of occupational safety and health - regulated the possibility of using the electronic signature to complete the requirements in force to cover the situation of using the electronic signature in the training of workers in the field of occupational safety and health. These are detailed as follows:

- electronic signature - the electronic signature as defined in art. 3 point 10 of Regulation (EU) no. Regulation (EC) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93 / EC;

- advanced electronic signature - the advanced electronic signature as defined in art. 3 point 11 of Regulation (EU) no. Regulation (EC) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93 / EC;

- qualified electronic signature - the qualified electronic signature as defined in art. 3 point 12 of Regulation (EU) no. Regulation (EC) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93 / EC.

Chapter VII - Reporting and investigating events, recording and recording work accidents and dangerous incidents, reporting, researching, reporting and reporting occupational diseases. Regarding the communication, research and recording of events produced outside the borders of Romania, in which are involved workers of some Romanian employers, who are performing state tasks, public interest or duties, it is provided to modify the investigation procedure of events outside the borders of the country in which Romanian citizens are involved in the sense of simplifying it in order to allow the unblocking of some situations that appeared in the implementation process.

We are also witnessing the introduction of three new annexes necessary in the procedure for investigating events outside the borders of the country in which Romanian citizens are involved, the establishment of a maximum term for the investigation of the above mentioned events, the application of the new when completing the investigation files of the events produced outside the territory of the country and for the research files already in progress, but not finalized, these being registered at the employer, respectively at the territorial labor inspectorates.

In Chapter VII - Occupational Disease Research, the following changes appear:

- modification of the number of days for the research of the occupational disease carried out by the occupational medicine specialist within the county or Bucharest public health directorate (from 7 to 30 days) considering the difficulty of procuring the documents necessary for the research;

- elaboration of the research report in 7 copies, being introduced as a novelty the handing over of a copy of it and to the National Center for risk monitoring in the community environment - National Institute of Public Health (INSP);

- the transfer of the activity of the Commission of experts from the legal area to the exclusively scientific area, of actual expertise, by repealing art. 155 and 156 of the Methodological Norms for the application of the provisions of the Law on safety and health at work no. 319/2006, with subsequent amendments and completions, and taking over the attributions of the Committee of Experts by the Appeals Commissions, set up at the level of Public Health Directorates.

Regarding the Declaration of Occupational Diseases, the following changes are made:

- drawing up the BP2 occupational disease declaration form in 6 copies, for informing the interested parties, respectively: the county or Bucharest public health department, the worker diagnosed with occupational disease, the occupational medicine doctor from the clinic / occupational medicine department or the occupational medicine office in the hospital structure that reported the disease, the territorial labor inspectorate, the National Institute of Public Health

- the National Center for Risk Monitoring in the Community - Occupational Health and Toxicological Information Department, and the territorial insurer;

- regulation of a simplified procedure for reporting-researching-declaring cases of occupational disease, provided in art. 149-158 of the Methodological Norms for applying the provisions of the Law on safety and health at work no. 319/2006, in exceptional epidemiological situations (pandemics or epidemics), respectively: the research is carried out by the occupational medicine doctor from the county or Bucharest public health department based on the documents received in electronic format or by mail, without the need for his presence at the the case of occupational disease has been reported.

Occupational disease reporting makes the following changes:

- the introduction of the 30-day deadline for reporting newly declared occupational diseases by the Public Health Directorate at the National Center for Risk Monitoring in the Community, INSP, for registration in the National Computerized Operational Register of Occupational Diseases.

- the updating of five Annexes (Annex No 13, No 19-22) taking into account the above-mentioned changes as well as new scientific data in relation to occupational diseases.

The implementing rules aim, based on the consensus of all parties involved in its elaboration, the common and unitary framework of actions in the field of occupational safety and health and aim, through the requested changes, to improve medical practice in occupational medicine.

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EFFECT OF LIQUIDITY RISK ON LOW VOLATILITY ANOMALY IN NIGERIAN STOCK MARKET

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Abstract: The proposition of MPT and CAPM was that the higher the risk, the higher the return and vice versa. This was premised on the assumption of rationality of market participant and efficiency of the market. However, several studies have violated this assumption, and that led to the anomaly in the market which is popularly known as low volatility anomaly. This study examines the effect of liquidity risk on low volatility anomaly in the Nigerian stock market. The population of the study is all the quoted companies in the Nigerian Stock Exchange (NSE) for the period of ten years. The purposive sampling technique was used to select forty-one companies' stocks that are frequently traded throughout the study period. The data employed for this study are secondary data which were sourced from the NSE. Risk-free rate was proxied with treasury-bill rate, was sourced from Central Bank of Nigeria. The Ordinary Least Squares (OLS) technique was used. The study found that liquidity risk does not impact on low volatility anomaly in the Nigerian stock market. The study concludes that there is no strong relationship between liquidity risk and low volatility anomaly. This implies that liquidity risk is not an important driver of low volatility anomaly in the Nigerian stock market. The study recommends that investors and other stakeholders should maximise the opportunity of new information in the Nigerian stock market to trade in short-term investment horizon and avoid delay of the information because the market does not reward long-term investment horizon.

Keywords: Stocks trading, short-term investment horizon, long-term investment horizon.

JEL Classification: C33, G11, G12.

1. Introduction

The sensitivity of stock return to risk and uncertainty has gained considerable efforts among researchers in the finance literatures. This is because the concept of risk and return form the basis of investment objective. In view of this, Sharpe (1964) proposed the capital asset pricing model (CAPM) which explains the influence of systematic risk exposure on expected return of a financial asset. This conforms to the assumption of Markowitz (1952) who expressed that the higher the volatility or risk of an asset, the higher the asset's return as conventional for investment decision.

However, evidence from the literatures (Oladele & Bradfieldy, 2016; Hartanto, 2019; among others) have shown that these assumptions do not hold in the stock market, due to the irrational behaviour of investors and the market structures. Similarly, Rogdeberg and Kland (2018) asserted that the CAPM-explained risk-return connection has been violated due to several anomalies that tend to dissipate or lessen over time and otherwise appear to be persistent over time.

The low volatility anomaly, discovered by Black, Jensen, and Scholes in 1972 while investigating the CAPM, is one of these anomalies. The risk-return relationship remains positive, but it is substantially flatter than projected, according to their research. They proved that the portfolio produces a greater return for a given degree of volatility and has statistically significant positive alpha.

In the same token, Harrisberg (2020) holds the view that low volatility anomaly is the deviation from linearity of risk-return relationship as suggested by CAPM and other traditional finance theory such as Modern portfolio theory (MPT), efficient market hypothesis, among others. This view negates the risk-return trade-off which emphasises that all investors act rationally in terms of how they process information about stocks, and that all investors are risk averse in the process of making investment decisions.

In addition, Malkiel and Fama (1970) believe that information incorporated into financial assets is always priced correctly and it prevents the asset to be traded at undervalued rate or at inflated prices. Thus, investors cannot make abnormal returns because they adopt buy-and-hold strategy, rather than active investment strategies. Contrary to this, Sarpong (2017) believes that active investment strategy addresses how investors can make abnormal returns and beat the market because the information incorporated in the asset prices are not significantly priced correctly always. Thus, this shows the relevance of active investment strategy that investor can devise various means to influence the behaviour of financial markets.

Thus, the implementation of various active strategies has led to low volatility anomaly, and this has drawn the attentions of many researchers to acknowledge the presence of low volatility anomaly and the likely factors that can influence it.

Mamer (2015) acknowledges the existence of low volatility from both academic and theoretical perspectives. Academically, he says that low volatility anomaly occurs when testing the validity of CAPM. Evidence of this anomaly has been documented by some pioneer academics who submit that securities with high-beta have corresponding negative alphas, and low-beta securities have corresponding positive alphas. From a theoretical perception, Mamer (2015) states that low volatility occurs when monthly returns of stocks with lower risks outperform monthly return of stocks with higher risks over the long run Ching, An-Pin, and Miao-Ling (2019) claimed that in spite of this, evidence reveals low volatility anomaly in some developed and emerging countries. But more of these studies were documented in the developed economies. This justifies the importance of conducting this research.

Evidence from the literature, particularly Seppälä (2016), Huskic and Baky (2017), and Hartanto (2019), has revealed the presence of a low volatility anomaly, defying conventional theories. Meanwhile, studies like Pandey and Samanta (2016), Blitza and Vidojevic (2017); and Pandey and Sehgal (2017), among others, corroborated the conventional theories and demonstrated the lack of a low volatility anomaly.

Thus, studies on low volatility anomaly revealed mixed results, and it is still unclear the extents to which assumptions hold, most especially in an emerging market like Nigeria.

More so, studies on low volatility anomaly have been debated beyond the existence of an inverse risk-return relationship to economic and behavioural explanations that justify its likely persistence. Some of these factors include but not limited to investors preferences for lottery-type payoffs, earnings shocks and earnings momentum, earnings forecasts from sell-side analysts, leverage limits and requirements to beat benchmarks short selling constraints, among others, which have been documented as the drivers of low volatility anomaly. But liquidity risk has been controlled, and interaction has not been documented (Ameni, Hasna & Mohamed 2017).

The study is distinct from the previous studies by examining the impact of liquidity risk on low volatility anomaly within the context of stock market in Nigeria. In view of this, the following research questions were stated and answered:

- i. How does low volatility anomaly exist in the Nigerian stock market?
- ii. What is the impact of liquidity risk on the existence of low volatility anomaly in the Nigerian stock market?

In line with the research questions, the following hypotheses were formulated:

- i. There is no relationship between low volatility anomaly and Nigerian stock market;
- ii. There is no linkage between liquidity risk and low volatility anomaly in the Nigerian stock market.

This study significantly contributes to the existing literature because studies on low volatility are very scanty in Nigeria.

The study is anchored on Fractal Market Hypothesis to explain impact of liquidity risk on low volatility anomaly which is different from the previous studies that adopted behavioural finance theory to explain low volatility anomaly. More so, portfolio managers, financial analysts or investment advisors would suffice to explore this study as a tool for initiating and executing decisions that could influence investment performance. Furthermore, the regulatory authorities in Nigerian stock markets could employ the findings of this study to influence their operations in respect to facilitating growth in these markets, as well as encouraging smooth trading.

The remaining sections of this paper are arranged as follow: section two presents the details of literature review, three outlines the methodology; four presents the result and discussion of findings, and section five details conclusion and recommendations.

2. Literature Review. Conceptual Review. Volatility

Volatility, according to Seppälä (2016), is the variation in price of a financial instrument that measures the risk of losing money over time. To him, an anomaly is a systematic divergence from theoretical expectation that provides anticipated opportunities for abnormal returns.

Seppälä (2016) idea of anomaly contradicts the classical CAPM, which predicts higher expected returns for higher risk stocks (Qian, & Qian, 2017).

On the other hand, Anderson and Noss (2013) posit that liquidity is the relative easiness with which an investor is able to buy or sell a security without their act of buying or selling having a substantial effect on its price. Thus, stocks with high liquidity are traded frequently, have high volumes and often perfectly mirror the estimated value and profitability of the company whose asset it represents.

According to Weimer (2015), liquidity risk is the danger of illiquidity in the market, which occurs when there is a lack of liquidity in the market, resulting in an imbalance between buyers and sellers in the market. When there are more buyers than sellers, supply and demand indicates that the price will rise; conversely, when there are more sellers than customers, supply and demand dictates that the price will fall.

And, despite the fact that several liquidity measures have been found in the literature, the Amihud (2002) measure is adopted for the purposes of this study.

Fractal Market Hypothesis

Contrary to the assumption of EMH, Buchanan (2013) is of the opinion that financial crises ranging from flash crashes to global financial meltdowns relate to waves in the socioeconomic system, which forces the economy to adapt to new circumstances which cannot be captured by the assumption of Efficient-Market Hypothesis (EMH). Market failures and crashes sometimes occur with no shifts from economic fundamentals, but as a result of herding behaviours which could lead to price changes and volatility (Moradi, Nooghabi & Rounaghi, 2019).

Accordingly, Peters proposed the Fractal Market Hypothesis (FMH) in 1991, which seeks to explain the complexity of financial markets by using mathematical laws. Following is an assumption of FMH proposed by Peter (1991): There are many different investment horizons represented in the market; information has different effects on different investment horizons; the stability of the market is largely a matter of liquidity (the balance of supply and demand); prices reflect a combination of short-term technical trading and long-term fundamental valuation; and if a security has no connection to the economic cycle, there will be no long-term trend; and trading, liquidity, and an increase in supply and demand are all important factors in the market.

Specifically, the FMH seriously undermines the rationality of investors as price takers, the use of generic information, and the stability of the market. In addition, the FMH makes the following assumptions about the situation: The market is stable because it is comprised of investors with a diverse range of investment horizons; it guarantees that traders possess adequate liquidity; the information set is more pertinent to market sentiment and technical factors in the short-run than in the long-run; prices represent a mixture of short-term fundamental valuation and long-term fundamental valuation, among other things; and prices portray a combination of short-term fundamental valuation and long-term fundamental valuation, among other things.

However, Velasquéz, (2009) identified the limitations of FMH, which are but not limited to the following: it is not a unique framework because it doesn't contain its main postulate but encompasses multiple issues in different fields; the investigation of FMH is limited to the extent of literatures which still need further development; the concepts of FMH are redefined or complemented continuously due to emerging issues and ideas.

Moradi, Nooghabi, and Rounaghi (2019) emphasise that markets are characterised with the actions of investors and availability of information at a given point. Thus, in stable times, information does not determine assets or market prices because investors in the long-run balance out the numbers of investors in the short-run; while in bearish markets, investors tend to respond to price fluctuations and information by focusing on short-term horizons.

Sarpong (2017) stresses that investors who hold illiquid assets involves in less trading because there is rarely recent information on which to trade or adjust expectations and discount rates. This could result to excess volatility in financial markets in the long run for investors. This corroborated with evidence of Fama (2016) that absence of information may signifies illiquidity that discourage investors in the short run because investors require a quick exit at a low cost. This prompts long-term investors who are rewarded for illiquidity risk in the long-run to dominate illiquid small stocks.

On the other hand, Sarpong (2017) emphasises that highly available information attracts a large number of investors with varying time horizons to take opposing sides of each exchange, resulting in high liquidity from which efficient markets will operate. This could lead rational investors to change their expectations and discount rates, resulting in high volatility with the potential of reducing returns.

This shows that the FMH explain the concept of low volatility anomaly, and the thrust of this study will be anchored on the FMH.

Empirical Review

Oladele and Bradfieldy (2016) examine the effect of low volatility on sector-based portfolios in South Africa. The study covered between 2006 and 2013. The study uses descriptive and correlation matrix in assessing range of sector-based low volatility portfolio in South Africa. It reveals that low instability portfolios outshine market capitalization-weighted index in all segments. The study concludes that coalescing low-volatility portfolios with consistent market-capitalization weighted portfolios can be a feasible and successful portfolio plan.

Jacqmin (2016) employs Sharpe ratio and regression to examine volatility effect in US stocks. It was found that the alpha for the low-volatility quintile is positive for low-volatility stocks and negative for high-volatility stocks. The study concludes that low-volatility anomaly occurrence does not depend on liquidity issue.

Pandey and Samanta (2016) investigate the effect of low Volatility Anomaly on Indian Stock Market. Secondary data collected for the period January 2001 to December 2014 was employed using regression technique to analyse the data. The result shows that

average excess returns rise gradually from the lowest to the highest volatility portfolio. They finalised that there is no low volatility irregularity in the Indian stock market.

Seppälä (2016) examines existence of anomaly in open mobile exchange (OMX) Helsinki stock exchange between years 2001 and 2016. Fama-Macbeth two step regression approach was adopted. Finding reveals that low-volatility stocks outdid high-volatility stocks in OMX Helsinki. The study concludes that traditional economic concepts, such as the capital asset pricing model, were ineffective in Finland's stock markets.

Li, Sullivan, and Garcia-Feijóo, (2016) investigated the role of market mispricing or to compensation for higher systematic factor risk on low-volatility stocks. Fama-MacBeth two step regression was used for the study. It founds that compensation for systemic factor risk was not the only factor that influences high returns of low-volatility portfolio, but other factors do. It indicates that excess returns were more likely to be prompted by market mispricing associated with volatility as a stock attribute than by other sources of information.

Blau and Whitby (2017) examine low volatility anomaly by comparing range-based measure of volatility with the expected return. Fama-MacBeth two stage regression was used and it was found that alphas are generally decreasing across rising range-based volatility portfolios. The study concludes that low volatility anomaly exists in both domestic and foreign markets.

Huskic and Bakøy (2017) assess the existence of low-volatility anomaly in Oslo Stock Exchange using Fama-Macbeth regression approach. It was documented that the low-volatility portfolio outperforms the high-volatility portfolio, with output decreasing monotonically as risk increases. It concludes that the Norwegian stock market has a low-volatility phenomenon.

Pandey and Sehgal (2017) conducted a study on volatility effect in stock returns for India. Regression analysis was used and absence of a volatility anomaly has been documented. It concludes that firm quality factor, which is based on cash flow fluctuations, explains the volatility trends in comparison to profitability.

Blitza and Vidojevic (2017) conducted a study on low volatility anomaly using Fama-French five-factor model. Fama-french five factors and regression analysis was used. It found that exposure to market beta in the cross-section is not rewarded with a positive premium. The study concludes that the low-risk phenomenon is not explained by the five-factor model.

To describe the low volatility phenomenon on the Johannesburg stock exchange, Sarpong (2017) uses the Fractal Market Hypothesis (FMH) and Chaos Theory. The study applies the Rescaled Range analysis and ordinary least square as the estimation techniques. It was discovered that domestic equity fund managers are the driving force behind the JSE's low volatility phenomena. It was concluded that a high level of liquidity and information is associated with a high level of volatility.

Nydal and Hgenhaug (2018) investigate if there is a low volatility anomaly in the Norwegian stock market and find that there is. The results of the regression study revealed that high idiosyncratic volatility stocks outperformed low idiosyncratic volatility stocks, which may be further explained by mean return reversals in the stock market. It comes to the conclusion that high volatility stocks have high returns in the short term while experiencing high volatility, but that returns have restored to normal after experiencing high volatility in the long run.

Rogdeberg and Økland (2018) employ Fama-French five-factor model to confirm whether low volatility anomaly hold or not in the Norwegian stock market. Regression analysis was used and it was found that the existence of low volatility anomaly was significant when a number of systemic risk factors were used to explain the cross-sectional

return. It concludes that the assumption of low volatility anomaly holds in the Norwegian stock market.

Li and Sullivan (2018) examine the Low-Volatility Anomaly: Market Evidence on Systematic Risk vs. Mispricing The study covers a 46-year period. The results from cross-sectional analyses show that normal returns to low-volatility portfolios are gritty by mutual variations linked with the idiosyncratic-volatility typical somewhat than factor loadings.

Driessen, Kuiper, Nazliben, and Beilo (2019) assess sensitivity of interest rate to low-volatility anomaly. Fama-MacBeth regressions were employed and it was documented that low-volatility stock portfolios have negative interest rate exposure, whereas high-volatility stock portfolios have positive interest rate exposure. It concludes that interest rate exposure explains the low volatility paradox, and that interest rate premium in the stock market is much higher than the bond market premium.

In the context of Nigeria, Nageri, Lawal and Abdul (2019) examine the risk-return relationship in two distinct periods: prior to and during the economic meltdown of 2007-2009. The study discovered a negative risk-return relation in the period prior to and following the crisis, indicating that investors in the Nigerian stock market incur more risk in proportion to return. According to the findings of the study, the market was inefficient and should be effectively monitored in order to dissuade too enthusiastic noise traders from entering the market.

Hartanto (2019) examines the role of size effect on low volatility anomaly. The study uses regression as the estimation technique. It finds that low volatility anomaly holds in small stocks but not in big stocks. The study concludes that size factor is one of the drivers that drives low volatility anomaly in the US stocks market.

Hsu, Wei, and Chen (2019) investigate effect of funding liquidity risk to institutional investors on low-volatility anomaly. Fama-Macbeth two step regressions was used. It was discovered that the low-volatility anomaly is most recognised when funding liquidity risk is high; whereas the low-volatility reversal is documented when funding liquidity risk is low. The study concludes that when the selling pressure is high on high-volatility stocks, it could lead to high funding liquidity risk, resulting in the low-volatility anomaly.

Joshiyura and Joshiyura (2019) present details on the volatility effect from the Indian market. Regression analysis was used and it was confirmed that the portfolio comprise of low volatility stocks outperforms the portfolio consists of high volatility stocks. The study concludes that the low-volatility portfolio has a large exposure to growth stocks, as opposed to the value tilt seen in developed market low-volatility portfolios.

A study by Ching, An-Pin, and Miao-Ling (2019) examines whether the funding liquidity risk confronted by institutional investors has an impact on the negative relationship between anticipated returns and variance (the 'Low-volatility anomaly'). The Taiwan Stock Market provides evidence. The model utilised was a multivariate Markov switching model. The funding liquidity risk modelling, on the other hand, allowed for time-varying transition probabilities of the regime-switching process to reflect changes in the funding liquidity risk regime, which was captured by the funding liquidity risk modelling. According to the findings, the low-volatility anomaly is particularly noticeable when there is a large level of funding liquidity risk. When there is a minimal risk of funding liquidity, on the other hand, the low-volatility anomaly has a considerable reversal in its direction. These findings suggest that greater funding liquidity risk as a result of a financial shock conveyed from parent banks is connected with increased selling pressure on high-volatility equities held by institutional investors, resulting in the low-volatility anomaly.

Joshiyura and Joshiyura (2020) assess the impact of low volatility on the Indian stock market and come up with some interesting findings. In the study, 500 of the most liquid stocks on the National Stock Exchange (NSE) of India were used during a period of 14 years, from January 2004 to December 2018. The data was tested using regression analysis. The findings demonstrate that the low-risk effect is independent of the size, value, and push effects, and that it is robust even after adjusting for variables such as the liquidity and ticket-size of stocks. It is also documented that the low-risk effect is a blend of stock and sector level effects, and that it cannot be captured completely by a concentrated sector disclosure.

Harrisberg (2020) investigates whether or not the premise of a low-volatility anomaly is valid in the Johannesburg Stock Exchange (JSE). A technique based on Fama-Macbeth two-stage regression was utilised, and it was discovered that the low-volatility anomaly continues to exist on the JSE. It was gathered that the concept of risk does not adequately depict the genuine risk-return relationship that a reasonable investor would accept when deciding between assets that are high-risk but also have a high reward potential when choosing between them.

Using data from the top-500 liquid stocks listed on the National Stock Exchange (NSE) of India from January 2004 to December 2018, Joshiyura and Joshiyura (2020) conclude that the Indian stock market has a low-risk effect on the economy. It was determined using regression analysis that low-risk stocks outperformed high-risk ones. This was previously anticipated. According to the findings of the study, a combination of the momentum effect and the low-volatility effect can improve the performance of a low-risk investing approach.

Using data from the Nigerian equities market, Omokehinde and Olurin (2020) investigate the irrational behaviour of investors in the high-risk market. The estimate tools used in this work are the Jensen ALPHA, CAPM, Sortino, Shapre, Treynor, and Fama's return decomposition, among others. This study discovers that the excess of market and portfolio returns above risk-free returns was almost always negative. It comes to the conclusion that investors in the Nigerian equities market acted irrationally, and that they will avoid taking on further risk until the risk premium is appropriately paid by other factors.

Burggraf and Rudolf (2020) acknowledge the presence of low volatility anomaly in the cryptocurrency market. Regression was employed as tool for analysis. The study confirms absence of low volatility anomaly in the currency markets. Thus, it concludes that cryptocurrencies are more efficient and it is based on the assumption of the higher risk yields, the higher return.

Seetharam (2021) analyses the presence of low-risk anomaly (LRA) in South Africa. It finds that LRA exists on the JSE using univariate sorts but absent when multivariate portfolio sorts were used. It concludes that under conventional proxies, the risk–return relationship is negative and deterministic, but linear under a Kalman filter.

According to Hwang, Rubesam, and Salmon (2021), the influence of beta herding on the low-beta anomaly in the United Kingdom is being investigated. Estimation was accomplished by the use of regression. It demonstrates that overconfidence results in beta herding, but under-confidence results in detrimental beta herding, which may result in a low-beta anomaly. According to the findings of the study, investors' preferences for lottery-like assets, sentiment, and return reversals, as well as beta herding, cause temporal variation in betas to increase with time.

It is explicit from the reviewed literature that there are very few studies on low volatility anomaly with respect to Nigerian stock market. Thus the study investigates the

volatility anomaly in Nigerian stock market. Furthermore, the study examines impact of liquidity risk on low volatility anomaly in Nigerian stock market.

3. Methodology

Research Design

The study was conducted using an ex-post facto research design. Research designs such as this one examines past occurrences to gain an understanding of the present situation. At the very least, this type of design incorporates a dependent and an independent variable into the equation. The design is chosen since it cannot be changed by the investigator at a later time.

Sources of Data

The data employed for this study are stock prices and market index sourced from Nigerian Stock Exchange (NSE), and risk-free rate proxy with treasury-bill rate sourced from Central Bank of Nigeria.

Population of the study

The population includes all companies listed on the Nigerian Stock Exchange (NSE) for the ten-year period from January 2011 to December 2020. The choice of this period is informed by the beta estimates, as the study intends to estimate 30-days beta. This was considered appropriate and is in line with the findings of Dadakas, Karpetis, Fassas, & Varelas (2016).

Sampling and Sampling Technique

The purposive sampling technique was used to select forty-one companies that are actively traded on a regular basis.

Model Specification

The Fama-MacBeth two step regression approaches were used and the models are specified below:.

$$R_{i,m(t)} = \log P_{i,m(t)} - \log P_{i,m(t-1)} \dots \dots \dots 1$$

Where $R_{i,m(t)}$ denotes the return on security, say (i) and market return, say (m) at time t. $P_{i,m(t)}$ represents the current price of security, say (i) and current market price, say (m); while $P_{i,m(t-1)}$ represents the previous price of security, say(i) and the last price market, say (m).

This method of computing return followed the approach of Zubairu and Oyedeko (2017). This model is specified in both first and second-pass regression.

The first-pass regression is specified below:

$$R_t - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + \varepsilon_t \dots \dots \dots 2$$

Where: α is coefficient /constant of the regression, β represents the sensitivity or Beta, $R_t - R_{ft}$ represents the excess return of the security at time t, $R_{mt} - R_{ft}$ is the market premium at time t, ε is the residual term.

The estimated beta, i.e., β_i is then used as the independent variable in the following two-pass regression equation:

$$\bar{r}_i = \lambda_0 + \lambda_1 \beta_i + \varepsilon_1 \dots \dots \dots 3$$

Where: \bar{r}_i is the average return of ith security, λ_0 is the intercept, λ_1 is the regression parameter, β_i is the estimated of the Beta, and ε_1 is the random variable.

The model can be transformed into two-factor CAPM by controlling for the co-skewness and this is stated below:

$$\tilde{r}_i = \lambda_0 + \lambda_1 \beta_i + \lambda_2 \beta_i^2 + \varepsilon_1 \dots \dots \dots 4$$

Where: β^2 is the co-skewness.

Also, the model can be transform to four-moments CAPM by controlling for co-kurtosis, as specified below:

$$\tilde{r}_i = \lambda_0 + \lambda_1 \beta_i + \lambda_2 \beta_i^2 + \lambda_3 \beta_i^3 + \varepsilon_1 \dots \dots \dots 5$$

Where: β^3 is the co-kurtosis.

The model can be augmented by introducing liquidity risk as a independent variable, e.g.:

$$\tilde{r}_i = \lambda_0 + \lambda_1 \beta_i + \lambda_2 \beta_i^2 + \lambda_3 \beta_i^3 + \lambda_4 \beta_{liq} + \varepsilon_1 \dots \dots \dots 6$$

Where: β_{liq} is the beta from the liquidity risk?

The liquidity risk is computed using the Amihud (2002) illiquidity measure, as shown below:

$$Illiquidity_{i,t} = \frac{|R_{i,t}|}{Volume_{i,t}} \dots \dots \dots 7$$

Where: $R_{i,t}$ is the return on stock i in month t , and $volume_{i,t}$ is trading volume in Nigerian stock market for stock i in month t .

Estimation Procedure

The portfolio was sorted equally into decile using the betas of the market premium and the liquidity premium. This procedure involves running expected return regressions before and after adding liquidity risk that may explain the outperformance of low-volatility stocks and assessing how the alpha generated by the regression model changes with the liquidity risk.

Also, the study controls for co-skewness and co-kurtosis because only beta may be inadequate to explain the variation in return, and most time assets return are not normally distributed.

Results and Discussion of Findings

Results

The result obtained based on the descriptive statistics is reported concisely in Table 1. The result reveals the average values of return, covariance (i.e. beta), co-skewness, co-kurtosis and liquidity risk for the study period from 2011 to 2020, which are 0.0117179, .4922946, .3451626, .2365402 and -.0411307 respectively. It is overt that return has a tendency to increase with covariance, co-skewness and co-kurtosis, but decrease with the liquidity risk during the sampling periods. The return value ranges from -.0055191 to .456, which implies that there were tendencies of making loses and capital gains on the market trading activities within the sample period.

The covariance ranges from -1.104066 to 1.405545. And this indicated that the securities are defensive in nature, therefore, investors can militate against this risk by holding the stock such that in good times high returns are required to compensate for the expected low returns during the bad times.

The co-skewness value ranges from .0000678 to 1.975556. And this implies that at some point in time the co-skewness tends to be less volatile than the market, but at some other times it tends to be more volatile than the market.

Co-kurtosis value ranges from -1.345813 to 2.776733, and this implies that co-kurtosis is more volatile than the market at some time and less volatile than the market at some time. The liquidity value ranges from -.1614433 to .7110608.

The values of standard deviation on the table indicate that co-kurtosis risk is more volatile among the variables, while the least variable among the variables is return.

Table 1. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Covariance	.4922946	.3210297	-1.104066	1.405545
Co-Skew	.3451626	.3554132	.0000678	1.975556
Co-Kurt	.2365402	.4134166	-1.345813	2.776733
Liq	-.0411307	.0935956	-.1614433	.7110608
Ret	.0027718	.0297125	-.0055191	.456

Source: Author's Computation (2021) Using E-view 10

The correlation matrix as presented in Table 2 reveals that covariance has a positive correlation with co-skewness, co-kurtosis, and liquidity in the first pair. This implies that covariance moves in the same direction with co-skewness, co-kurtosis, and liquidity.

In the second pair of the result, co-skewness has positive correlation with co-kurtosis and liquidity, and this implies that they moves in the same direction.

However, the result of the third pair shows negative correlation between the co-kurtosis and liquidity. This signifies that they move in negative direction.

Also the study shows that the highest coefficient of correlation is 0.8680, which is strong but not perfect. Thus, there is absence of multicollinearity among the variables.

The study proceeds to estimate the capital asset pricing model, and the results are presented in Tables 4.3, 4.4, 4.5, 4.6 and 4.7.

Table 2. Correlation Matrix

Statistics	Co-variance	Co-Skewness	Co-Kurtosis	Liquidity
Covariance	1.0000			
Co-Skewness	0.8371	1.0000		
Co-Kurtosis	0.8188	0.8680	1.0000	
Liquidity	0.0135	0.0171	-0.0809	1.0000

Source: Author's Computation (2021) Using E-view 10

Evidence is shown in Table 3 that the systematic risk-return relation does not corroborate with the assumption of CAPM. Thus, this assumption was falsified under P2, P3, P4, P5, P6, P7, P8 and P9. This shows the presence of volatility anomaly, while the P10 is in line with the convention of risk-return trade-off. In addition, the result shows some portfolios violate the apriori of CAPM. This implies that the validity of CAPM is weak in the Nigerian stock market. Thus, the study shows that low volatility anomaly exist in the Nigerian stock market, but not persistent. Also, it was observed that the coefficient of determinations of the portfolios is very low and this could be an indication of noise in the Nigerian stock market.

Table 3. Capital Asset Pricing Model of Sorted Portfolio

Statistics	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Alpha	-0.00083	-0.00091	0.010956	0.006683	-0.06724	0.000377	0.006005	0.003038	-0.00113	-0.00181
T-value	(-1.18109)	(2.519524)	(1.247157)	(0.051942)	(-0.41228)	(0.823068)	(1.281406)	(0.802448)	(-2.9243)	(-3.30582)
Beta	-0.00012	0.002654	0.000288	0.314782	0.454261	-0.00027	-0.00319	-0.00119	0.001637	-0.00157
T-value	(-0.11331)	(-1.37252)	(0.051539)	(1.16262)	(1.298872)	(-0.29389)	(-0.48684)	(-0.19944)	(2.443733)	(-1.71428)
R-Square	0.000329	0.139984	6.81E-05	0.033498	0.041464	0.00221	0.00604	0.001019	0.132791	0.070073
Adj-R ²	-0.0253	0.117932	-0.02557	0.008715	0.016887	-0.02337	-0.01945	-0.0246	0.110554	0.046228

Note: The P1-P10 represents portfolio 1 (lowest volatile portfolio) to portfolio 10 (Highest volatile portfolio) respectively, and the critical value for t-test with 39 Degrees of freedom @ 95% level is 2.023. The degree of freedom is arrived at using (n-k), where n is the number of observations and k is the number of variables.

Source: Author's Computation (2021) Using E-view 10.

In table 4 the study controls for co-skewness because it is assumed that higher volatility will have positive co-skewness, and is one of the reasons why the market is overpriced. Thus, higher skewness signifies higher probability of extreme return. Thus, controlling for the skewness in the study does not validate the assumption of risk-return trade-off among the portfolios, which implies that the assumption of low volatility anomaly holds in the market.

The introduction of skewness to CAPM results into two factor CAPM. Also, the adjusted R-square explains the variation in the two-factor CAPM as compared with single factor model. Therefore, the result from table 4 shows that the two-factor model slightly improves the explanatory power of the CAPM in the Nigerian stock market. This occurs under the P2, P6 and P10. Similarly, like the single factor model, the risk premium factors in the two-factor model are not significantly priced under some of the portfolios. And this violate a-priori stance of the model.

Table 4. Capital Asset Pricing Model of Sorted Portfolio after Controlling for Co-Skewness

Statistics	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Alpha	-0.00133	0.001339	0.029708	-0.00544	-0.15395	-0.00041	0.005373	0.002569	-0.00136	-0.00127
T-value	(-0.74827)	(0.896688)	(1.401931)	(-0.04053)	(-0.68825)	(-0.79113)	(0.616846)	(0.431787)	(-2.51313)	(-1.35701)
Beta	0.001734	-0.00721	-0.0311	0.266277	0.981127	0.005573	-0.00075	0.000269	0.002891	-0.00382
T-value	(0.286522)	(-1.20492)	(-0.94951)	(0.878184)	(0.994909)	(2.396522)	(-0.02565)	(0.017518)	(1.335359)	(-1.16512)
Co-Skew	-0.00149	0.008999	-0.00367	0.117371	-0.49517	-0.00506	-0.00195	-0.00078	-0.00101	0.001819
T-value	(-0.31067)	(1.673322)	(-0.97255)	(0.372273)	(-0.57213)	(-2.69195)	(-0.0865)	(-0.10308)	(-0.60954)	(0.715865)
R-Square	0.002862	0.199005	0.024353	0.0370	0.049651	0.162013	0.006236	0.001298	0.141188	0.034154
Adj-R ²	-0.04962	0.156847	-0.027	-0.01367	-0.00037	0.117909	-0.04607	-0.05127	0.095987	0.082447

Note: The P1-P10 represents portfolio 1 (lowest volatile portfolio) to portfolio 10 (Highest volatile portfolio) respectively, and the critical value for t-test with 38 Degrees of freedom @ 95% level is 2.024. The degree of freedom is arrived at using (n-k), where n is the number of observations and k is the number of variables.

Source: Author's Computation (2021) Using E-view 10.

Also, the study controls for co-kurtosis alongside with the co-skewness. And this transforms the single factor CAPM to four moment factor CAPM. A lower kurtosis simply implies lower chances to experience extreme return. Thus, higher volatility stocks could have a lower co-kurtosis with the market portfolio while the low volatility anomaly has higher co-kurtosis.

The result from table 5 shows the reverse relationship between the systematic risk and expected return having controlled for both skewness and kurtosis. This occurs under some of the Portfolios such as P4, P5, P6, P8, P9 and P10. This connotes an anomaly in the market. Also, the covariance, co-skewness and co-kurtosis are not significantly priced under some of the portfolio, and this violates the assumption of the model. However, the four moments pricing model slightly improves the explanatory power of the two moment CAPM, especially under P2 and P9 as reported by the adjusted R-Squared.

Table 5. Capital Asset Pricing Model of Sorted Portfolio after Controlling for Co-Skewness and Co-Kurtosis

Statistics	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Alpha	-0.00226	0.005117	0.011258	-0.17282	0.190731	-0.0005	0.000277	0.002569	-0.00183	0.001356
T-value	(-0.51072)	(2.259858)	(0.246956)	(-0.93571)	(0.638053)	(-0.88258)	(0.025187)	(0.431787)	(-2.66188)	(0.761786)
Beta	0.006992	-0.02904	0.057759	1.117213	-2.8919	0.007265	0.041222	0.000269	0.007939	-0.02104
T-value	(0.294859)	(-2.49123)	(0.293741)	(1.556194)	(-1.16276)	(1.556047)	(0.662744)	(0.017518)	(1.566591)	(-1.99963)
Co-Skew	-0.01037	0.036766	-0.08839	0.217262	8.067416	-0.00908	-0.08679	0.000269	-0.01137	0.030948
T-Value	(-0.26588)	(2.64403)	(-0.47822)	(0.67547)	(1.569653)	(-0.93053)	(-0.76608)	(0.017518)	(-1.19001)	(1.805809)
Co-Kurt	0.004623	-0.01422	1.24E-05	-0.86778	-4.66333	0.002137	0.048198	-0.00078	0.00527	-0.01379
T-Value	(0.229545)	(-2.14898)	(0.458463)	(-1.30507)	(-1.68899)	(0.419473)	(0.764307)	(-0.10308)	(1.100987)	(-1.71772)
R-Square	0.00428	0.287887	0.029864	0.079388	0.117677	0.16598	0.02249	0.001298	0.168431	0.150213
Adj-R ²	-0.07645	0.230148	-0.0488	0.004744	0.046138	0.098356	-0.08612	-0.05127	0.101006	0.081311

Note: The P1-P10 represents portfolio 1 (lowest volatile portfolio) to portfolio 10 (Highest volatile portfolio) respectively, and the critical value for t-test with 37 Degrees of freedom @ 95% level is 2.026. The degree of freedom is arrived at using (n-k), where n is the number of observations and k is the number of variables.

Source: Author's Computation (2021) Using E-view 10.

Evidence has been documented in the literature that liquidity is significantly priced, i.e., it determines the assets return. Lam and Tam (2011) posited that investors require higher return for less liquid assets, and accept a low return for more liquid asset. The implication is that there is positive relationship between return and liquidity, while there is a negative relationship between return and liquidity risk. And why the study examines the impact of liquidity risk alongside higher moment. .

The result presented in Table 6 shows that there is presence of low volatility anomaly. This occurs under some of the portfolios such as P4, P6 and P7. Also under P2, P3, and P5 where there is increase in abnormal return shows a corresponding decrease in the liquidity. This suggests that liquidity risk does not serves as an explanatory variable for the low volatility anomaly. This reveals that liquidity risk does not improve the explanatory power of the four moments CAPM, and this was reported by the adjusted R-Squared.

Table 6. Capital Asset Pricing Model of Sorted Portfolio after Controlling for Higher Moment and Liquidity

Statistics	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Alpha	-0.00286	0.005073	0.00937	-0.18689	0.147688	-0.00031	-0.00163	0.085514	0.005811	0.001069
T-value	(-0.63479)	(2.206871)	(0.199307)	(-1.00812)	(0.487448)	(-0.34631)	(-0.10366)	(1.584211)	(0.737995)	(0.578684)
Beta	0.008517	-0.02915	0.068507	1.330559	-3.07522	0.007168	0.041033	0.096856	0.007754	-0.02136
T-value	(0.356896)	(-2.46769)	(0.333569)	(1.771467)	(-1.23049)	(1.512053)	(0.650898)	(1.190867)	(1.52801)	(-2.01256)
Co-Skew	-0.01195	0.03696	-0.10065	0.203902	8.47199	-0.00901	-0.08608	-0.12649	-0.01113	0.031087
T-Value	(-0.30489)	(2.621092)	(-0.51424)	(0.632913)	(1.639682)	(-0.91221)	(-0.74927)	(-1.15695)	(-1.16421)	(0.799558)
Co-Kurt	0.005132	-0.01437	1.42E-05	-1.04123	-4.89138	0.002143	0.047768	0.03963	0.005235	-0.01376
T-Value	(0.253824)	(-2.13716)	(0.495227)	(-1.51157)	(-1.76162)	(0.415333)	(0.746922)	(1.127284)	(1.092857)	(-1.70073)
Liq	0.112272	0.028176	0.004331	-0.49091	-1.14438	0.004072	-0.05501	1.174922	0.048565	-0.0039
T-value	(0.858202)	(0.270935)	(0.215304)	(-0.97349)	(-0.93309)	(0.280698)	(-0.17252)	(1.741646)	(0.973763)	(-0.64943)
R-Square	0.024242	0.289336	0.031111	0.103001	0.138512	0.167801	0.02249	0.087614	0.189772	0.160053
Adj-R ²	-0.08418	0.210373	-0.07654	0.003334	0.042791	0.075334	-0.08612	-0.01376	0.099746	0.066726

Note: The P1-P10 represents portfolio 1 (lowest volatile portfolio) to portfolio 10 (Highest volatile portfolio) respectively, and the critical value for t-test with 36 Degrees of freedom @ 95% level is 2.028. The degree of freedom is arrived at using (n-k), where n is the number of observations and k is the number of variables.

Source: Authors' Computation (2021) Using E-view 10.

The result in the table 7 shows the interaction of liquidity with the systematic risk in order to examine the role of liquidity risk on the low volatility anomaly. From the analysis it is evidence that there is presence of low volatility anomaly under some of portfolio such as P2, P5 and P6. The interaction of liquidity risk with the systematic risk slightly improves the explanatory power of the model. This occurs most especially under the P2, P4, P5 and P9 and it is shown by the adjusted R-squared.

Table 7. Capital Asset Pricing Model of Sorted Portfolio and the role of Liquidity risk

Statistics	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Alpha	-0.00174	0.008023	0.009066	-0.21101	0.233281	-0.00077	-0.05136	0.092089	0.023262	-0.00053
T-value	(-0.33904)	(3.001175)	(0.849968)	(-1.13315)	(0.753204)	(-0.37021)	(-0.89662)	(0.734304)	(1.225398)	(-0.11028)
Beta	0.003856	-0.04105	0.082806	1.502549	-3.28717	0.008202	0.105861	0.076478	-0.02742	-0.01553
T-value	(0.148255)	(-3.18717)	(0.392634)	(1.962692)	(0.195575)	(1.287926)	(1.106733)	(0.212854)	(-0.77929)	(-0.79894)
Co-Skew	-0.00552	0.049328	-0.11761	0.298213	8.482656	-0.00939	-0.1057	-0.12609	-0.01324	0.03401
T-Value	(-0.13187)	(3.297621)	0.565268	(0.896198)	(1.651194)	(-0.92709)	(-0.90181)	(-1.1349)	(-1.35313)	(1.764332)
Co-Kurt	0.002038	-0.02031	1.66E-05	-1.28217	-4.99012	0.002343	0.057453	0.039518	0.006087	-0.01523
T-Value	(0.095088)	(-2.84364)	(0.561132)	(-1.77665)	(-1.80671)	(0.4429)	(0.883769)	(1.106789)	(1.251784)	(-1.66463)
Liq	-0.07736	-0.54685	-0.35606	0.397061	0.782484	-0.00603	-1.44751	1.251296	0.160452	-0.02068
T-value	(-0.18544)	(-1.76888)	(-0.3933)	(0.414902)	(0.385982)	(-0.13883)	(-0.91908)	(0.846358)	(1.321028)	(-0.44049)
Beta*Liq	0.33593	0.958281	0.400377	-2.71484	-5.39184	0.019457	1.544936	-0.23324	-0.23135	0.067556
T-Value	(0.479294)	(1.965902)	0.398183	(-1.09063)	(-1.1898)	(0.247208)	(0.902949)	(-0.05827)	(-1.01022)	(0.360444)
R-Square	0.030605	0.360006	0.035481	0.132483	0.172002	0.169252	0.044743	0.087702	0.212728	0.16316
Adj-R ²	-0.10788	0.268578	-0.10231	0.008553	0.053716	0.050573	-0.09172	-0.04263	0.10026	0.043611

Note: The P1-P10 represents portfolio 1 (lowest volatile portfolio) to portfolio 10 (Highest volatile portfolio) respectively, and the critical value for t-test with 35 Degrees of freedom @ 95% level is 2.030. The degree of freedom is arrived at using (n-k), where n is the number of observations and k is the number of variables

Source: Author's Computation (2021) Using E-view 10.

Discussion of Findings

Evidence from the analysis shows that there is presence of low volatility anomaly in the Nigerian stock market, but it is not persistence. This corroborates with the findings of Rogdeberg and Økland (2018). The explanation for the presence of other low volatility could be as a result of investors' irrational behaviour, such as over confidence, sentiment, among others. However, the study is not in line with the findings of Burggraf and Rudolf (2020), Seetharam (2020) among others.

Also it was found that the validity of the single factor, two factor, and the four moments capital asset pricing model are weak in the Nigerian stock market. This is because some of the portfolios reveals negative volatility premium, negative and significant alpha, which is an indication of anomaly in the market. This is inconsistent with the findings of Misra, Vishnani, and Mehrotra (2019). The consistency could be as a result of other factors such as size, momentum, profitability among others, which are relevant determinants of asset returns aside from covariance, co-skewness and co-kurtosis.

However, the study conforms to the findings of Leković, and Stanišić (2018), Agbatogun and Olowe (2019) among others. More so, it was discovered that liquidity risk does not prevent the low volatility anomaly. And this is inconsistent with the findings of Sarpong (2017), Hsu, et.al (2019) among others. The explanation for this is that investors do not change their holdings in response to new information in order to be compensated for liquidity risk. Contrary to this, the study conforms to the findings of Jacqmin (2016), Huskic and Bakøy (2017) among others.

Furthermore, the study finds that the coefficient of determinations of most of the portfolios is very low and this could signify price information inefficiency in the Nigerian stock market. This conforms to the findings of Bramante, Petrella and Zappa (2013). The explanation for this could be due to mispricing in the Nigerian stock market.

4. Conclusion and recommendations

The study examines the impact of liquidity risk on low volatility anomaly in Nigerian stock market. It found that there is existence of low volatility anomaly in the Nigerian stock market, and that liquidity risk does not serve as the driver of the anomaly. The results are inconsistent with the preaches of CAPM. Thus, the anomalous relationship can be attributed to higher systematic risk or hidden factors as suggested by Li, et. al (2016). The study controlled for co-skewness, co-kurtosis and liquidity risk alongside with systematic risk and it was documented that there is still presence but not persistence of low volatility anomaly in the stock market. This implies that the role of liquidity risk does not explain the low volatility anomaly in the Nigerian stock market. The study concludes that liquidity risk has no significant impact on low volatility anomaly. The study recommends that the Nigerian stock market regulators should put in place communication devices to communicate news and information on stock market activities daily to investors and other market participants. Also, the investors and other stakeholders should maximise the opportunity of new information to trade in short-term investment horizon and avoid the delay of the information because the market does not reward long-term investment horizon. The study suggests that further studies should control for more factors in the capital asset pricing model when examining the low volatility anomaly. Also, studies should focus on the sectors of the Nigerian stock market.

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INNOVATION STRATEGIES IMPLEMENTATION, SOURCE OF COMPETITIVE ADVANTAGE

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Abstract: *Competitive advantage can be defined as the achievement, by an organization, of superior products or services from a significant point of view for consumers, compared to the offers of similar items by competitors. The effective acquisition of the competitive advantage can be manifested by the renewal of the product, technology, equipment, management, marketing, financing, personnel, information, etc. The innovation strategy implemented in the respective business is based on the innovation method, through which the competitive advantage is achieved. The inclusion of innovative strategies in the development strategy of a company aims to improve the sustainability of production through new processes and technologies, while incorporating customer requirements. After analyzing the main types of strategies that can be applied by a company depending on its economic situation, the choice and implementation of those strategies that best correspond to the internal and external conditions in constant change must be the major concern of senior management. The theoretical aspects based on the literature are concretized in the case study approached in this paper.*

Key words: *strategy, innovation, development, production.*

Classification JEL: *L1, O32, O1.*

1. Introduction

The identification of competitive advantages at the organizational level can be manifested by the realization of products or services that present superior qualities for consumers, both in terms of quality and in terms of costs, so as to outperform similar offers of competitors.

The effective obtaining of the competitive advantage can be manifested by the renewal of the product, the technology, the equipment, the management, the commercialization, the financing, the personnel, the information, etc. There are a multitude of such factors that determine the competitive advantage that can be identified in the fields of: marketing and distribution; research & development; production and operations management; Financial Accountant; personnel and labor relations.

The integration of an innovative strategy in the organization's strategy can be a strong point through which the organization can succeed, in the long run, to increase its performance. This type of managerial approach must be manifested by adopting strategic decisions at the level of the top management of the organization.

In general, development strategies aim to improve the sustainability of production by integrating new processes and technologies, while also incorporating customer requirements. In order to reduce production costs, organizations that want to gain competitive advantage through innovative strategies must create and maximize the synergy created between the use of modern decision-making methods and the optimal and efficient use of all resources.

The choice of the strategy that best corresponds to the ever-changing internal and external conditions must be of major concern to senior management. The formulation of the strategy must provide concise information regarding: the company's presence on the market; strategies followed at company level; economic objectives pursued; other aspects of the unit's activity.

Following the analysis of the main types of strategies, which can be applied by a company depending on its economic situation, an innovative strategy can be defined to ensure the identification and maintenance of a competitive advantage generating added value and development opportunities.

2. Innovation strategies, the basis for obtaining competitive advantages

The definition of an innovation strategy is based on taking into account several determinants, resulting from those presented in the previous chapter: the political, socio-economic, technological and commercial environment of the organization; the creative-innovative, productive and marketing potential of the innovative organization; its available resources, depending on these factors, an organization may opt for one of the following innovation strategies or a combination of them.

The implementation of innovation strategies must be based on and generate technological advantages, as an important part of the strategy of a productive or service company. An argument in their favor would be that the technologies of a company, very expensive, change more difficult than the products that can be offered on the market and therefore their acquisition and capitalization must be thought out very carefully. The creation of competitive advantages in the competitive race can be manifested, in this case, by highlighting the equipment, technologies that the organization already has, so as to create the possibility of differentiation from competitors.

In order to gain competitive advantage by implementing innovative strategies, organizations have the opportunity to implement in their overall strategy, one or more such strategies (Figure 1).



Figure no. 1. Types of innovative strategies

Source: Processing after Albu, 2014

At the level of organizations that occupy the leading position in a market or one of the leading positions, a position that manifests itself technically and technologically or commercially, an offensive strategy can be implemented. This type of strategy has the role of determining the organization to maintain its positive trend on the market, by constantly increasing the market share or by identifying and accessing new markets. The competitive

advantage of these organizations can be manifested by diversifying production and improving product quality. Increasing the rate of customer attraction can be achieved by entering new markets, diversifying the field of activity, offering new benefits to customers.

When we talk about organizations that aim to maintain a market position, this fact can be manifested by adopting a defensive strategy whose main role is not to obtain a better market position but to maintain the current one, the continuous integration of technical and technological innovations and the use of weaknesses of competitors. Competitive advantages can also be noted in this case and they mainly involve the security generated by activation in a known field, approaching a path that involves fewer risks.

At the level of small organizations, which adopt a role of supplier of strong organizations, innovation strategies can be manifested by creating a dependence on large organizations, a dependency that can bring them various benefits, from obtaining contracts that offer them, in the long run a marketplace, as well as the chance to be noticed by other organizations. This kind of innovation strategy is called dependency strategy and can generate a competitive advantage derived from the advantages of large, strong organizations.

Organizations that have a significant capital, can express their desire to take over the news in the field, generated by other companies that occupy top positions in that field. In this case, by adopting an imitative innovation strategy, the organizations concerned can benefit from the latest developments in the field, even if this is manifested with some delay.

Starting from the use of one of the most well-known managerial tools, namely SWOT analysis, organizations can analyze the top companies, in terms of research, development and innovation, so that they can make the most of their weaknesses. This kind of approach is manifested by the implementation of an interstitial strategy.

The competitive advantages that can be obtained by applying such an approach can be generated by making the most of the weaknesses of other organizations working in the field.

One argument in favor of implementing innovation strategies in order to gain competitive advantage is that organizations must be able to make the most of new technologies in their field. This can create an undisputed advantage in the competitive game.

3. Competitive development through innovation. Illustrative example British American Tobacco

Regardless of the field in which an organization operates, its main objective is to develop and increase market competitiveness. Based on the theoretical considerations presented above, it can be stated that one way in which competitive advantages can be generated is to integrate in the own activity of organizations some technologies, products and services based on scientific research, development and innovation. Access to new developments in the field is costly and therefore organizations need to establish a strategy that allocates sufficient funds in this regard.

The strategic approach of innovation includes several major directions of action, including the finalization of the European Research Area (Zaman, Georgescu, 2013).

Increasing the capacity of some organizations to include state-of-the-art technologies in their work can be an important competitive advantage.

An example of this is the work of British American Tobacco. In order to include in its own activity new technologies, new manufacturing processes and especially new products, the company approaches the innovation strategies in several ways such as:

- promoting innovative business culture

- optimizing the use of research resources
- intensifying access to scientific research in its field of activity
- concentrating investments on the innovation side
- training of its own staff in order to increase their capacity to access news in the field

Not infrequently, on the occasion of various events attended by members of the company's management, they stated that the most important thing for British American Tobacco is innovation.

The inclusion of new, innovative products in the portfolio can lead to major changes in the history of a sector of activity such as the tobacco industry.

From the beginning of its activity and especially in recent years, British American Tobacco has approached the development strategy as focusing on rapid transformations that can only be achieved by integrating innovative strategies.

The needs of society in general and consumers in particular are changing at an accelerated pace. Everyone's expectations are growing and growing. Therefore, the strategy must include innovations in the field that meet the requirements of customers to the highest degree and generate competitive advantages for the organization. The basis of the innovation strategies approached by the company taken as a case study, consists in its desire to create a portfolio of products with low risk potential, which can offer the prospect of a better future for consumers.

As a result of this strategic approach, British American Tobacco's strategic portfolio consists of a growing range of potentially low-risk products. They are currently available in 28 countries around the world and will be launched in other markets. In this sense, the British American Tobacco company aims to offer consumers less risky variants of products containing tobacco and nicotine.

Starting from the presented aspects, it can be stated that the organization presented as a case study approaches an offensive innovation strategy. This type of strategy has the role of determining the organization to maintain its positive trend on the market, by constantly increasing the market share or by identifying and accessing new markets.

As part of this strategy, British American Tobacco has entered into a partnership agreement with McLaren Applied Technologies. This agreement is manifested primarily through an exchange of expertise and experience in the field of technology.

There is also an exchange of know-how regarding the construction of batteries, as well as the use of the most advanced materials that can be used in the manufacture of products and design (Economica.net, 2019). Both companies are willing to exchange ideas both in the field of product and process innovation and in the field of good practice.

In order to generate sustainable development in this field of the tobacco industry as well, companies must consider innovation as a primary objective of their activity.

Stimulating innovation in the existing supply chain at the level of British American Tobacco is also manifested through the collaboration with Kuehne + Nagel. According to the website of this major international logistics and transportation company, the collaboration between the two companies will lead to optimizing the management of the end-to-end supply chain for all commodities, inbound and outbound, worldwide, through a platform of information.

According to official data presented by the company and having a strategic science and technology division in its internal structure, British American Tobacco has invested over £ 1 billion in scientific research and product and technology development over the last four years (Ciutacu, 2021). In this way it was able to create a clear competitive advantage over the competition.

A major competitive advantage of including innovations in the field in the company's production activity is the reduction of the impact on health, by producing a range of products less risky for consumers.

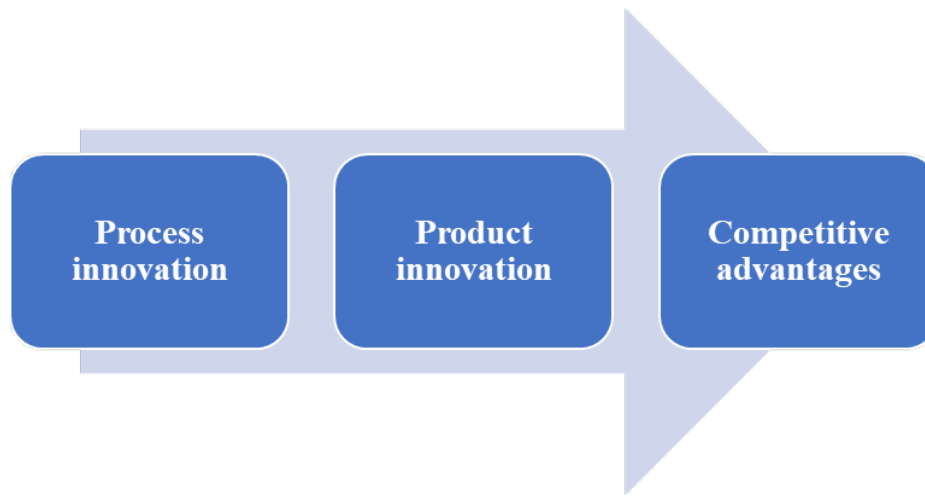


Figure no. 2. Competitive advantage, effect of innovative aspects
Avantajul competitiv, efect al aspectelor inovative

4. Conclusions

Starting from the theoretical aspects presented in the paper as well as based on their exemplification through the case study, it can be argued that there are many advantages obtained as a result of synergy and complementarity between process innovation, products and integration of innovation strategies in organizational strategy. In the context of the implementation of innovation strategies, investments can be made in the development of advanced technologies that can generate competitive advantages over the competition.

Collaboration between innovative companies, support for scientific research and the development of innovation projects are advantages that economic entities must use. Supporting innovation initiatives involves costs that organizations must base on the overall strategy and in particular on innovation strategies.

Approaching a strategy that best corresponds to the internal and external conditions in which the company operates must be the major concern of managers. The formulation of an innovation strategy must generate concrete information regarding: the company's presence on the market; strategies followed at company level; economic objectives pursued; other aspects of the unit's activity.

The identification, maintenance and continued use of the competitive advantages generated by the integration of innovation strategies into the strategy of organizations implies a synergistic approach to all aspects of economics, science and innovation.

As part of innovation management, innovation strategies determine the extent to which innovation can be included in the organization's strategy to determine its competitive advantages.

In order to choose the optimal innovation strategy for their own business, managers must analyze the characteristics of each type of strategy so that they can implement a set of aspects that generate competitive advantages.

Through the case study approached, it was possible to illustrate the fact that, regardless of the field of activity, innovation has the role of generating benefits for the

organization. At British American Tobacco, innovative strategies have contributed to the launch of new products with outstanding features. Because it is a health-damaging industry, differentiating it from the competition can be quite difficult.

A major competitive advantage of including innovations in the field in the company's production activity is the reduction of the impact on health, by producing a range of products less risky for consumers.

The exchange of know-how regarding the development of new technologies, as well as the use of the most advanced materials that can be used in the manufacture of products generates major changes in the history of a sector of activity such as the tobacco industry. be considered an innovative company in its field of activity.

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THEORETICAL APPROACH OF ILLIGAL FINANCIAL FLOWS' DEFINING AND IDENTIFICATION

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Abstract: *The last decade has perceived illicit financial flows as a growing concern and threat to human progress. The topicality of this research is conditioned by the need for a scientific approach to the phenomenon of illicit financial flows to analyze its complexity (all dimensions and facets). At the same time, it is imperative to evaluate the existing methodologies for quantifying illicit financial flows in order to develop a methodology, which will be relevant for the Republic of Moldova, with the aim to reduce the economic-financial and social risks through their efficient management and to reap the benefits of the recovered financial flows. The purpose of the research carried out consists in the theoretical substantiation of the process of identification and evaluation of illicit financial flows. In order to achieve the proposed goal, the following objectives were proposed: identifying the conceptual-methodological landmarks of the concept of illicit financial flow; researching the fundamental methodological elements for evaluating illicit financial flows.*

Keywords: *illicit financial flow, balance of payments, exports, imports, external debt, Global Financial Integrity.*

JEL Classification: E26, K42.

1. Introduction

The topicality of the research theme is conditioned by the need for a scientific approach of the phenomenon of illicit financial flows to perceive its complexity (all dimensions and facets), at the same time, it is imperative to evaluate the existing methodologies for quantifying illicit financial flows in order to develop a sustainable methodologies for the Republic of Moldova, the aim being to reduce the economic-financial and social risks by efficiently managing them and reaping the benefits of the recovered financial flows. The state, through its institutions, must act as a whole in order to ensure economic and financial stability by increasing budget revenues.

The purpose of the research carried out consists in the theoretical substantiation of the process of identification and evaluation of illicit financial flows. In order to achieve the proposed goal, the following objectives have been proposed:

- identifying the conceptual-methodological landmarks of the concept of illicit financial flow;
- researching the fundamental methodological elements for evaluating illicit financial flows.

Therefore, *the importance of identifying and assessing illicit financial flows is evident in the context of providing the state budget with additional revenues that will allow the development of major investment projects at the country level, as well as improving the social problems of Moldovan citizens.*

The research methodology was based on the following methods and techniques: analysis and synthesis, induction and deduction, graphical and tabular methods, methods inherent in economic disciplines - observation, reasoning, comparison, classification, which allowed an in-depth analysis of the research topic. The data sources of the paper constituted the works of researchers in the domestic and foreign economic field, official statistics of some public institutions in the Republic of Moldova, as well as studies in the field of international organizations.

2. Conceptual-methodological landmarks of the illicit financial flow notion

Illicit financial flows represent a phenomenon that developed during the XXth century with the unprecedented evolution of the exchange of goods and capital, on the one hand, and the increase in fiscal pressure from states with their adoption of the interventionist doctrine, events after which illicit financial flows could no longer be stopped. The very term “illicit financial flows” has a general character, which reached an enviable political importance during the elaboration of the Millennium Development Goals (2000-2015) (UN, 2015). Its success, in part, was due to the broad spectrum it contains. The term allowed for a common agenda for those who set out to fight corrupt leaders and officials, as well as for those who saw a critical obstacle to the success of development in multinational companies that did not pay taxes in the country of production of goods and services. The common elements of hidden behaviors that eliminate resources and weaken governance were clear enough that an irresistible impulse developed to ensure prioritization in the Sustainable Development Goals (SDGs). Therefore, in order to have a full understanding of the phenomenon of illicit financial flows, we must first understand what is to be defined as “illicit”.

According to the Explanatory Dictionary of the Romanian Language, “licit means - legally, permitted, allowed by law”, and “illegal” Contrary (to a law or) to a norm. Dishonest”. In the “legal / illegal” part, it is necessary to identify which norms apply - domestic civil / criminal law, the legislation of the ordering or beneficiary states of the payments, the existing international framework, etc.

At the same time, it would be strange to limit the notion of “illicit financial flows” only to cases that fall into the category of offenses or sanctions by regulators, as these transactions have a major impact on poverty and pollution, which are, at least, just as serious.

To conceptualize illicit financial flows, we must first introduce a broader notion. Thus, in our opinion, *all financial operations and manipulations with money or capital will be considered illicit financial movements, when they are illegally earned, transferred and / or used, actions that take place both at national and cross-border level.*

Based on this definition, we will consider domestic illicit financial movements, transactions that take place within a state, and external illicit financial movements, those that take place across an international border. Thus, according to the definition provided by the Non-Governmental Organization “Global Financial Integrity (GFI)”, which states as follows: “Illicit financial flows (IFF) are illegal movements of money or capital from one country to another, being classified these movements as illicit flows when funds are illegally earned, transferred and / or used across an international border” (GFI, 2020). Thus, the notion of illicit financial flows corresponds to external illicit financial movements, which represents its research element.

The authors Sisoeva and Ergasheva mention as characteristics of illicit financial flows the lack of control and statistical reflection, the illegal origin and, in most cases, the non-payment of taxes from the obtained incomes.

While researchers Reed and Fontana state that one or more conditions must be present in order to consider certain funds as illicit:

- Their transfer itself is illegal;
- The money comes from illegal activity;
- Fiscal obligations related to obtaining these funds were not honored.

Another classification, in the author's view, of illicit financial flows would be that related to the mechanism used for the transfer of value, so we can deduce:

- illicit financial flows based on commercial transactions;
- illicit financial flows based on capital transfer;

➤ illicit cash flows.

Researcher Peter Reuter distinguished the *groups of people who practice activities that generate illicit financial flows* (Reuter, 2017):

(1) Multinational corporations. Studies have shown that corrupt behavior, lobbying by multinational corporations in developing countries, and abusive transfer pricing behavior in low-tax jurisdictions (Global Witness, 2020).

(2) Corrupt officials. They can get bribes through various activities, such as taxing rights that should be freely available, improper awarding of contracts, extortion for non-application of appropriate criminal sanctions. Some authors assume that only high-ranking corrupt officials obtain illicit revenues large enough to make the transfer of funds abroad worthwhile.

(3) Tax evasion. The activities that generate the financial flows are legal. Illegality is exclusively in hiding them for tax purposes. The evaders can be individuals or private companies.

(4) Criminal entrepreneurs. Drug traffickers, smugglers and illegal entrepreneurs on the market can generate high revenues. There is a reasonable question whether they generate financial outflows from developing countries as important as illegal inflows, as most of their revenue is generated in rich, high-priced markets.

Another *classification of illicit financial flows can be made by the source, type and destination of the transfer*, as shown in Figure 1, which are comprised as a whole, from the perspective of the logical cause-effect link and vice versa, in the components of the unobserved economy related to the formal sector and its illegal production.

Thus, illicit financial flows can be classified according to the legality of the source of the financial means into:

- financial means of legal origin
- financial means of illegal origin.

In turn, within the illicit transactions with financial means of legal origin are distinguished:

- illicit financial flows directed against fiscal regulations
- illicit financial flows directed against market regulations (Cobham, Jansky, 2020).

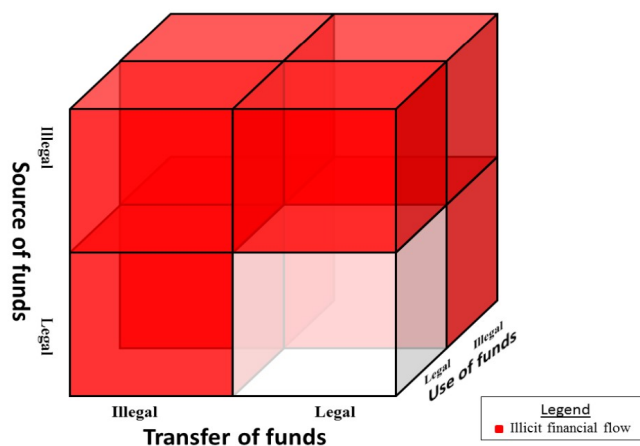


Fig. 1. Three-dimensional representation of the common definition of illicit financial flows source

Source: (Chowla P., Falcao T., 2016)

Through illicit financial flows directed against tax regulations, natural and legal persons commit tax evasion and avoidance of customs duties, which is due to the rigid tax

system, insufficient regulations from regulators, corruption, the economic and social situation in the country, and through illicit financial flows directed against market regulations the same actors try to avoid political sanctions, for not identifying the dominant position on the market, sanctions for the repatriation of financial means, avoidance of controls by relevant bodies, regulations on capping prices.

At the same time, *illicit financial flows based on transactions with illegally obtained assets* can be divided into two categories:

- assets arising from the abuse of power, corruption and theft of state funds and assets
- assets generated from criminal activity.

The classification of illicit financial flows by their use after the completion of the transaction can be summarized by analogy with the procedural institution in the criminal law "Poisoned Fruit Rule", which is a phrase taken from the American legal system, the doctrine of "Poisoned Fruit" is a product of the exclusionary rule of the American system, which states that evidence obtained through unlawful arrest, unjustified investigation, or forced interrogation must be excluded from the trial. By analogy, the use of financial means will not be considered legal if they have had a source of illicit origin or transfer.

This approach allows us to identify the main beneficiaries of illicit financial flows as a whole. Thus, private, domestic and foreign natural and legal persons are the basic perpetrators of illicit financial flows directed against tax regulations, market regulations, as well as illicit financial flows carried out by means of committing abuse of power, corruption and theft of funds, and state assets. Civil servants are ordinator for illicit financial flows resulting from the abuse of power, corruption and theft of funds and state assets, as well as transactions carried out with financial means generated by criminal activity. And, in turn, criminal organizations and criminal groups are the main perpetrators of illicit financial flows with financial means generated by criminal activity, to which are attributed the trade in drugs, weapons, pimping, weapons of mass destruction, the means derived from the activity of groups and criminal organizations and, last but not least, the provision of money laundering services, as a separate type of activity, when the beneficiaries of those services are abroad.

This classification gives us an overview of the illicit financial flows and its authorizing officers. This classification is not exhaustive, as there is the potential to create an illicit flow in any transaction, and the range of potential illicit motives is indeed wide and, at the same time, demonstrates the magnitude of the phenomenon of illicit financial flows. It is important to note that the types of illicit financial flows mentioned above will seriously damage the state budget, institutional power by limiting the funds available for social programs and reducing the quality of those expenditures, as well as aggravate the poverty and pollution of the environment. It is also important to note the existence of substantial overlap in the mechanisms used to generate illicit financial flows, regardless of the motivation. When there is a regulatory, procedural or functional gap that allows the generation of illicit financial flows, it will be used for several purposes.

3. Fundamental methodological elements for the illicit financial flows evaluation

The need to estimate illicit financial flows arises in response to the challenges of the 21st century in terms of the sustainable development of a democratic state. Any mathematical calculation will focus on a formula or, in our case, a calculation methodology, as well as data and information relevant to the above methodology. Moreover, the last decade has seen a growing concern about "illicit financial flows" as a threat to human progress. This culminated in 2015 with the global agreement to set a goal

in the UN Sustainable Development Goals to reduce illicit flows (Cobham, Jansky, 2020). What was missing then and still is missing is the consensus on indicators and measurement for this purpose, which is due, last but not least, to the lack of a universal methodology for estimating the illicit financial flows.

Researches on illicit financial flows are now developing rapidly. This is a welcome change after a long period of unwarranted neglect (Cobham, Jansky, 2020). However, the task facing researchers and public institutions is more like "running after the train", as the mechanisms and tools used in illicit financial flows are constantly changing and adapting to the new regulatory realities of public institutions, the international community, but also the evolution of financial systems and the development of information.

The common features of illicit financial flows are that they are deliberately hidden, made opaque to hide their true role. They drain resources from states, which, in turn, do not meet the needs of education, health, protection of citizens.

Thus, starting from the fact that illicit financial flows are largely unidentified and quantified at the moment, it is difficult to make a fair assessment if the Sustainable Development Goal of reducing illicit financial flows is making any progress. This is indirectly confirmed by the lack of information on the progress made in the Voluntary National Assessment of Progress Report on the Implementation of the 2030 Agenda, published by the Government of the Republic of Moldova in 2020 (Government of the Republic of Moldova, 2020).

Moreover, according to the report of the Non-Governmental Organization "Global Financial Integrity (GFI)" "Illicit capital flows on foreign trade of 135 developing countries for the years 2008-2017", there is no obvious dynamic of decreasing flows illegal financial statements, which are due to the inauthentic declaration of the value of imports / exports of the Republic of Moldova with other states. This shows that, in fact, illicit financial flows made through the inclusion of distorted data in import / export invoices increase with the total volume of their transactions, so that regulatory authorities are unable to reduce these flows.

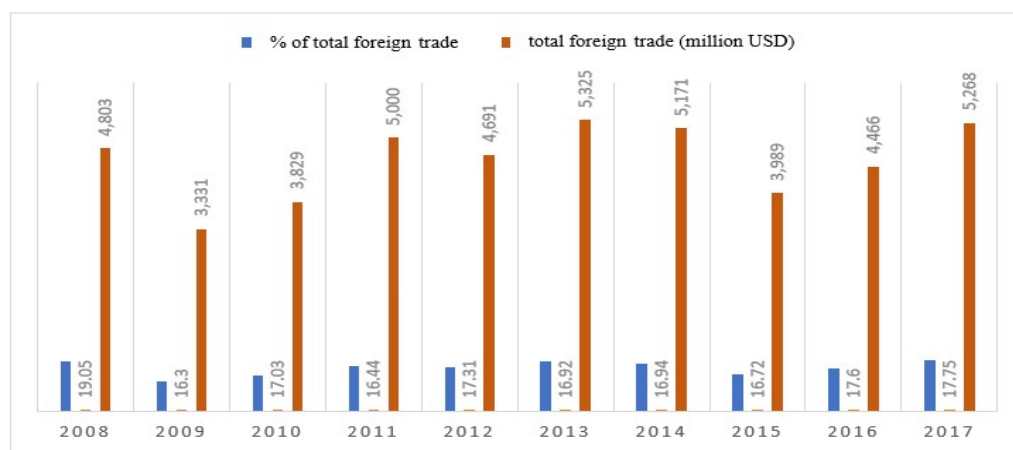


Fig. 2. Discrepancy between the data of the national and foreign authorities regarding the value of the import / export of the Republic of Moldova, related to the value of the foreign trade

Source: elaborated by authors basing on GFI data (GFI, 2020)

The research aims to identify fundamental methodological elements for assessing *illicit financial flows that are generated by the formal sector and illegal production, as components of the unobserved economy*.

Moreover, this approach is in line with the definition given by the Non-Governmental Organization “Global Financial Integrity (GFI)”, which reads as follows: “Illicit financial flows (IFF) are illegal movements of money or capital from a in other countries, these movements are classified as illicit flows when funds are illegally earned, transferred and / or used across an international border” (GFI, 2020). Moreover, the 2030 Agenda for Sustainable Development of the United Nations means reducing the value of financial flows entering and leaving the country illegally.

In order to develop a reliable methodology for estimating illicit financial flows, it is first of all important to make a retrospective of the calculations, but more importantly of the methodologies applied in the past for evaluating illicit financial flows.

An example is one of the first estimates of illicit financial flows made by Raymond Baker in 2005 (Baker, 2005), who in 2006 founded Global Financial Integrity (GFI), a non-governmental organization that is well known for its own estimates. The latter, based on about 550 interviews with corporate employees, estimated that more than \$ 539 billion represents annual illicit financial flows leaving developing and transition countries due to a combination of tax evasion, fraud, drug trafficking and corruption. These abuses are due to both criminal production (illegal arms trade, smuggling) and tax evasion (indication of erroneous values in export / import transactions, as well as the conduct of fictitious transactions).

In contrast to Baker's (2005) pioneering estimates based in part on interviews, most recent approaches to estimating illicit financial flows acknowledge that it is not possible to directly observe and estimate illicit financial flows (Cobham, Jansky, 2020). These approaches are based on the little information on available economic transactions that is available about activities that could be related to illicit financial flows. Specifically, methodologies often focus on exploiting data anomalies that may arise from the process of hiding flows.

The most prominent approaches focus on current account and capital account deviations. Some authors combine the two approaches, including the reports of the Non-Governmental Organization "Global Financial Integrity", which covers most developing countries.

Within the estimates made, we distinguish three broadly defined groups of approaches, depending on the data used. The first group examines estimates based mainly on country-level data. The second group addresses data-based studies on trade in goods. Each of the first two groups also deals with a specific methodological approach. Thus, the first group focuses on so-called trade relations statistics, while the second group analyzes studies on abnormal prices.

The third group is based only on detailed data recently available at the level of each import / export transaction, including data on the type, volume, quality and cost of the goods traded. This type of detailed data is only available to a limited number of countries so far, although their numbers are growing.

Thus, we conclude that the difference between the three groups lies in the type of information underlying the calculations performed to estimate the volume of illicit financial flows, but using the same methodological approach. An example of this approach is the non-governmental organization Global Trade Integrity, which relies on the assumption that any exports or imports are reported by advanced economies but are not equally reported by countries. In development, they are illicit financial flows because the difference is the very value of the financial flows that is hidden. In addition to what they

call the lower limit estimate using only relations between developing countries and advanced economies, their upper limit estimates are extended on the assumption that traders include erroneous data in import / export invoices in their relations with developing countries. In general, incorrect invoicing of foreign trade is the act of deliberately manipulating the value of a commercial transaction by falsifying the price, quantity, quality (customs tariff) or country of origin of a good or service of at least part of the transaction. Wrong trade invoicing is a widely used method of concealing illicit financial flows within the international trading system, as well as the evasion and / or exploitation of customs procedures. For example, financial means can be illegally moved to other countries either through exports, artificially increased value, or undervalued imports.

Although the World Trade Organization (WTO) has estimated the value of global trade in goods at almost 18 trillion US dollars in 2017, less than two percent of these shipments are verified the veracity of customs invoices indirectly (Cobham, Jansky, 2020), thus providing access to a channel for illicit financial flows. Thus, as the volume of world trade has been steadily increasing in recent decades, the opportunities for incorrect invoicing of transactions are also increasing (Moiseienko, Reid and Chase, 2019).

Calculation formula for estimating illicit financial flows generated by incorrect invoicing of foreign trade:

$$DI_{md,t} = \frac{I_{m,t}}{r} - X_{d,t},$$

(1)

$$DE_{md,t} = \frac{I_{d,t}}{r} - X_{m,t},$$

(2)

Where:

$DI_{md,t}$ – represents the difference between the value of the declaration on import into the developing country "m" of the goods from partner country "d" and the value of the export declared in partner country "d";

$DE_{md,t}$ – represents the difference between the value of the export declaration of the goods from the developing country "m" to the partner country "d" and the value of the import declared in the partner country "d";

$I_{m,t}$ – represents the import made by the developing country "m" from the partner country "d" in a time "t";

$X_{m,t}$ – represents the export from the developing country "m" to the partner country "d" in a time "t";

$X_{d,t}$ – represents the export from the partner country "d" to the developing country "m" in a time "t";

r – represents a correction coefficient for data on imports from one state with exports declared by another state in that state.

Thus, we can interpret the negative values of $DI_{md,t}$ as import under-invoicing and, respectively, illicit incoming financial flows, and the positive values as over-invoicing and, consequently, outgoing financial flows from the analyzed jurisdiction. In addition, they interpret the negative values of $DE_{md,t}$ as excessive invoicing of exports equivalent to illicit inflows, and the positive values of $DE_{md,t}$ as under-invoicing of exports representing illicit financial outflows.

Of particular interest is the coefficient "r", the task of which is to make comparable the declared values of the same goods exported from one country and imported from another country. Researchers Matt Salomon and Joe Spanjers, in the analysis of the comparability of these values, in the report of the Non-Governmental Organization "Global Financial Integrity (GFI)" "Illicit financial flows to and from developing countries: 2005-2014" (GFI, 2017), assumed to set the value of the coefficient "r" of "1,1", which is a

difference of 10% between the CIS and FOB prices of goods exported from one country and imported from another country. The argument for this process was that the transaction values that were used for the analysis were available in USD for exports under the terms of delivery of the goods - FOB, and for the associated imports under the terms of delivery - CIF. FOB and CIF delivery conditions are international trade clauses (INCOTERMS, 2010). The difference between the transaction values according to the FOB and CIF delivery conditions is that the FOB values are indicated by the exporting country and the CIF values by the importing country. Thus, the value of import is increased by the costs of transport and insurance of exported goods, in this way we can conclude that from the beginning between the export values of goods delivered by a country will not correspond to the values of imported goods, declared by the importing country.

It is clear from the very beginning that assigning the coefficient "r" to the value of "1.1" for all states will not contribute to the accuracy of the calculations performed. For these reasons, the Non-Governmental Organization Global Financial Integrity (GFI) in its report for the years 2008-2017 on illicit financial flows from late reporting of foreign trade transactions, published in 2020 information on how to calculate the coefficient "r". Thus, for the conversion of CIF values into FOB values, the transport information developed by the Center d'Etudes Prospectives et d'Informations Internationales (CEPII) was taken into account, namely the role of factors such as the distance between trading partners, contiguity, the degree to which a "world" prices for individual goods, including factors such as the presence of trade agreements between partners, which should reduce trade costs, as well as categorical factors as to whether one or both trading partners are ongoing countries development (Gaulier, Zignago, 2010). Thus, using more elaborate infrastructure indices and per capita income in pairs of countries, it would be possible to increase the number of countries for which transportation costs could be estimated (Miao, Fortanier, 2016).

It should be emphasized that there are some important limitations of the methodology described above for identifying incorrect invoicing of foreign trade. In our view, first of all, the described methodology only covers the mis-invoicing of trade in goods - they do not include estimates of mis-invoicing involving trade in services due to lack of data in this regard, which has been a growing component of world trade. Therefore, even if trade in services, as a percentage of total world trade, has increased, trade in services cannot be detected in our analysis of the difference in value. Moreover, the non-quantification of any illicit financial flows that could be disguised through the overestimation or fictitious diminution of the value of transactions related to the import and export of services would be a major loophole for a methodology for calculating illicit financial flows for the Republic of Moldova. According to the information available in the Balance of Payments of the Republic of Moldova for the years 2016-2019, the share of services in total foreign trade was about 26%, being maintained at the same level during the analyzed periods, see Figure 3.

Such incorrect commercial invoicing for services includes counterfeit invoices for management fees, interest payments, licenses, payments for copyrights and patents, and other intellectual property rights (IPR), and so on. in one country and another. An additional factor is that the price of services is much more subjective than the price of goods, which generally have clear entry costs, etc. In addition, there are many forms of illicit cash flows (IFF) that cannot be retrieved using available economic data and methods, because they are simply not recorded in available legal sources.

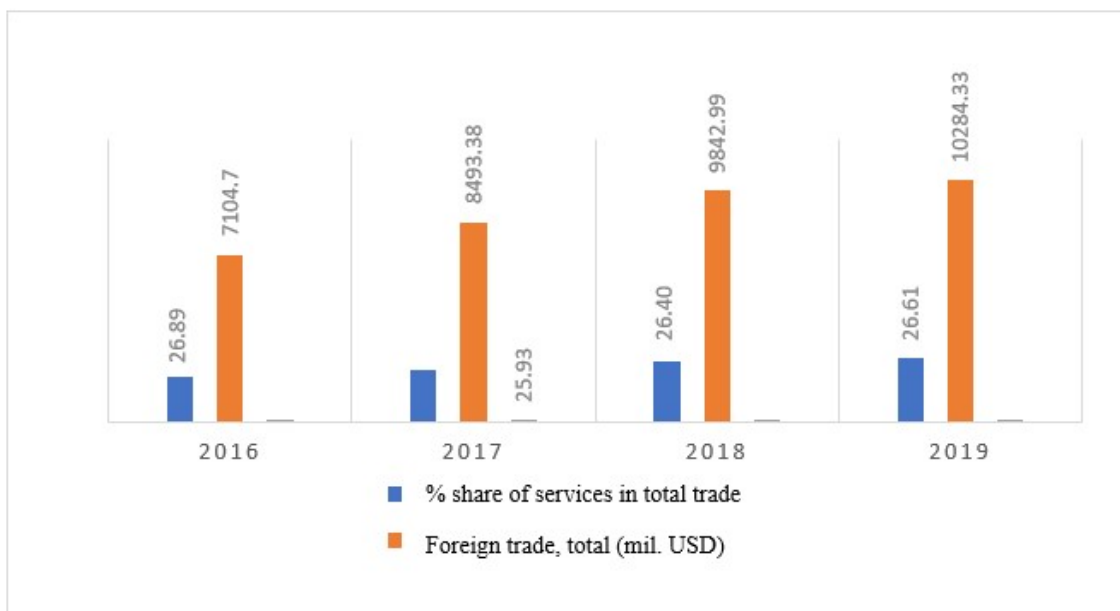


Fig. 3. Share of services in the total value of foreign trade of the Republic of Moldova

Source: *Elaborated by authors in accordance with the information available in the Balance of Payments of the Republic of Moldova*

As for cash transactions, which are sometimes used in trade and often used in criminal transactions and cash smuggling, they do not appear in official trade data and cannot subsequently be captured in value analysis. Also, this methodology cannot detect transactions that use mechanisms such as "Hawala" transactions or cash smuggling. Thus, hawala is a popular and informal securities transfer system based not on cash flow or telegraphic or computerized network transfers between banks, but on the activity and honor of a huge network of money brokers. In the most basic version of the hawala system, the money is transferred through a network of hawala or hawaladari brokers. It is the transfer of money without actually moving it. In fact, one successful definition of the hawala system that is used is "money transfer without money movement". According to author Sam Vaknin, while there are large Hawala network operators to which networks of intermediaries are connected in cities in many countries, most of the actors involved in this system are small businesses (Vaknin, 2005). The activity in the Hawala network is described in Figure 4.

The Hawala system works as follows: (1) a client (A) approaches a hawala broker (X) in a country and gives a sum of money (red arrow) to be transferred to a recipient (B) in another country. Along with the money, he usually specifies something like a password that will lead to the payment of the money (blue arrows). (2b) The Hawala (X) broker contacts another hawala M broker in the recipient's country and city and informs M of the agreed password or provides other funding arrangements. Then the recipient (B), who was also informed by A about the password (2a), now approaches M and tells him the agreed password (3a). If the password is correct, then M releases the amount transferred to B (3b), usually minus a small commission. X now owes M the money M paid to B; thus, M must trust X's promise to settle the debt at a later date.

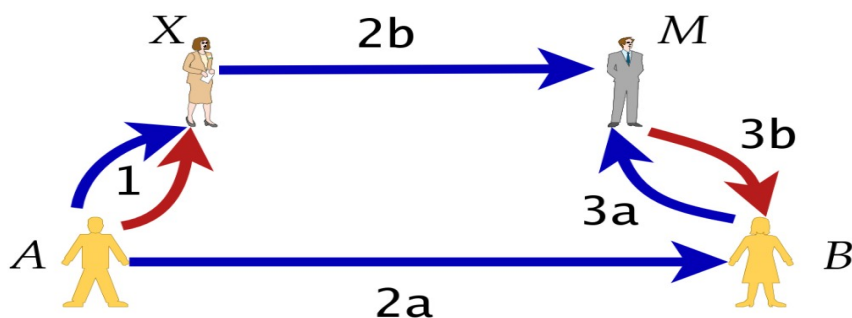


Fig. 4. Carrying out a transaction within the Hawala system

Source: (Beispiel, Z., 2009)

Analyzing the previous transfer mechanism, it is absolutely transparent that the methodology for identifying illicit financial flows by identifying erroneous invoicing in foreign trade transactions is inefficient in this case.

These techniques are being used more and more as the volume of trade increases, as they are less expensive than formal value transfer services (e.g., banks, money services, etc.) and are more accessible to underserved communities, and / or non-banking. With regard to the 'falsification of the same invoice', the analysis of the difference in value cannot capture the incidents in which both the importer and the exporter cooperated in advance to agree on the prices they will each declare in the respective falsified import and export documents. In such cases, there is no discrepancy between export and import values and therefore cannot be detected in our analysis. This approach is difficult to detect and is widely used by both multinational corporations and long-term trading partners.

For the Republic of Moldova this mechanism is characteristic in the case of exports of agricultural products to CIS countries, thus, the billing price for exported horticultural products may be several times lower than similar products exported to European Union countries.

Based on these findings, it is necessary to develop a methodology for calculating illicit financial flows based more on data on the value of each product, taking into account the specifics of each partner state, rather than analyzing the total values of foreign trade transactions as a whole. However, information on the value of goods traded on the foreign market in different states is limited, and data sources on the value of services provided internationally do not exist.

4. Conclusions

From the analysis of the estimates of illicit financial flows based on foreign trade, we draw three main conclusions. First, international trade is an active channel for illicit financial flows, and research leading to trade estimates is useful in several ways. Thus, it has been established that the use of wrong prices in foreign trade is used to transfer funds illegally abroad. Trade estimates are useful to shed light on discrepancies in international trade data. The identification of these discrepancies should also be useful for customs officers in highlighting appropriate cases for more detailed audit, as well as for other public actors involved in the preparation of public policy documents.

Estimates based on the methodology approach described above, using data at the country level, could be useful in raising awareness about these issues, but are not credible enough to quantify illicit financial flows over time. Secondly, there is an improvement in the methodology used by the Non-Governmental Organization "Global Financial Integrity

(GFI)" in terms of the exact quantification of the coefficient "r", necessary for a more accurate comparison of the information available in the countries involved in the same commercial transaction. However, the use of trade estimates for the Sustainable Development Goal 16.4.1 Significantly reduce illicit financial flows, strengthen the recovery and return of illicit goods is not enough. Indeed, there seems to be a trade-off for trade estimates - either they are available for many countries but not credible, or they are of relatively high quality but are not available for in the required volume. Third, it is necessary to identify mechanisms for assessing illicit financial flows that use other trading channels.

Also, within the process of researching this topic there is a need to identify data sources and a methodology for calculating illicit cash flows, which should be applicable based on the specifics of the Republic of Moldova and the fact that it is an economy based on cash transactions.

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THE RELATIONSHIP BETWEEN HUMAN RESOURCES MOTIVATION AND THE PERFORMANCE OF THE INSTITUTION - CASE STUDY BORDER POLICE

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Abstract: *The interest shown today for the degree of motivation of employees is in the attention of present psychology, where we are witnessing the phenomenon of the growing of the organizational culture, conflict mediation and negotiation policies, in order to achieve performance. Motivation, as a central process, appears with double meaning: cause and effect. It is the cause of the manifestation of the behavior and the effect of the appearance of the excitatory agent (need, expectation, purpose, effort, result). Indeed, the global context created by the pandemic influences the variations in the employee's motivation, usually demotivating the activities carried out on a daily basis. Thus, we believe that employee's motivation is a trigger for the entity's performance. Starting from this premise, in this article we asked ourselves the central question: to what extent does the motivation of human resources influence the performance of the institution? In order to find out the answer, we undertook a qualitative research based on an interview on a selection chosen from the staff of the Border Police of the country.*

Keywords: motivation, human resources, management, performance.

JEL Classification: M12.

1. Introduction

The conditions that favour motivation must be continuous and not sporadic, and the efforts to maintain motivation must be sustained. To the extent that the management is inconsistent in managing motivation, it will have a boomerang effect, people becoming reluctant or disinterested in it. The employee is more motivated when consulted to determine the nature of his work and how it will be performed. The employee's interest in what he does is a condition of the democratic or participatory management style.

In order to identify the motivation strategies of the Border Police personnel with implications on the institution's performance, we conducted a qualitative research, through which we received answers about the motivation strategies appreciated within the Border Police structures, about the personnel perception regarding motivation and the performance of the institution.

2. Qualitative research methodology

For the hypothesis: *motivation is an important factor in increasing the performance of human resources in the structures of the Border Police* - a qualitative research was carried out within the Territorial Inspectorate of Sighetul Marmatiei Border Police. The sampling method was random, the target group of the interview was represented by the managers (chiefs or deputies from the Territorial Inspectorate of Sighetul Marmatiei Border Police), who would have the possibility to implement a strategy to motivate the staff and the subordinates (deputies or heads of crossing points) within the Territorial Inspectorate of Sighetul Marmatiei Border Police.

The interview includes six open-ended questions. Five people with management positions were interviewed (1 ITPF chief and four deputies from the Territorial

Inspectorate of Sighetul Marmăției Border Police and of the subordinate sectors: Halmeu, Petea, Târnava Mare) and seven people with executive positions appointed deputies within Territorial Inspectorate of Sighetul Marmăției Border Police (of which three heads of crossing points). Through this qualitative research we want to check the perception of the interviewees on the relationship between human resources motivation and the performance of the institution, and at the same time to know their opinion about the evaluation process and its degree of influence on the level of involvement of the staff in the Territorial Inspectorate of Sighetul Marmăției Border Police.

3. Calitative analysis and interpretation of the qualitative research results

Interviewee profile

The interviewees are the heads or deputies of the Territorial Inspectorate of the Sighetul Marmăției Border Police and within its sectors. The sample was chosen at random and is represented graphically in Figure 1.

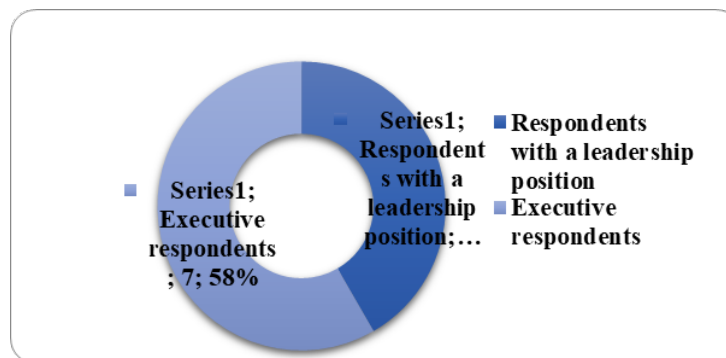


Fig. 1. Profile of the interviewed persons

Source: Developed by the author

I. The concept of motivation is often seen as a mystery - something like a magical substance that, if you sprinkle it on people, they become full of energy and eager to work. The first part of the interview checks the level of understanding of the phrase "*motivation of human resources*". It was found that the term was almost completely associated with "*stimulating and rewarding the employee, as well as recognizing his merits*" (the interviewees being familiar with only two perspectives of motivation - the economic and the affective one, regarding the energizing of behaviour and directing or orienting behaviour toward an objective, and less with the cognitive one regarding the intellectual dimension of the employee). Cognitive motivation focuses on meeting the individual needs of being informed, knowing, learning, innovating, operating and controlling the environment in which the employee works. Also, no interviewee spoke about the activity, within the human resources management, of maintaining and sustaining the motivating behaviour. So, to the question: "What do you mean by '*human resource motivation*'?" most of the interviewees define the motivation as the totality of those strategies implemented by the institution for "*the ambitioning of the staff to fulfill their attributions and to exercise the profession with dedication and passion*". Consequently, motivation determines the internal aims - innate or acquired of an employee's conduct - whether he is aware of it or not, in the form of some causes external to the personality (exciting, stimuli that are usually felt as needs) or internal causes (usually, abstract ideals).

II. In the second question: "*In your opinion, to what extent does the motivation of human resources influence the performance of the institution?*" the interviewees fully

confirmed the existence of this influence. The fact that motivation influences and drives performance is a matter of record. If a person is not stimulated to work in different ways, he will not achieve maximum performance. As well as with any element related to the human being, which is unique and unpredictable, at the level of motivation we are talking about a series of situations that motivate some, but do not motivate others, which have positive effects on some and negative effects on other individuals. In fact, one interviewee claims that *"the performance of the institution is largely influenced by the motivation of human resources, because any reward or incentive will make the employee exceed the threshold previously reached, consequently the institution has a profit."*

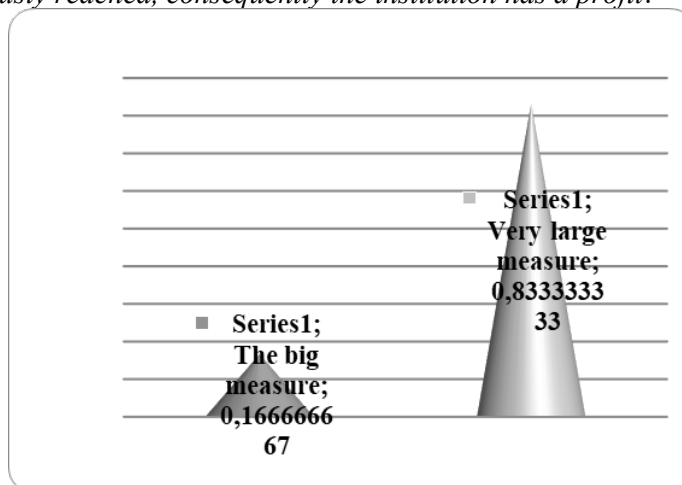


Fig. 2. Measuring the influence of human resources motivation on the institution's performance

Source: Developed by the author

III. In the case of the question: "Can motivation be considered a factor in increasing the performance of human resources?". All interviewees confirmed this. If the answer was yes, the interviewees were asked to argue the answer. Thus, from the received arguments, we bring into discussion two representatives: *"motivation can be considered a major factor in the performance of human resources, because the worker will feel more comfortable and eager for results when he notices that his work is valued and evaluated fairly"* and *"motivation can not only be considered a major factor in the performance of human resources, it is a factor in increasing performance."* In other words, the central hypothesis of our research is verified among the interviewees from the Territorial Inspectorate of Sighetul Marmatiei Border Police. The respondents stated that *"the human resources that will be motivated, regardless of the way of motivation (ideological, pecuniary, etc.) will have a higher degree of success in achieving the final goal that the institution proposes. This motivation attaches human resources to the values of the institution which leads to a much higher degree of success in achieving the objectives)"*. In the central question of the qualitative research: "What motivational strategies are appreciated within the Border Police?", the answers were varied. For the examples of strategies proposed by us to increase the level of motivation and implicitly the performance of the institution, the interviewees confirmed each proposed strategy, each depending on the place held within the institution. For a much clearer picture of the answers, the following table is created.

Table no. 1. Motivation strategies are appreciated within the Border Police

The type of motivation strategy	Interview with leadership		Interview with execution function	
	YES	NO	YES	NO
reward;	✓		✓	
creating a culture in which employees' results are appreciated;	✓		✓	
increasing the degree of transparency in professional development;		✓	✓	
recognition of employees' merits using Social Media platforms;	✓			✓
flexibility, autonomy and stress reduction;	✓		✓	
creating opportunities for professional development;	✓		✓	
introduction of global mobility programs;		✓	✓	
giving personalized gifts;	✓			✓
job security;		✓	✓	

Source: Developed by the author

Thus, rewarding, creating a culture in which the employees' results are appreciated, flexibility, autonomy and reducing the level of stress, creating opportunities for professional development were strategies chosen primarily by both categories of respondents. 'A deputy from the Territorial Inspectorate of the Border Police Sighetul Marmatiei states that *"the creation of a culture in which the results of the employees are appreciated raises their morale and implicitly the results of the work converge to the objectives pursued by the institution."* While recognizing the merits of the employees using social media platforms and giving personalized gifts are the preferred strategies of interviewees with leadership positions.). While introducing global mobility programs; increasing the degree of transparency in professional development, job security are strategies of the interviewees with executive function.

The interviewees also mentioned some of the most appreciated strategies within the Border Police, such as: eliminating work under pressure, awarding merits and titles, advancements in rank and function (which implies a higher remuneration and a recognition of merits).

Unfortunately, at the level of the Romanian Border Police there is not really a strategy to motivate the staff at a formal level, there is no emphasis on this, except for the rewards provided in the Statute of the Policeman. In conclusion, the role of the manager is paramount, he being responsible for triggering the internal motives of the subordinate team members, but also for maintaining and sustaining the behaviour.

4. Conclusions regarding the identification of the strategies for motivating the personnel from the Border Police structures with implications on the performance of the institution

It was found that the term motivation was almost completely associated with *"stimulating and rewarding the employee, as well as recognizing his merits"* (the interviewees were familiar with the economic and emotional side of motivation, very little with the cognitive side of the intellectual dimension of the employee). Thus, the

energization of behaviour and the direction or orientation of behaviour towards a goal are means perceived as motivational. Most of the interviewees define motivation as the totality of those strategies implemented by the institution for “*the ambitioning of the staff to fulfill their attributions and to exercise the profession with dedication and passion*”.

All interviewees acknowledged the relationship between motivation and performance. Some of them claiming that there is a directly proportional relationship between the two, influencing each other. In other words, the central hypothesis of the qualitative research is 100% verified (83% of the respondents confirm a very high influence, and the rest a high influence).

The result of the interviews is not surprising being given by most of the interviewees, motivation and performance being linked by what specialists call optimal motivational, which designates the most significant proportionality between the intensity of motivation and the size of performance. But motivation is also related to a number of its characteristics: intensity, duration, persistence, etc.

Regarding the answers on the strategies practiced within the structures of the General Inspectorate of Sighetul Marmăției Border Police, the strategies proposed by us were confirmed. Thus, rewarding, creating a culture in which employees' results are appreciated, flexibility, autonomy and reducing the level of stress, creating opportunities for professional development were strategies chosen primarily by both categories of respondents. While recognizing employees' merits using Social Media platforms and giving personalized gifts are the preferred strategies of management interviewees. While introducing global mobility programs; increasing the degree of transparency in professional development, job security are strategies of the interviewees with executive function. At the same time, three more types of strategies have been proposed: eliminating pressure work, awarding merits and titles, advancements in rank and position (which implies higher pay and recognition of merit).

From these interviews we can say that at the level of the Territorial Inspectorate of Sighetul Marmăției Border Police, motivation is already a trigger for performance.

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ICT SPECIALISTS - A NECESSARY RESOURCE IN ACHIEVING THE OBJECTIVES OF SMART SPECIALIZATION STRATEGIES

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Abstract: *In the current context in which Romania elaborates the National Research and Innovation Strategy for Smart Specialization, based on the Regional Strategies for Smart Specialization, we consider important to highlight the role that ICT specialists can play in developing and ensuring the enterprises competitiveness. In fact, almost all the development regions of Romania (South-Muntenia, South-East, North-West, North-East, Bucharest-Ilfov, South-West Oltenia) have delimited ICT as a distinct field of smart specialization, within their own Regional Strategies. This paper mainly aims a quantitative descriptive research of the Key Indicators regarding the ICT specialists, from Romania and from the European Union, respectively: Enterprises employing ICT specialists, Enterprises reporting hard-to-fill vacancies for jobs requiring ICT specialist skills, Persons Employed with ICT Specialist Skills (broad measure), Enterprises where ICT functions are mainly performed by external suppliers, Enterprises provided training to their personnel to develop/upgrade their ICT skills, Individuals who have obtained ICT skills through formal educational institutions, Individuals who have written a computer program using a specialised programming language. We consider that the comparative analysis of these indicators represents the starting point in establishing the specific measures targeting the ICT field.*

Keywords: *ICT Specialists, smart specialization, key indicators, analysis.*

JEL Classification: *M59, R11.*

1. Introduction

In Romania, in the context in which the elaboration of the The National Research and Innovation Strategy for Smart Specialisation for the period 2021-2027 is in progress, almost all development regions, respectively South-Muntenia Region, South-East Region, North-West Region, North-East Region, Bucharest-Ilfov Region and the South-West Oltenia Region, have delimited ICT as a distinct field of smart specialization, within their own Regional Strategies of Smart Specialization. Smart specialization is the process of economic transformation by identifying areas where the research and innovation for smart specialization can bring benefits for the Region, creating new competitive advantages. The role that ICT specialists can play in achieving the specific objectives of the ICT field is obvious, with direct implications for regional and national competitiveness.

In this context, this paper proposes a quantitative descriptive research of some indicators considered relevant for the ICT specialists, from Romania and the European Union. The comparative analysis of these indicators will reveal the level of Romania compared to the European Union, helping to correctly assess the real possibilities of meeting the objectives assumed by our country, in the context of allocating financial resources from Operational Programs, corresponding to the Policy Objective 1 - A more competitive and smarter Europe.

2. Analysis of key indicators regarding the ICT specialists

We consider the following key indicators relevant for the analysis of ICT specialists: Enterprises employing ICT specialists, Enterprises reporting hard-to-fill vacancies for jobs requiring ICT specialist skills, Persons employed with ICT specialist skills (broad measure), Enterprises where ICT functions are mainly performed by external suppliers, Enterprises provided training to their personnel to develop/upgrade their ICT skills, Individuals who have obtained ICT skills through formal educational institutions,

Individuals who have written a computer program using a specialised programming language.

Enterprises employing ICT specialists are presented in table no.1 and viewed in figure no.1.

ICT specialists are employees for whom ICT is the main job, with the main tasks: developing, operating or maintaining ICT systems or applications.

**Table no.1. Enterprises employing ICT specialists
(unit of mesure: percentage of enterprises)**

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
	All enterprises, without financial sector (10 or more employees and self-employed persons)						
European Union	19	20	20	19	19	19	19
Romania	12	13	11	10	11	10	16
	Large enterprises (250 employees and self-employed persons or more), without financial sector						
European Union	75	77	75	74	75	75	76
Romania	46	45	46	42	43	43	47
	Medium enterprises (50-249 employees and self-employed persons), without financial sector						
European Union	42	43	42	41	41	41	42
Romania	20	19	19	16	16	17	21
	Small enterprises (10-49 employees and self-employed persons), without financial sector						
European Union	14	14	14	13	13	14	14
Romania	9	11	8	7	9	8	13

Source: Eurostat, INS

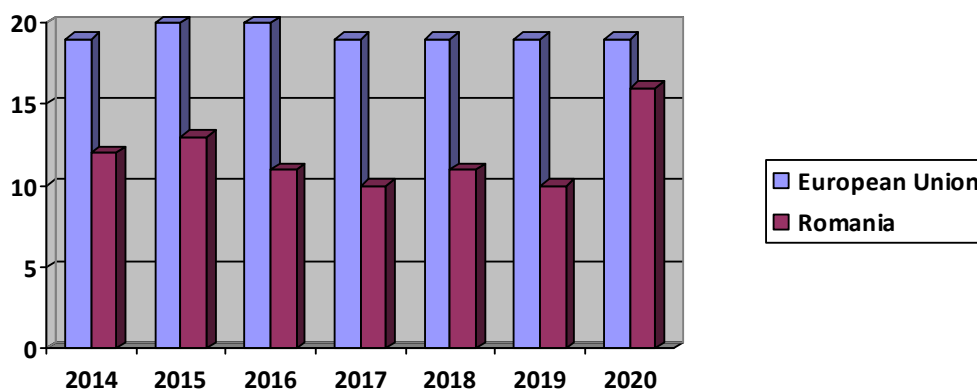


Figure no.1. Enterprises employing ICT specialists (all enterprises, without financial sector, 10 or more employees and self-employed persons)

The table no.1 shows the high values for large enterprises (250 employees and self-employed persons or more), compared to small enterprises (10-49 employees and self-employed persons).

Enterprises reporting hard-to-fill vacancies for jobs requiring ICT specialist skills (reduced comparability with 2007) are presented in table no.2 and viewed in figure no. 2.

Vacancies that are difficult to fill during the previous calendar year refer to a number of situations in which it is difficult for companies to find people with certain skills, ie vacancies that are difficult to fill due to skills shortages.

Table no.2. Enterprises reporting hard-to-fill vacancies for jobs requiring ICT specialist skills, reduced comparability with 2007 (all enterprises, without financial sector, unit of measure: percentage of enterprises)

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	3	3	3	4	5	5	5
Romania	1	1	1	1	2	3	2

Source: Eurostat, INS

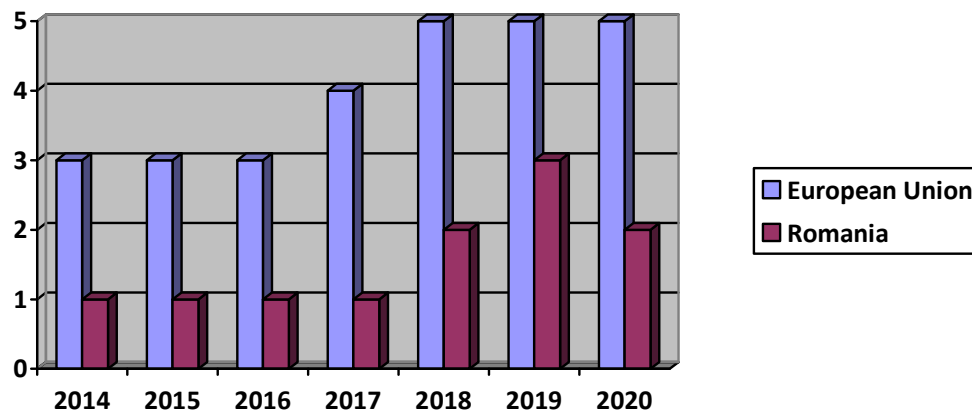


Figure no.2. Enterprises reporting hard-to-fill vacancies for jobs requiring ICT specialist skills, reduced comparability with 2007 (all enterprises, without financial sector)

In comparison and in addition to the previous indicator, we can also analyze the indicator Enterprises recruited/tried to recruit personnel for jobs requiring ICT specialist skills (reduced comparability with 2007), presented in table no.3 and viewed in figure no. 3.

Table no.3. Enterprises recruited/tried to recruit personnel for jobs requiring ICT specialist skills (unit of mesure: percentage of enterprises)

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
	All enterprises, without financial sector, reduced comparability with 2007						
European Union	7	8	8	8	8	9	8
Romania	3	4	4	4	4	3	3
	All enterprises, without financial sector						
European Union	38	43	48	54	58	55	:
Romania	35	36	33	45	90	46	:

Special value (:) not available, Source: Eurostat, INS

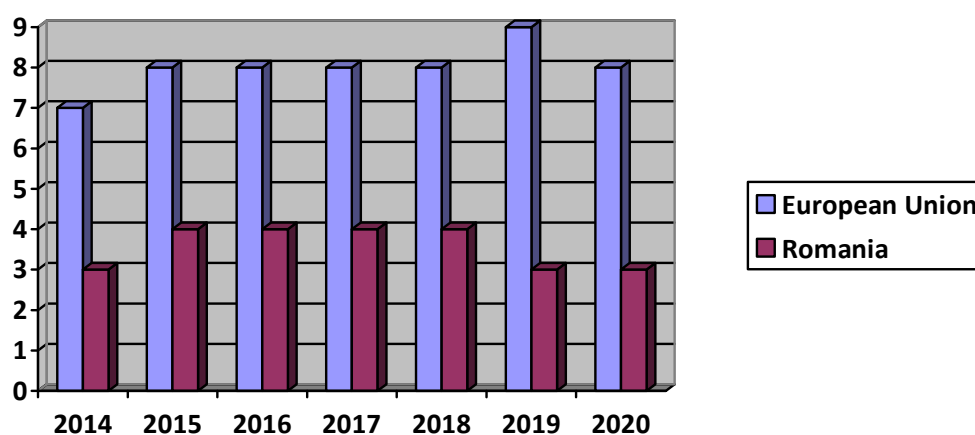


Figure no.3. Enterprises recruited/tried to recruit personnel for jobs requiring ICT specialist skills, reduced comparability with 2007 (all enterprises, without financial sector)

We notice that the share of enterprises that recruited/tried to recruit personnel for jobs requiring ICT specialist skills was in Romania of 35% in 2014 and 46% in 2019. We also note that this share increased greatly in 2018, reaching 90% of enterprises. It is important to note that labor shortages have a significant economic impact.

Persons employed with ICT specialist skills (broad measure) are presented in table no.4 and table no.5 and viewed in figure no. 4 and figure no.5.

The definition of the ICT Specialists' occupations is based on the new ISCO-08 classification. It includes ICT service managers (code 133), ICT professionals (25), ICT technicians (35) and some other groups, from electronic and telecommunications engineers (215) up to ICT installers and servicers (7422).

Table no.4. Persons employed with ICT specialist skills (broad measure) unit of mesure: thousand persons

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	6.302,5	6.540,6	6.908,3	7.173,4	7.570,3	7.846,2	8.431,4
Romania	139,9	160,8	167,7	185,4	190,1	197,2	202,7

Source: Eurostat, INS

Table no.5. Persons Employed with ICT specialist skills (broad measure)
unit of mesure: percentage of total employment

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	3,4	3,5	3,6	3,7	3,8	3,9	4,3
Romania	1,6	1,9	2,0	2,1	2,2	2,3	2,4

Source: Eurostat, INS

From these tables it is observed that Romania is at a low level compared to European values. However, we note the increasing evolution of the indicator in the analyzed period (2014-2020), which reflects a favorable evolution, both at European level and in our country.

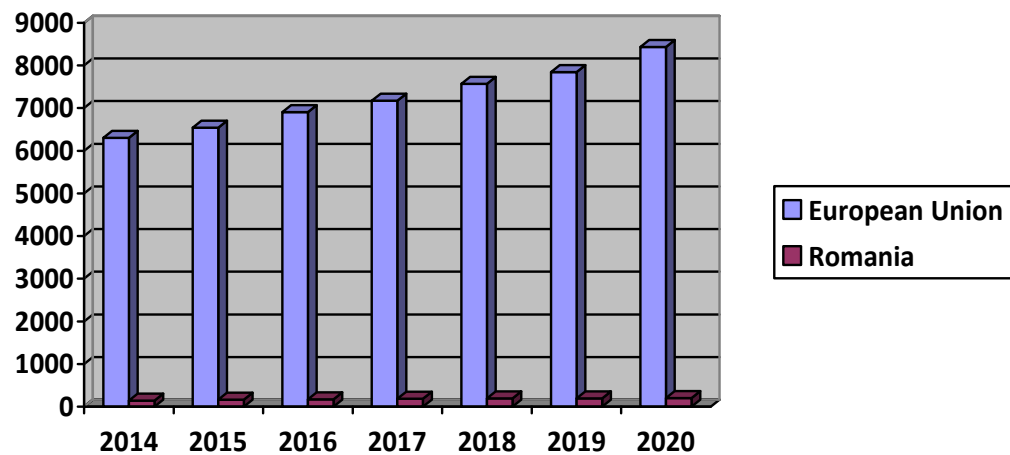


Figure no.4. Persons employed with ICT specialist skills (broad measure), thousand persons

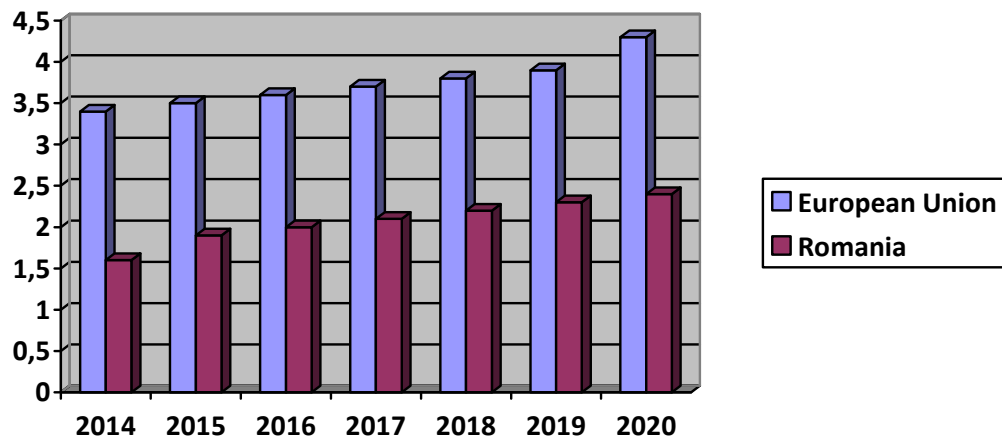


Figure no.5. Persons employed with ICT specialist skills (broad measure), percentage of total employment

Enterprises where ICT functions are mainly performed by external suppliers are presented in table no.6 and viewed in figure no. 6.

The majority of ICT functions are mainly performed by external suppliers and not by own employees. From the point of view of defining this indicator, we specify that the functions include: maintenance of ICT infrastructures, support for office software, development and support for web solutions or business management software/systems, security and data protection.

In comparison and in addition to the previous indicator, we can also analyze the indicator Enterprises where ICT functions are mainly performed by own employees, presented in table no.7 and viewed in figure no. 7.

Table no.6. Enterprises where ICT functions are mainly performed by external suppliers. All enterprises, without financial sector (10 or more employees and self-employed persons), unit of mesure: percentage of enterprises

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	:	51	51	:	53	:	:
Romania	:	36	38	39	44	:	:

Special value (:) not available, Source:Eurostat, INS

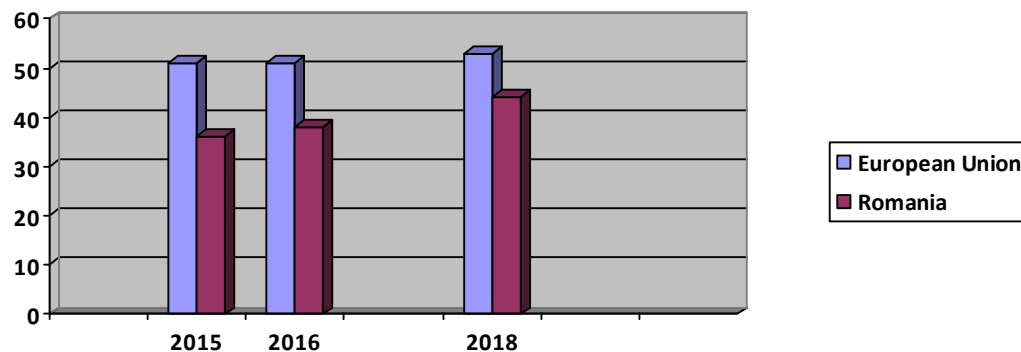


Figure no.6. Enterprises where ICT functions are mainly performed by external suppliers, percentage of enterprises

Table no.7. Enterprises where ICT functions are mainly performed by own employees. All enterprises, without financial sector (10 or more employees and self-employed persons), unit of mesure: percentage of enterprises

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	:	17	18	:	16	:	:
Romania	:	15	14	15	15	:	:

Special value (:) not available, Source:Eurostat, INS

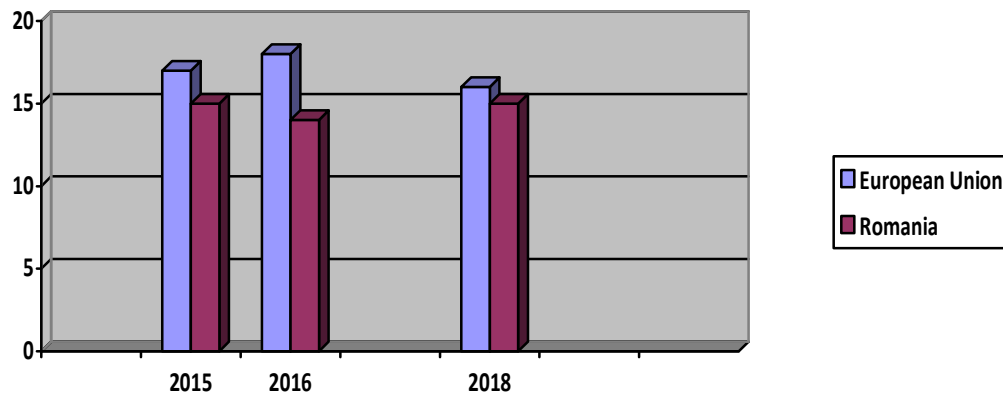


Figure no.7. Enterprises where ICT functions are mainly performed by own employees, percentage of enterprises

Enterprises provided training to their personnel to develop/upgrade their ICT skills are presented in table no.8 and viewed in figure no. 8.

Table no.8. Enterprises provided training to their personnel to develop/upgrade their ICT skills. All enterprises, without financial sector (10 or more employees and self-employed persons), unit of mesure: percentage of enterprises

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	20	21	21	21	22	23	20
Romania	5	5	5	4	5	6	6

Source: Eurostat, INS

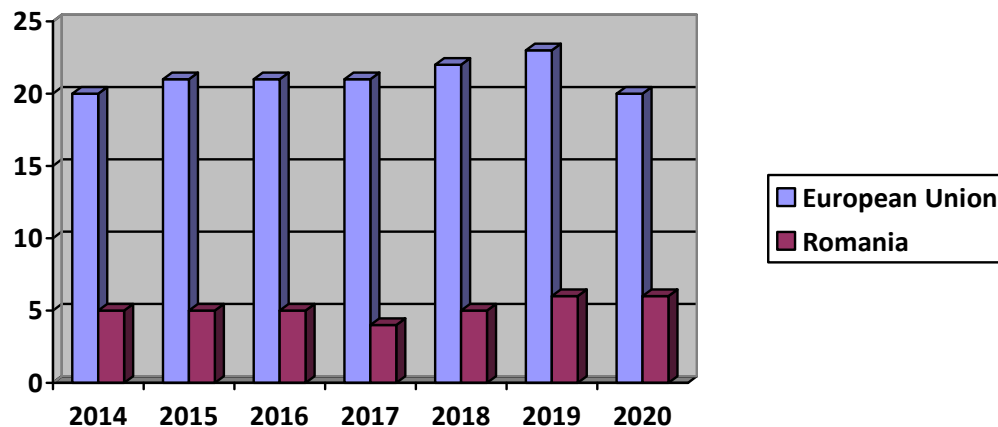


Figure no.8. Enterprises provided training to their personnel to develop/upgrade their ICT skills

In comparison and in addition to the previous indicator, we can also analyze the indicator Enterprise provided training to other persons employed to develop/upgrade their ICT skills, presented in table no.9 and viewed in figure no. 9.

Table no.9. Enterprises provided training to other persons employed to develop/upgrade their ICT skills. All enterprises, without financial sector (10 or more employees and self-employed persons), unit of mesure: percentage of enterprises

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	18	18	18	18	19	21	17
Romania	4	4	4	3	4	5	5

Source: Eurostat, INS

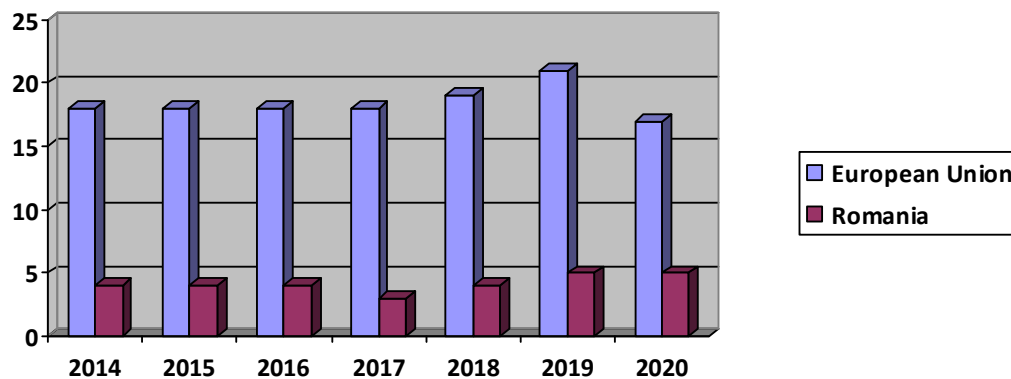


Figure no.9. Enterprises provided training to other persons employed to develop/upgrade their ICT skills

Individuals who have obtained ICT skills through formal educational institutions are presented in table no.10 and viewed in figure no. 10 and figure no.11.

Table no.10. Individuals who have obtained ICT skills through formal educational institutions (school, college, university etc.) unit of mesure: percentage of individuals

Geopolitical entity	2007	2011
Individuals living in cities		
European Union	23	28
Romania	20	23
Individuals living in rural areas		
European Union	19	24
Romania	5	13

Source: Eurostat, INS

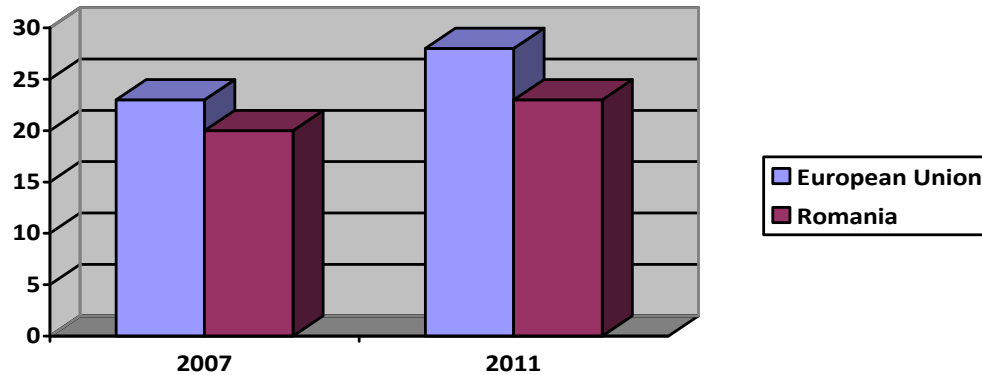


Figure no.10. Individuals (living in cities) who have obtained ICT skills through formal educational institutions

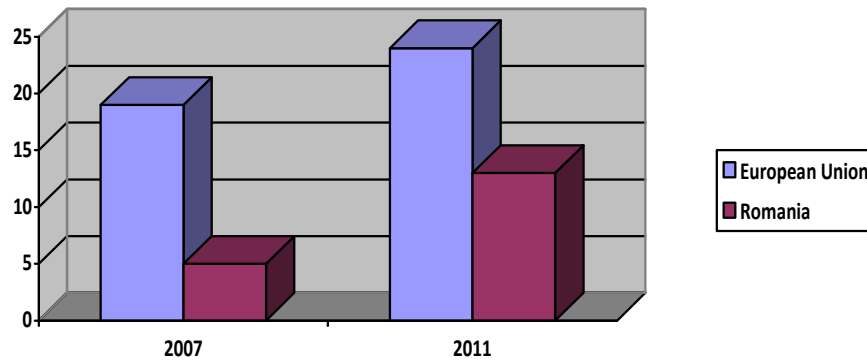


Figure no.11. Individuals (living in rural areas) who have obtained ICT skills through formal educational institutions

Regarding the Individuals who have obtained ICT skills through formal educational institutions indicator, we note that at present there are no recorded and centralized data on the values recorded in recent years, the most recent being the data from 2011. This lack of information is a recognized limitation of the analysis, implicitly an impossibility to correlate with other indicators.

Individuals who have written a computer program using a specialised programming language, more precisely Individuals who have written code in a programming language, are presented in table no.11 and viewed in figure no. 12.

Table no.11. Individuals who have written code in a programming language, unit of mesure: percentage of individuals

Geopolitical entity	2014	2015	2016	2017	2018	2019	2020
European Union	:	5	5	5	6	5	:
Romania	:	1	1	1	1	1	:

Special value (:) not available, Source:Eurostat, INS

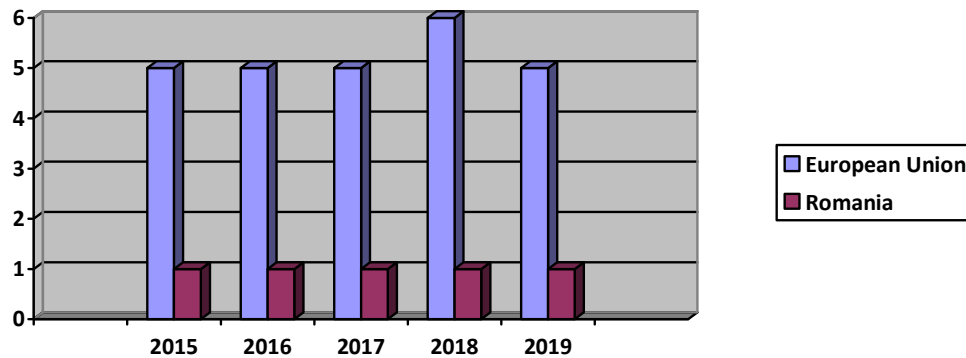


Figure no.12. Individuals who have written code in a programming language, percentage of individuals

3. Conclusions

The segment of ICT specialists has an important impact for building the European and Romanian competitiveness potential, through its contribution to the use of digital technologies. Overall, the dynamics of ICT specialists are characterized by stable and persistent employment, showing resilience to economic recessions.

The comparative analysis of the indicators regarding the ICT specialists, except Individuals living in cities who have obtained ICT skills through formal educational institutions and Enterprises where ICT functions are mainly performed by own employees, reveals the low level at which Romania is in comparison with the average registered at the level of European Union. Thus, in the next period, it will be necessary to approach with caution the objectives assumed by Romania in the context of the allocation of financial resources from the Operational Programs at regional and national level.

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ONLINE TRADE: VULNERABILITY FOR FRAUD AND TAX EVASION

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Abstract: *The Covid-19 pandemic at the macroeconomic level severely disrupted the classic world trade and the most obvious consequence of these events was the massive expansion of e-commerce. The aim of the paper is to highlight the need to apply at national level new solutions and procedures to combat tax evasion and fraud that may occur in the field of online commerce, having as a point of reference the advantages of the three declarations (VIU-DO, VIN-DO and VII-DO), used by Poland in combating e-commerce tax evasion. Currently, the One Stop Shop computer system has been introduced at European level, starting with July 1, 2021, to combat tax evasion in the area of electronic commerce. E-commerce is supported by the European Union so that economic operators can sell and buy on the internet as if they were buying from a local market, with Member States taking responsibility for collecting VAT and customs duties following e-commerce. In order to combat evasion in the area of online commerce, Romania could apply similar solutions to Poland, which has implemented declarations for each type of registration (EU OSS, non-EU OSS and Import OSS). We will present these solutions and follow the conditions under which they could be adopted, the advantages and consequences of their application.*

Key words: e-commerce, VIU-DO, VIN-DO, VII-DO, One Stop Shop.

JEL Classification: M40, M42, M48.

1. Introduction

The Covid-19 health crisis has accelerated the expansion of e-commerce and given customers access to a significant variety of home comfort products and services, giving companies the opportunity to continue operating during restrictions and containment measures. The Covid-19 pandemic has led to a fundamental change in the structure of global demand for online shopping, as well as an increase in the use of digital communication tools and distance consumption, such as: social networking, internet telephony and teleconferencing.

With more and more evidence of significant growth in both B2C and B2B e-commerce, we can say that it is necessary to adopt new methods to identify the taxation of revenues from online sales of goods and services to combat untaxed trade.

At this moment, in the situation where Romania is a member of the European Union, starting with June 2021 according to the "Government Emergency Ordinance 59/2021" the VAT treatment of distance sales of goods and deliveries of intra-community domestic goods made through platforms facilitating these deliveries, has undergone changes to combat tax evasion at EU level.

ANAF published on 28.07.2021 according to art. 314, 315 and 3152 of the Fiscal Code, Special VAT Return (VAT Return) D398 for intra-community sales of distance goods that are operated after exceeding the ceiling of 10,000 euros if you opted for registration in the OSS system.

Through the objectives of this paper we aim to:

- ✓ Highlighting the need to apply in Romania new solutions and procedures to combat tax evasion that may occur in the field of online commerce
- ✓ Presenting, as a benchmark, the advantages of the three declarations used by Poland in combating e-commerce tax evasion:
 - VIU-DO for the special procedure EU One Stop Shop (OSS)
 - VIN-DO (for the special one-stop shop procedure (OSS) non-EU)
 - VII-DO (for the special procedure of Import One Stop Shop (IOSS))
- ✓ Identifying implementation solutions for Romania

2. Literature review

E-commerce is a reorganized form of traditional commerce, being closely related to the development of the Internet and its degree of spread in society. The development of e-commerce has an important role to play in improving and securing the future of companies in critical crisis situations.

The coronavirus crisis has been a threat to the European economy and to the lives of its citizens, but the virus has stimulated online commerce and changed the reality.

Even though certain areas such as the tourism and entertainment industry have proven to be totally compromised, there have been areas that have worked at full capacity. One of these areas is e-commerce. As for the operation of the online store, it must have:

- Well-developed IT infrastructure,
- A perfectly functional website with a user-friendly interface
- Well organized and efficient logistics.

The definitions of e-commerce are grouped in Figure 1 below:

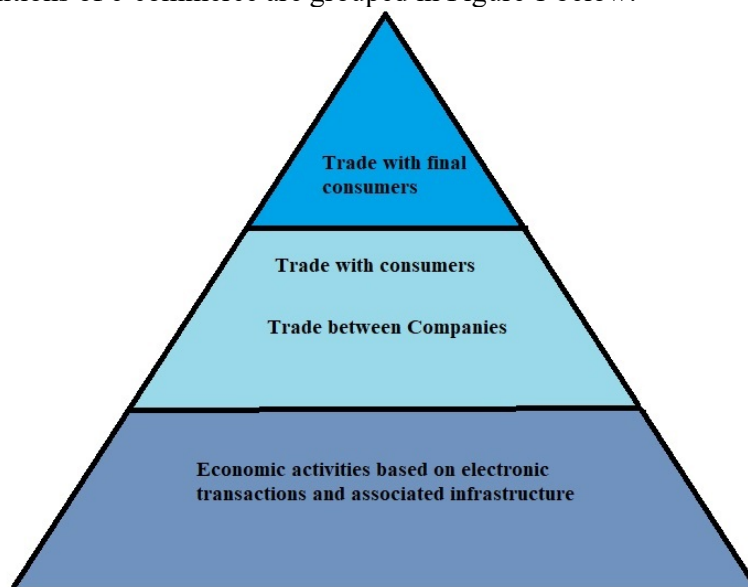


Figure 1. Grouping e-commerce definitions

Source: <http://informatica.ase.ro/site/a140301/cap2.htm>

As we can see in Figure 1, e-commerce in the broadest sense includes all economic activities based on electronic transactions and associated infrastructure. In a narrower sense, e-commerce only includes trade between companies and consumers. The narrowest definition is that which limits e-commerce to end-consumer transactions.

"The National Agency for Fiscal Administration will extend the controls to combat tax evasion in online commerce, according to the Convergence Program 2021-2021, adopted by the Government."(<https://nocash.ro/anaf-va-extinde-in-ritm-accelerat-operatiunea-mercure-de-control-in-ecommerce-institutiile-a-creat-directia-comert-electronic-pentru-a-combate-evaziunea-fiscala-in-domeniu/>).

In order to combat evasion in the area of online commerce, Romania could apply similar solutions to Poland, which has implemented declarations for each type of registration (EU OSS, non-EU OSS and Import OSS).

The Union's **one-stop shop** (OSS) is the electronic portal that companies can use to meet their VAT obligations for e-commerce sales in the EU, **starting on 1 July 2021**.

The One-Stop Shop (IOSS) is a simplified reporting model in which an entity registers in a single location for sales to EU consumers in the 27 EU Member States and for which the value freight is less than EUR 150. This creates a more efficient "Green Channel" with quick and easy customs clearance.

2.1. Union OSS electronic portal

Union OSS is an electronic portal that simplifies up to 95% of VAT obligations for online retailers and EU-wide electronic interfaces, as it allows:

- Register electronically for VAT in one Member State for all distance sales of goods within the EU and for the provision of services to consumers;
- The VAT due for all deliveries of goods and services is declared and paid in a single quarterly electronic return;
- They work with the tax administration in their own Member State and in their own language, even if the sales are cross-border.

2.2. VAT on e-commerce - what is its revolution in e-commerce?

With regard to cross-border e-commerce activities, the rules for B2C transactions have been amended as of 1 July 2021. The main reason for these changes is to combat online tax fraud for distance selling. *"The Brussels authorities have proposed a revision of VAT in the EU, which could take effect in the coming years. With a view to the global eradication of online tax fraud."* (<https://taxrep.ro/ro/e-commerce-and-vat-in-romania/>).

Certainly, each of us orders something over the Internet. From the consumer's point of view, it's not difficult - we add the product to the cart, we pay for it and after a while the courier delivers the order to the indicated place. However, the case is quite different from the point of view of an e-commerce entrepreneur. Especially from a fiscal point of view, accounting for this type of sale can be quite problematic.

In addition, by the end of June 2021, EU online retailers may have found themselves in a slightly more difficult position than their US or Chinese competitors, who did not always pay attention to VAT. For these reasons, tax regulations have entered into force throughout the European Union since 1 July 2021, introducing a number of changes to e-commerce and e-imports, the so-called small parcels to the European Union.

The changes introduced and the new regulations are undoubtedly a major challenge for both e-commerce entrepreneurs and the accounting services responsible for the proper settlement of such transactions.

The new statutory definitions, additional registration and registration obligations, and the possibility of using simplification procedures are a revolution in e-commerce.

Taxable persons who opt to use one of the OSS schemes are required to register in a single Member State, namely the Member State of identification.

From the outset, it should be noted that the above-mentioned amendments were introduced into the Polish legal system by the Law of 20 May 2021 amending the Law on Taxes on Goods and Services and Certain Other Acts (*Journal of Laws 2021, paragraph 1163*). The indicated act is the implementation of the EU VAT package for e-commerce, which consists of several regulations and directives.

Among the changes introduced are the following:

- Replacing the definition of "distance selling" with a new definition of intra-Community distance selling of goods (ESPO);
- Introduction of a definition of distance selling of imported goods (SOTI) in the VAT Law;
- New definition - special procedures and simplifications for the settlement of e-commerce transactions (OSS, IOSS, USZ);
- Capping the VAT exemption on imports of goods in transport with a value not exceeding EUR 22 throughout Europe;

- Impose new obligations on online platforms and stores;

3. Studies and examples of good practices

3.1. Intra-Community distance sales of goods, ie ESPO instead of distance selling

By the end of June, the sale of goods through the e-shop to consumers in EU countries was hampered by many formalities. Among other things, an e-commerce trader had to register for VAT in each Member State in which he exceeded the relevant sales threshold (and each country could set its own separate threshold). Consequently, such a taxpayer had to file a VAT return and at the same time keep VAT records in different EU countries.

As of July 1, 2021, the VAT Law includes several new definitions. One of them is *Intra-Community distance selling of goods* (ESPO). ESPO is, to put it simply, the delivery of B2C goods that are shipped or transported from one Member State to another. The ESPO definition practically corresponds to the repealed definitions of distance selling to and from the country. The rule in this type of transaction is the taxation in the country of consumption.

There are a few exceptions to this rule.

Once certain conditions have been met, the place of delivery of the ESPO will be the place where the goods are at the beginning of the shipment or transport to the buyer. This will be if:

- ✓ The provider is established in the territory of a single Member State (permanent residence / habitual residence);
- ✓ The goods are dispatched or transported to a Member State other than the home Member State (domicile of the supplier / usual place of residence);
- ✓ The total amount of ESPO and cross-border telecommunications, broadcasting and consumer electronics services (TBE services) did not exceed the taxpayer during the fiscal year or the previous fiscal year in the amount of EUR 10,000 or its equivalent (PLN). 42,000 in Poland.

The amount indicated above is a uniform threshold introduced across the EU. A taxpayer who has not exceeded the above threshold may choose to tax ESPO and TBE services in the country of consumption. The selection is made by submitting a notification to the head of the tax office by the 10th of the month following the month in which the selection was made (electronically on the VAT-29 form).

Under the new regulations, the choice of place of delivery in the case of ESPO applies to all deliveries. Until the end of June, it was possible to choose the place of taxation of mail order sales outside the country in relation to one or more Member States of consumption.

If the ESPO is taxed in the country of consumption, the taxpayer, in order to settle the VAT in that country, may:

- choose to register in that country and file VAT and VAT returns directly there
- decides to simplify the registration for the OSS procedure and the settlement and payment of tax due to other countries in a so-called window.

3.2. OSS Procedure

Under the previous legislation, some contractors (providing telecommunications, broadcasting or electronic services) could use the MOSS (so-called one-stop shop) procedure.

The procedure indicated was that the taxpayer who sold the above services to consumers in various EU countries and not only did not have to register for VAT in each EU country, but could only pay VAT in the country of tax residence.

As of July 1, the above procedure has been extended - now, as part of OSS (the so-called one-stop shop), e-merchants can use it (if they meet the conditions mentioned below). The new OSS procedure (like the previous MOSS) is divided into two special procedures: EU and non-EU. The scheme outside the Union can only be used by entities that are not established or have a fixed seat in the EU and sell to EU consumers. OSS registered taxpayer:

- ✓ submit a quarterly VAT return in electronic format to the Member State of identification;
- ✓ will pay the VAT due to other Member States through OSS;
- ✓ does not have to register as a VAT payer in other countries unless they settle transactions other than those covered by OSS;
- ✓ will reimburse VAT on all transactions subject to special procedures, only through the OSS system
- ✓ is required to keep electronic records of transactions settled in OSS, the records should be kept for a period of 10 years.

3.3. Distance selling of imported goods (SOTI)

Until the end of June 2021, a special VAT exemption was in force in the European Union for the import of goods up to EUR 22 (exemption does not apply in Poland and France). This exemption has been removed. Thus, VAT is now paid in connection with the importation into the EU of goods purchased by EU consumers.

The e-commerce package has introduced in the legal system a new definition of distance selling of imported goods (SOTI) and the related new regulations on the establishment of the place of taxation of such transactions.

SOTI is a supply of goods dispatched or transported by or on behalf of the supplier, including where the supplier is indirectly involved in the transport or shipment of goods - from the territory of a third country, provided that the following conditions are cumulatively met:

- ✓ the delivery is made to a taxpayer or a non-taxable legal person who does not have the obligation to settle the intra-taxable goods, or to another non-taxable person (B2C provision);
- ✓ the goods delivered are not new means of transport or goods that are installed or assembled, with or without proof.

A special (voluntary) import procedure (Import One Stop Shop, IOSS) has been introduced for goods placed in a shipment with a low real value (up to EUR 150), and new special regulations for VAT declaration and payment have been added (VAT), if the special import procedure (IOSS) has not been applied.

3.4. Import ONE STOP SHOP

In the IOSS procedure, it will be possible to reimburse VAT due to the Member State of consumption (different Member States, including PL) for the distance sales of imported goods (in a shipment not exceeding EUR 150) through the Member State of identification (eg PL).

At the same time, when using the IOSS procedure, there is a VAT exemption for the import of a package with a value of up to EUR 150. If you do not use the IOSS procedure, all low value goods (up to EUR 150) will be subject to VAT.

3.5. Procedure for declaring and deferring VAT payments on imports of goods (CVT)

If IOSS has not been used to settle VAT on the import of goods, it is possible to settle VAT in two ways:

- Using a standard customs declaration
- By a special regulation (CVT).

Under the new CVT procedure, the operator will be able to declare and pay VAT on the import of goods in a collective customs declaration once a month. The procedure concerns the importation of goods which meet all of the following conditions:

- ✓ the goods are delivered to consumers in Poland
- ✓ their actual value does not exceed EUR 150 per transport
- ✓ are not subject to excise duty
- ✓ are released for free circulation in the Member State of dispatch or transport.

According to the draft explanations of the Ministry of Finance, the changes in the field of electronic commerce are due to the CVT, the operators submit monthly electronic declarations, which are in fact monthly customs declarations and pay the VAT due from the recipient. for the import of the above goods.

3.6. OSS / IOSS special procedure

- ✓ VAT-29 - Notification of choice of place of taxation or waiver of choice of place of taxation in respect of intra-Community distance sales of goods or provision of telecommunications, broadcasting and electronic services
- ✓ VIU-R (OSS) - Notification providing information on the specific EU VAT settlement procedure
- ✓ VII-R (IOSS) - Taxpayer's request for information on the special procedure for refunding import VAT
- ✓ VIN-R (OSS) - Request for information on the special procedure for the settlement of non-Community VAT
- ✓ VII-RP (IOSS) - Application of an intermediary informing about the special procedure for importing VAT refunds
- ✓ VII-DO (IOSS) - Declaration for VAT settlement within the scope of the import procedure
- ✓ Instructions for completing the VAT refund declaration within the scope of the import procedure (VII-DO)
- ✓ VIN-DO (OSS) - Declaration for VAT settlement in the sphere of extra-community procedure
- ✓ VIU-DO (OSS) - Declaration for VAT settlement within the scope of the EU procedure

New obligations for digital platforms

The new e-commerce simplification regulations provide for two actions on platforms and websites (eg Ebay, AliExpress, etc.), which assume that entrepreneurs have used the platform to:

- Buy goods from the merchant;
- Sell the goods to the consumer.

Consequently, this means that online platforms will be required to pay VAT.

The method of VAT settlement by the platform may vary depending on the supply chain and the value of the shipment. *"The responsibility for collecting VAT and customs duties due in connection with cross-border e-commerce transactions lies with the Member States. Any shortfall in the collection of VAT and customs duties affects the budgets of the Member States and the EU budget."* (<https://op.europa.eu/webpub/eca/special-reports/e-commerce-12-2019/ro/index.html>).

To simplify, it can be said that the platform will be obliged to pay VAT, for example when a Polish consumer buys goods through this platform from a seller based in the USA.

4. Research methodology and results

Research is the study of specific processes, techniques, tools and procedures used to accomplish a set of purposes, it is a theory of the general research process and methods of online commerce, to expose their trends and development directions and the interrelationship between various methods. in the process of researching online commerce.

The research methodology approached is of qualitative-quantitative-deductive type, the methodological approach applied throughout the paper will be of qualitative-deductive type, the methods used being: analysis of specialized papers and comparison. The applied techniques will be: analysis of works containing qualitative and quantitative research, as well as comparative analysis.

The article provides an overview of the study of the essential laws of research from the perspective of several systems, coordination, integration, order, simplicity and cycle.

The methodology focuses on e-commerce research, and based on it, systematically introduces the determination of research topics, selection of research methods and technologies, program design, and writing and publishing the final research results of the entire e-commerce research process.

We pay equal attention to both theory and practice and emphasize the maturity and systematicity of relevant concepts and theories, as well as the advanced nature of the results, trying to reflect the inherent characteristics and development trends of the online commerce research methodology.

5. Conclusions

In this section we have identified in the selected articles the main key issues to answer the question of combating tax evasion in the field of e-commerce. Even if locally the National Agency for Fiscal Administration has submitted several operations, the most important operation "Mercury" being the most developed verification of non-taxed online trade.

The recent evolution of e-commerce and the decisions taken at European level regarding online commerce require in Romania to consider the fight against tax evasion in this area by connecting e-commerce sites with the ANAF server by direct billing in the program e-invoicing or by entering new statements.

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INNOVATIVE LEADERSHIP DURING PANDEMIC

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Abstract: *The last two years have significantly influenced the evolution of companies and the leadership styles applied by managers. Work from home, downsizing, technical unemployment, reduced production capacity and all aspects of the pandemic have led leaders to adopt innovative team coordination strategies, involving changes in communication style, coordination, motivation, and evaluation of employee outcomes. The role of leaders changed significantly during the pandemic, the innovative ways in which they positioned themselves at the team level being the success factors in most cases, the most significant qualities being organizing via a network of teams, displaying deliberate calm and bounded optimism, making intuitive decisions amid uncertainty, demonstrating empathy and effectively communicating.*

Key-words: *Leadership, innovation, remote teams, online meetings, communication.*

JEL Classification: *L20, M10, M12, M52.*

1. Introduction

The leadership concept reflect the ability of an individual or group of individuals to guide followers and to influence them in order to achieve a goal. This ability involves creating a transparent vision, establishing realistic goals and providing to followers all information and tools necessary to achieve those goals. Leadership means vision, encouragement, enthusiasm, love, energy, passion, obsession, consistency, the use of symbols, being attentive to the priorities of others, the real drama (caused and management), creating heroes at all levels, training, effective walks through. Also, leadership is a reciprocal relationship between those who choose to lead and those who choose to follow. A leader has the ability to make people happy with what they do and helps people feel that their work helps them achieve the long-term goal of the organization. A leader challenges employees to go beyond the basic level of efficiency and try to reach their full potential; they strive to get the best out of employees. A leader is one who recognizes the accomplishments, successes, and rewards the people he or she deserves. One of the most important traits of the leader is that he treats mistakes as learning experiences. Leadership is an art and also a science. There are leaders who end up in management positions and fail to get results due to lack of knowledge and management tools. On the other hand, a manager who does not have the qualities of a leader will always have problems with the motivation and the formation of a team that will work well together.

2. Leadership skills

One of the most important skills of a leader is **emotional intelligence**. This individual ability helps leaders to recognize and manage emotions in themselves. Emotional intelligence helps people to be aware of their and others strengths, weaknesses and emotions, to manage feelings in different circumstances or levels of stress, to manifest empathy and to manage relationships with others. By increasing their emotional intelligence skills, leaders are more capable to efficient communicate, motivate team

members, delegate activities and can better communicate, motivate their teams, delegate tasks, and making intuitive decisions amid uncertainty and demonstrating empathy.

Another important skill consist in the ability to **effectively communicate** with team members. Communication consist in several skills, such as: adaptability (refers to the capacity to adapt communication approach related to different circumstances and audiences), active listening (consist into the ability to be focused on the topic, remaining involved during conversation, taking into consideration verbal, non-verbal and para-verbal communication), transparency (promoting company's strategy, directions, opportunities and challenges to team members in transparent manner), clarity (simplifying messages so that the audience can understand exactly the demand and the expectation, but also providing all details in order to motivate team members to take action), empathy (the ability to identify emotions and feelings of team members and adapt your actions and communication accordingly) and body language (manifest open body language that increase self-confidence and makes others feel comfortable sharing opinions).

The ability to **bring out the best performance** is another skill that leaders should have, including strategies as building a culture of trust, delivering honest feedback, manifest empathy, fostering open communication, being purpose-driven and supporting growth opportunities.

In order to properly lead a team, a leader has to have a healthy level of **self-awareness**. This ability allows leaders to recognize and control emotions as they can perform duties, helping to remain effective during stressful situations.

Resilience is another leadership skill that leaders should have, including the reflection and options assessment before taking any step or decision, striving to continuously learn and improve yourself and your team, keep the focus on goal even during stressful situations and cultivating a strong relationship with colleagues and mentors.

3. Leadership during pandemic

The last 2 years have been unexpected for all of us. It was a time of many unknowns, many questions and uncertainties. It was a time when each of us tried to find solutions so that life before the pandemic could be transposed as easily and better as possible in the context of the pandemic. Among leaders, the pandemic required team repositioning, rethinking leadership strategies and redesign of leadership styles, all of them being built on basic leadership skills. In a pandemic context, every leader had to do whatever it took to keep businesses afloat so that post-crisis recovery would be as easy as possible. They had to find tools and ways to collaborate with the team so that business remain productive. The management of remote teams it was a necessity in the current conditions, but, fortunately, technology helped us to move from working remotely easily by removing some of the difficulties. Suddenly, tens of millions of people around the world woke up the next day to work from home. Companies have rushed to adopt fast remote work solutions, consisting mainly of video and tele-conferencing platforms, along with phone, chat, WhatsApp, email and collaborative solutions. Thus, each leader had to be innovative, to use all available tool and processes and find the best way for his team to achieve exceptional results and to remove as much as possible the barriers of communication through the screens.

3.1. Leading remote teams

Virtual teams need the same things that every team needs: a well-defined goal, a clear set of roles and responsibilities within the team, communication options that meet all the needs of the team, learning options, and change of direction.

The role of the manager is to help the team learn how to be a team at a distance and more than ever to find ways to make the work of the team effective. The role of the

manager is to build and build trust in the team he leads. Trust is the foundation of successful relationships and a crucial element in the success of a long-distance team. Returning to the managerial role, learning to lead a virtual team means understanding more about people and the process of collaboration between them, and not just focusing on technological skills.

Leading a virtual team has the following challenges and disadvantages:

- ✓ There is *no direct contact*, even if it used visual communication, even if it is used the camera is not the same thing.
- ✓ The *emotional distance appears*, even if a leader can call his team at any time, this involves an action; in the office the contact is default, the leader don't have to ask permission to communicate with you and nor the team member to talk to the leader. Basically, there is a limit to the extent to which technology can replace human contact. It is clear that once the emotional distance increases a lot, the relationships must be compensated, the leader must take positive actions to maintain teamwork and contact between people.
- ✓ *Lack of skill*, and the necessary technology, or technical problems, which affect the way we communicate

All of this raises barriers between sender and receiver that change the ability of the two to communicate.

3.2. Strategies for leading remote teams

Managing remote teams can be a challenging task since you have to create/maintain remote organizational culture. In order to create a successful remote team, there are some initiatives can be applied, as follows:

a. *Define and promote clear and detailed outcomes*

In times of normality and with collocated teams, with communication loops and immediate feedback, targets can be set more broadly and recalibrated later, some managers avoid giving instructions in too much detail, precisely to avoid micro-management. But for remote teams it is better to give more detailed task descriptions, with examples of what the end result should look like. Give team members the freedom to execute tasks as they see fit, but not with few instructions that can be a source of potential misunderstanding and frustrations in case of failure.

b. *Overlapping working hours*

Find out other constraints of team members (part time activities, family) and identify at least three to four hours a day when most of the team is online at the same time. Common meetings with all team members must be in that period of time.

c. *Create a professional working environment*

Professional appearance and a distraction-free work environment are part of any organizational culture. In addition, setting professional standards contributes to efficiency and gives people the right and positive mind set.

d. *Adapt to the people you work with*

Not everyone can easily adapt to work remotely and not everyone is equally suited to this way of working. Assess how well people fit into the team and identify the optimal way of working.

e. *Establish a meritocracy system*

Meritocracy - or the process of rewarding and recognising people on the basis of their skills - encourages people to work harder and better. Be sure to set up reward systems to keep your team motivated and to better identify team members who can take on more responsibility.

f. *Schedule regular meetings*

Scheduling current meetings at the same time on the same day of the week helps create a routine. Routines give the team a sense of calm, familiarity and predictability. This allows team members to feel comfortable and reduces stress. Video calls are one of the best ways to maximise the effectiveness of meetings as they recreate office routines, thus reducing the feeling of alienation for remote teams.

g. Define working systems

Different people have different ways of doing tasks. Setting standards can shorten the time it takes to achieve the expected result. By setting standards and defining repeatable work systems, the team generally has fewer questions and knows how long it should take to solve certain tasks. These work systems must be both standardized to allow for maximum efficiency and tailored to allow the freedom needed to complete the task to the best of one's ability.

h. Use project management tools

Project management tools can be ideal for tracking deadlines. Also, send out alerts and reminders for deadlines and make a quick daily, weekly or monthly overview of what needs to be done, by whom and when. File-sharing tools and time management apps are a big help.

i. Motivation and sense of belonging

An organized work environment is not only disciplining but also motivating. It helps people to do their job consistently day in, day out, 8 hours, that's how they progress. But beyond discipline (that would be the stick, the element of strength), there is also motivation (the carrot, the positive element). It is motivating to see others working side by side with you, not giving up, pulling in the same direction, even if each at their own tempo. People inspire each other, motivate each other, when we are low on energy, the others motivate us to keep going. Here's an element that many are missing. They will emotionally walk away from projects in the works because people are emotional beings and not machines. It matters that individuals believe in what they are doing and feel the pulse of others around them, it's like an outlet with energy and motivation there that a simple email or phone call can't supplement.

j. Define multiple communication tools

Using multiple communication tools has the following advantages. First, your team has a way to immediately communicate something that is urgent to the right person. Second, it unifies processes, such as what to use for conference calls, screen plays, and so on. It's clear that using the same tools helps create a sense of belonging and connection.

In parallel to phone, chat, WhatsApp, email, Google Docs, One Drive there are collaborative solutions and specialized platforms on a case-by-case basis, which have easily and quickly proven their usefulness:

Zoom - a more complex tool than Skype, ideal for multi-user conferences and presentations. The number of users doubled earlier this year with the spread of Coronavirus.

Google Drive - a sharing system with options for document, table or presentation files, where you can track the activity of all contributing users, save previous versions and use the whole suite with the whole team.

Google Hangouts Meet - ideal and simple for online meetings, with or without a video camera, where two or more people can pass an invitation to their Google calendar and then talk, write and share files.

Monday.com - a collaborative planning and activity management platform. Helps you work with speed and adapt quickly Monday.com allows team members to work in a unique way tailored to the specific needs of each member while gaining the agility to adapt to the specific speed of business development.

CRM - a useful CRM platform for administering and managing customer relationships. Provides you with the technical support you need to make the most of opportunities. Transparent, efficient and incredibly simple. Helps you capture contact information no matter where it comes from: email, documents, business cards or web pages.

Microsoft Teams - a platform developed by Microsoft for proprietary business communication, as part of the Microsoft 365 family of products. Teams is offering workspace chat and videoconferencing, file storage, and application integration. Also, can be added different add-ons that can help people organizing better their work.

k. Trust investment

Dispersed teams that are working remote as virtual teams often struggle to build and maintain trust, because of lack of physical proximity, reducing the cohesion feelings and also cultural differences. In order to increase the trust of team members, are recommended virtual “face-to-face” meetings, keeping the team members informed about company’s strategy, long term organizational changes and consequences, asking for team input on organizational issues and celebrate short-term victories by reinforcing the team’s joint effort.

l. Define roles and respect procedures

In case of remote teams, roles are very important. Each member of the team needs to know who can help him with an issue, who is accountable for some action or to whom needs to report a status. Leaders need to pay attention to establishing roles in the team. They need to define clear roles in virtual teams as well, primarily related to communication and information strategy. These roles can include technical support for people who need it; people responsible for archiving information, people who will monitor results and so on. Also, procedures create the background that each company must has and needs to be very well known by each team member. The leader should reinforce procedures and be sure that each team member is up to date with procedures updates.

4. Conclusions

The leader’s role is to help the team learn how to be a remote team and more than ever to find ways to make the work the team does effective. Also, his role is to build and strengthen trust within the team he lead. Trust is the foundation of successful relationships and the crucial element in the success of a remote team. More than that, learning to lead a virtual team means understanding more about people and the process of how they work together, and not just focusing on technological skills. Managers leading virtual teams need to be present, consistent, and plan well to keep the team motivated, engaged, and performing, using all the tools available. Innovation is an important asset of any leader, which help leaders succeed in managing remote teams. There is no one right way to correctly coordinate remote teams. Each leader must use his or her intuition, experience within their team build on previous experiences and identify the most innovative method of coordinating remote teams, with the strategies and actions presented in this article as a background. By practising, each leader identifies the best methods of coordinating remote teams, depending on their response.

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INFORMATION ANALYSIS, ESSENTIAL TOOL FOR BUSINESS GROWTH

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Abstract: *The business environment is based on a complex structure of internal and external processes through which all the activities used to generate services or products are integrated. Knowledge, analysis and management of useful information of these processes is a prerequisite for the development of any organization. In order to increase the performance indicators of an organization, it is necessary to apply the techniques of analysis, modeling, control and continuous optimization of internal processes. In an economic unit, internal processes, whether or not they involve a human operator, refer to the controlled movement of information in order to facilitate decision-making or to deliver goods or services to internal or external customers. Information analysis and business process information analysis techniques include identifying, decomposing, and modeling process flow, resulting in one or more process and subprocess diagrams down to activity and task level.*

Keywords: *information analysis, OSINT, management, analysis techniques, data flows and information.*

JEL Classification: *M1, M15, O11.*

1. Introduction

Modern analysis techniques are becoming more and more complex, the amount of information available at any given time is becoming very large. From a business perspective, the need for information is also on an upward trend. Until recently, the dominant idea in the business environment was that the one who has the most information is also the strongest. The enormous volume of data and information makes it necessary to clearly differentiate between useful and useless.

The efficient use of existing information sources in the online environment has become extremely important. One of the most important and frequently asked questions in the business environment is: how can we filter, analyze a volume of data in such a way that the company's information needs are met to the greatest extent possible, with the lowest possible costs?

Information analysis deals with a current problem of modern society, the need to obtain information that gives the ability to act, namely intelligence (intelligence is "the element that can be coded to be stored, processed or communicated; it is the product of collection, processing, integration, analysis, evaluation and interpretation of available data on areas of interest" (Nicolaescu and Simileanu, 2004)). The usefulness of this type of information is increasing with the evolution of technologies.

Information is an important factor in the production process, but increasing the amount of information leads to the concept of information analysis and intelligence creation, which will make the difference between two competitors who have similar economic activities (Fuld, 1995, pp.24-25).

Information analysis is an important tool to highlight the benefits and eliminate the risks, taking into account certain aspects / objectives:

- ✚ highlighting the characteristics of the concept of "intelligence" from an economic perspective and, in particular, so that it can be used properly within the company;
- ✚ highlighting an innovative method of qualitative analysis of information that can be used in the production cycle;
- ✚ adapting the Competitive Intelligence process to the specifics of Romanian companies and materializing the result in a guide to using the integrated analysis of information as part of the Competitive Intelligence process, in the strategic approach to obtaining sustainable competitive advantages by the company;
- ✚ supporting Romanian companies in order to increase competitiveness by using new means to obtain sustainable competitive advantages.

Marketing techniques, market research and analysis techniques and types (Big Data, Business Intelligence), and the analysis of information from the competitive environment can ensure the achievement of that degree of innovation necessary to obtain competitive advantages over economic competitors.

If the financial, quantitative analysis, and even the study of the facts in the competitive environment are known ways, used by most Romanian companies, combining them with qualitative methods specific to the analysis of information from the competitive environment will certainly bring innovation and added value.

The strong point is represented by the possibility to study new concepts presented in detail in the specialized literature abroad, but especially to transpose these concepts on the Romanian market, where innovation is necessary.

2. Collecting OSINT information and converting it into information

Employees who specialize in collecting information from open sources must have skills in managing news and articles on the Internet, print or news agencies, audio-video material from TV stations, radio, and other types of material, such as documentaries, reports, analysis, statistics, including from open source databases. The rapid change in the open source table - especially the development of new media - and the transfer of most of the content of traditional sources in virtual space, along with trends in the evolution of the characteristics of the information provided, have significantly increased the complexity of search and processing skills their¹.

"New media" does not have a generally accepted definition, being perceived differently by different categories of users, but the conceptual core of the notion indicates any digital media product that is interactive and distributed through computer networks, or all texts, sounds, images and graphics processed on the computer and gathered in databases.

The sheer amount of information - the huge number of corporate / personal websites, blogs, public forums, social networks that already account for hundreds of millions of accounts - the exponential growth of user-generated content and the diversity of languages / packages in which information is delivered are challenges which translate, from the perspective of the need to manage them, into distinct training objectives, such as:

- ✚ acquiring in-depth and specialized knowledge of surfing and operating the Internet;
- ✚ developing the skills to identify the best sources of information;
- ✚ acquiring skills regarding source validation;
- ✚ data search methods and techniques;
- ✚ acquiring skills for data validation and organization;
- ✚ development of processing techniques.

¹ Information asymmetry theory is a concept introduced by the 2001 Nobel laureates in economics, George Akerlof, Michael Spence and Joseph Stiglitz, and is the study of transactional decisions in which one party has more information than the other.

3. Steps for the development of an analytical product using open sources of information

Finding and using data and information is a process during which one identifies, as completely and thoroughly as possible, what has been written about the subject before.

- *Identifying the data and information needed to document a particular topic can be seen as a process that begins with the preparation for the search for information and continues with the implementation of the search. After the search, the result is evaluated to decide on the relevance to the topic addressed and the efforts made to achieve the original objective.*
- *Finding data and information, collecting and converting it into information, starts with understanding the topic to be documented, and at the same time, determining the type of information to be found. Establishing, from the outset, the type of data and information to be identified, speeds up and at the same time facilitates the whole process.*
- *Familiarization with the terminology and concepts used in the field of documentation is also an important step in the process of searching for data and information. This is done through the initial search that allows you to identify other keywords that describe the topic, which will later be used for a systematic, more accurate search. If you use a string of keywords that describe the documented topic to search, it is recommended that you also perform a secondary search that uses alternative terms, synonyms, or similar concepts.*
- *The elaboration of the informative product is the stage that supposes the most complex and in-depth training of the worker in intelligence from open sources, fact for which the OSINT trainings focused on the analysis of the information are the most consistent, elaborated and extended.*

Continuous training and improvement of open source information analysts is essential to increase the quality of the information products they prepare, with training in this area having the role of specializing the worker on certain types of analysis (depending on the needs of the organization). as well as to ensure its constant maintenance in an area of knowledge of the elements specific to the main intelligence activities (knowing that the omission or ignorance of some important aspects of the analyzed situation may alter the usefulness of the product delivered to beneficiaries).

The complexity of the activity of elaborating an analytical information document dictates the careful structuring of the trainings in clearly delimited modules according to the proposed objectives.

Currently, the criteria for formulating these objectives are mainly set by:

- the type of analysis of the information for which the workers are trained;

Tactical, strategic analysis, trend analysis, risk analysis, predictive analysis - these are just a few examples of areas characterized by their own means and methodologies for creating materials in an integrated format.

- monitored spaces;

The oscillation of the poles of instability over certain periods of time and in different spaces determines the focus of OSINT analysts' attention on the respective regions / states, in order to inform the beneficiaries extensively and operatively, respectively to support as effectively as possible the decisions relevant for national security.

- the issues they are responsible for;

Treaties separately or interconnected from the perspective of the causality of certain developments, issues such as terrorism, proliferation of weapons of mass destruction, organized crime, economic security, frozen conflicts, extremism, radicalization and religious fundamentalism, etc. they imply specific methods of approach in the analytical

documents, especially from the point of view of their inclusion in certain types of analysis and of the resources used in the elaboration of the informative products.

4. The use of social networks in Romania and the advantages of OSINT analysis

The social media industry is constantly evolving to keep up with the trends and requirements of users, being almost impossible to predict how they will look in just a few years.

The fact that social media users are becoming more aware of how their data is being used creates problems of transparency and confidentiality, so that the social networks of the future place more emphasis on privacy.

Online social networks are of great importance, being important sources of information for various fields: social, political, economic, civic and educational. Social networks can provide considerable benefits in terms of communication and user relationships, as well as useful information for making predictions based on the analysis of the huge data flow they generate.

Online social networking platforms have evolved significantly in recent years and, in the context of the expansion of the Internet, have become useful economic tools in many countries, now helping governments to engage in dialogue. They understood that they could not isolate themselves and that they could provide better services when involving and consulting the citizen in the act of governing.

Thus, social media is one of the most commonly used ways to create online communities, based on common values and interests. Online communities can create, use, and share large volumes of data and information, lead to the creation and development of new social trends and behaviors, and determine their current and future evolution.

Appreciation: Social networks help build relationships, communicate with others at low cost, help with career opportunities, express thoughts and feelings, and play an important role in everyday entertainment. At the same time, they destroy the value and quality of real interpersonal relationships. It is a distraction from the important things in real life.

These online platforms come in several forms:

- ✓ Social news: dedicated websites where the user can read about various topics and can give feedback by voting or commenting on articles;
- ✓ Social networks: platforms that allow user interactions, publishing and recommending content based on personal accounts;
- ✓ Blogs / forums: this type of platform belongs to some people / communities that approach general or personalized content;
- ✓ Photo / video sharing: These types of platforms allow you to upload and publish content for sharing, sharing and receiving feedback from other users.

Social networks are in full virtual expansion and are the result of the increasing use of revolutionary technologies, which have led to a significant change in society:

- ✓ appeared as important means of communication;
- ✓ exchange of information regarding different social events, personalities or ideas;
- ✓ the development of technologies and the internet has led to an increase in the number of users;

The increasing percentage of people who use the Internet to access such virtual communities has led to the development of existing social media platforms and the emergence of other social networks.

- ✓ The activity, more and more increased, in the virtual environment was noticed by groups of people who have formed organizations, who saw in the online field a new way through which they can fulfill their goals and objectives;

5. OSINT analysis in intelligence information management

Perhaps the biggest challenge today, in terms of disseminating information, is connectivity. People are constantly connected to reality through social networks, where open sources are present, which have become almost perfect channels for disseminating information.

One of the biggest advantages offered by OSINT is the possibility to evaluate the way in which the information is received, the reactions of the readers on the public accounts of the media sources to the social and economic stimuli, to the political events. And here we are not talking about individual reactions, particular positions, but about currents of opinion, mass reactions, extremely important to identify in conducting evaluations and outlining future scenarios of evolution of certain situations or phenomena.

Given the fact that, over time, technology will evolve dramatically, but human nature is almost imperceptible, OSINT is the field of intelligence best prepared to meet this kind of challenge.

The OSINT¹ analyst thus becomes that "magician of information", with the role of seeing the big picture, of connecting the pieces of a puzzle, thus transforming the immense amount of information to which we have access into a knowledge of the present, but more chosen of the future.

It can be concluded that through OSINT a large part of the information needs can be filled and thus a decongestion of the other collection resources is achieved, allowing the latter to concentrate the effort on other types of information. Open source is best suited to prevent other intelligence disciplines on topics of interest, especially given that freedom of movement has greatly increased media organizations' access to information.

6. Conclusions

- Acquiring the theoretical knowledge necessary for orientation in the open source space, along with acquiring the skills / competencies required for the practical development of OSINT activity is an increasingly important segment in contemporary intelligence, given that recent paradigm shifts, weight reduction traditional models and the development of technology draw new conceptual and global action coordinates.
- The unclassified nature, the extremely generous volume of information, the quality and complexity of the resulting products, as well as the possibilities of worker interaction indicate open sources as the most environmentally friendly working environment in intelligence, mainly from the perspective of variety of sources and fields. decisively.
- The OSINT trainings currently carried out at the level of the most developed intelligence communities or in a collaborative, inter-institutional and inter-state format, manage to ensure, to a significant extent, the qualitative leap of human resources within the intelligence organizations. effectively prevent and combat new forms of security threats.

¹ The analyst is limited in his activity by the horizons of his own knowledge, the result of a language barrier or the absence of knowledge in other fields than those traditionally associated with the environment in which he works.

- The GDP of the countries seems to be strongly correlated with the spread of the internet, the richest countries having a higher penetration of the internet and vice versa.
- Facebook and WhatsApp are the most commonly used messaging applications and are owned by the social media giant Facebook.
- The social networking platform Facebook will represent in the next period the most important communication channel, with potential not only for information and organization, but also for training and influencing the opinions, attitudes and behaviors of the population.

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ACCESS TO FINANCE BY MOLDOVAN SMALL AND MEDIUM ENTERPRISES: MAIN OBSTACLES AND SOLUTIONS

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Abstract: *The small and medium-sized enterprise sector is one of the main elements of the modern national economy and is the guarantor of the existence of competition. It contributes to increasing the percentage of the middle class and the creation of new jobs in the state. Finance plays a crucial role in the activities of small and medium-sized enterprises. One of the main obstacles to the development of SMEs in the Republic of Moldova is limited access to finance. The article presents the results of the analysis of the evolution of the main indicators of business activity of enterprises. The object of this study is to describe the experience of Moldovan small and medium-sized enterprises in accessing finance, highlighting the main obstacles. Using the software package EViews 9, an econometric model was developed for the dependence of the total credits given to the small and medium-sized enterprises on the follow factors: Consumer Price Index, base rate, non-performing credits and the volume of redemption government securities. Based on the results of the study, measures have been developed to improve access to finance for small and medium-sized enterprises in Moldova.*

Key words: *small and medium-sized enterprise, access to finance, main sources of finance, barriers for access to finance.*

JEL classification: *G00, M20.*

1. Introduction

Small and medium-sized enterprises (SMEs) play a substantial role in the growth of the national economy. They contribute to increasing the standard of living, reducing poverty, and are an important source of creating new places of jobs. The contribution of SMEs to the formation of total Gross Domestic Product (GDP) per economy was 48,0% in 2020 (year of COVID-19) and 50,9% in 2019. At the same time, its contribution to the formation of net tax on products is 44.7% in 2020 and 46.8% in 2019.

One of the main barriers to SMEs growth is limited access to finance. The most common source of finance is the bank credit. That is why the study is focused on the factors that influence the volume of the credit granted by the banks to SMEs. An econometric model was developed to describe the dependence of the total volume of the credit by four variables, such as Consumer Price Index, base rate, non-performing credits and the volume of redemption securities. Because the main impediment to the development of SME in Moldova is the access to finance, the survey on this obstacle is relevant. The primary goal of this study is to develop solutions for expanding access to finance.

2. Literature review

Many foreign and domestic scientists are concerned with studying the peculiarities of the development of the small and medium-sized enterprise sector. Of the total number of studies, a few have the object of research – access to finance. E. Godjaeva (2021) argues that the primary solution in the development of the SMEs sector is “credit stimulation”. Taking into account that we are in the period of a new industrial revolution, the scientist G. Ciobanu (2020) from Romania researched through the prism of value management the finances of the enterprise in the conditions of the digital economy. In the Republic of Moldova, economist A. Balan (2014, 2018) studied the priorities for the development of

this sector, and A. Ianioglo (2021) in his paper focused on the difficulties of financing small and medium enterprises.

In the world economic literature, there are some works on the elaboration of an econometric model for the development of SMEs in the Republic of Moldova. These models take into account the number of enterprises, the number of employees, sales revenues, and profits (losses) before tax (Ganciuov et al., 2021), but do not include finances. The novelty of this research consists in the elaboration of the econometric model of the credits obtained by enterprises in the Republic of Moldova.

3. Evolution of SMEs in the Republic of Moldova

According to Law no. 179/2016 on small and medium-sized enterprises, SMEs are categorized into three categories depending on the average annual number of employees, the sales revenue, or the total assets (Table no. 1). After the entry into force of this Law, the National Bureau of Statistics of the Republic of Moldova changed the calculation methodology. Data for 2015 were recalculated according to the new criteria in the Law. Therefore, this chapter analyzes the evolution of SME activities for 2015-2020.

Table no. 1. Clasification of small and medium-sized enterprises in the Republic of Moldova

Classification criteria	SMEs categories		
	Micro enterprise	Small enterprise	Medium-sized enterprise
Average annual number of employees	1 – 9 employees	10 – 49 employees	50 – 249 employees
Annual turnover	up to 9.0 mil. MDL	up to 25.0 mil. MDL	up to 50.0 mil. MDL
Total assets	up to 9.0 mil. MDL	up to 25.0 mil. MDL	up to 50.0 mil. MDL

Source: Systematized by the authors based on the Law no. 179/2016 on small and medium-sized enterprises.

In 2020, the number of SMEs accounted for 98.6% of the total number of enterprises, the most of them are micro-enterprises (fig. no. 1). The average number of employees – 60.1% in total, and sales revenues – 39.3% of the total sales revenues per economy.

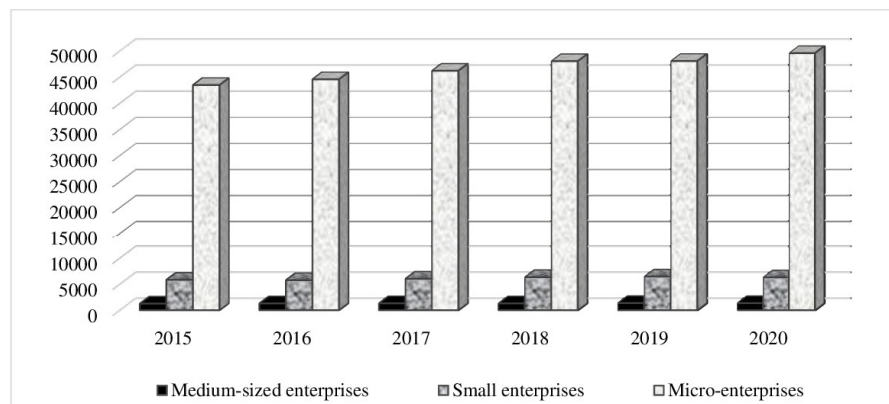


Figure no. 1. The evolution of the number of SMEs in the Republic of Moldova

Source: Authors processing based on statistical databank “Statbank” provided by the National Bureau of Statistics of the Republic of Moldova, published on the websites <https://statistica.gov.md/pageview.php?l=en&idc=407>.

Five thousand enterprises were created in 2020; and the rate of creation of start-ups was 13.8%. However, in this year, 10.5 thousand enterprises were liquidated. At the same time, 45.9% from new enterprises created in 2019 and 44.3% in 2018 were active in 2020. In 2019 compared to 2015, the number of medium enterprises increased by 8.44%, small enterprises by 10.91%, and micro-enterprises by 10.63%. The following year, due to the collapse caused by the COVID-19 pandemic, the number of medium-sized enterprises decreased by 0.87%, and the number of small enterprises by 2.54%. Only the number of micro-enterprises remained growing by 3.13%.

Sales revenue of small and micro enterprises increased annually from 2015 to 2019 but decreased in 2020 (fig. no. 2). Although the number of micro-enterprises increased in 2020 and turnover decreased. The number of medium-sized enterprises decreased in 2018 and 2020. As a result, the sales revenue of this category of enterprise decreased too.

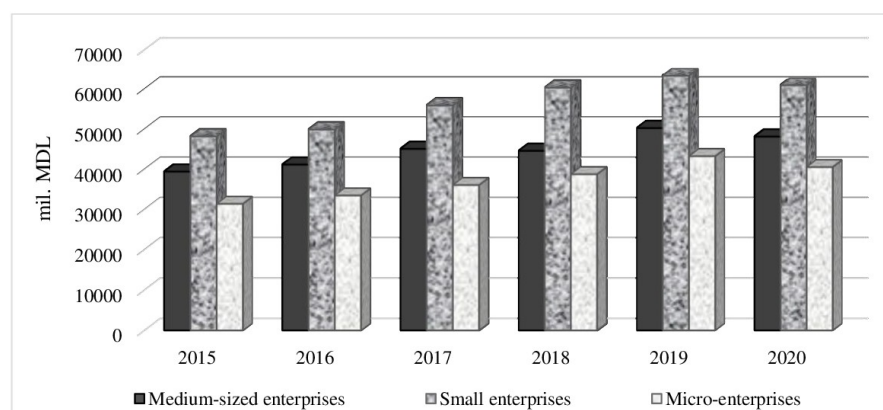


Figure no. 2. The evolution of the sales revenue of SMEs in the Republic of Moldova

Source: Authors processing based on statistical databank “Statbank” provided by the National Bureau of Statistics of the Republic of Moldova, published on the websites <https://statistica.gov.md/pageview.php?l=en&idc=407>.

The analysis of the structure of the number of SMEs by types of activity showed that in 2020 the highest share belongs to wholesale and retail trade (35.73%), followed by professional, scientific, and technical activities (8.70%), manufacturing (8.45%), agriculture, forestry and fishing (8.13%) and real estate activities (6.65%). The share of wholesale and retail trade SMEs is decreasing by 3.97 percentage points, the enterprises of the professional, scientific and technical activities by 0.22 p.p., and the manufacturing enterprises by 0.09 p.p. in 2020 compared to 2015.

The number of SMEs that received a profit increased every year from 2015 to 2019 and decreased in the following year because there was a recession of entrepreneurial activity caused by drought and a state of emergency during the COVID-19 pandemic in 2020 (fig. no. 3). The impact of the second cause is the greatest. The number of SMEs that have suffered losses decreased in 2017-2019 because there was a relatively stable economic growth in the Republic of Moldova.

Gross Domestic Product (GDP) at constant prices increased by 4.7% in 2017, 4.3% in 2018, and 3.7% in 2019, and the national currency in these years appreciated. The average annual exchange rate was 20.83 lei / Euro in 2017, 19.84 lei / Euro in 2018, and 19.67 lei / Euro in 2019.

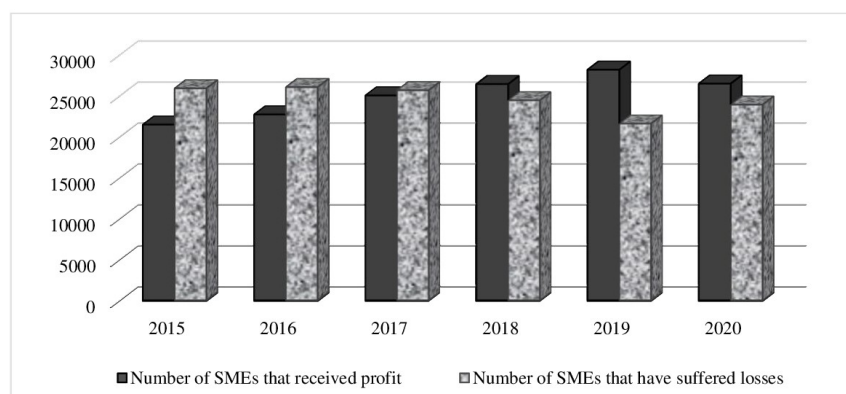


Figure no. 3. The evolution of the number of SMEs that received profit (suffered losses) in the Republic of Moldova

Source: Authors processing based on statistical databank “Statbank” provided by the National Bureau of Statistics of the Republic of Moldova, published on the websites <https://statistica.gov.md/pageview.php?l=en&idc=407>.

Analysis of the evolution of net profit (net losses) SMEs showed that all types of enterprises recorded cumulatively net profit from 2016 to 2020, and micro-enterprises posted cumulatively net losses in 2015 (fig. no. 4). This year (2015) is the year of economic recession, banking crisis, and stagnation of reforms in Moldova.

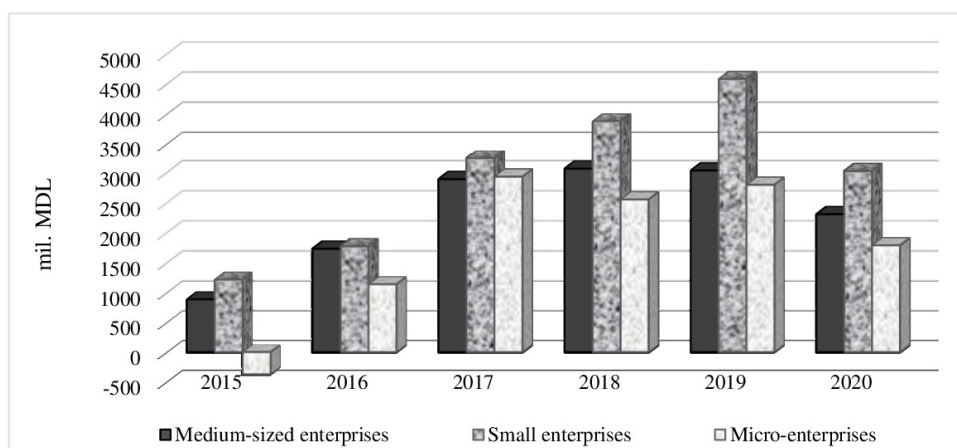


Figure no. 4. The evolution of the net profit (net loss) of SMEs in the Republic of Moldova

Source: Authors processing based on statistical databank “Statbank” provided by the National Bureau of Statistics of the Republic of Moldova, published on the websites <https://statistica.gov.md/pageview.php?l=en&idc=407>.

Even though the sales revenues of medium-sized enterprises increased (by 12.73%) in 2019, however, the net profit of these enterprises decreased (by 1.00%). To discover the reasons for the discrepancy in the economic results obtained by SMEs, the obstacles to SME development are analyzed in the next chapter.

4. Access to finance by SMEs

The World Bank surveyed enterprises in Moldova in 2009, 2013, and 2019. As 2009 is the year of the global financial crisis, this chapter provides a comparative analysis of the business environment in the Republic of Moldova in 2019 compared to 2013. The World

Bank uses a methodology for classifying enterprises different from the one practiced today in Moldova. The main criterion is the number of employees: from 5 to 19 (small), from 20 to 99 (medium), and 100 or more (large). Since there are relatively more small enterprises in Moldova, the authors focus on the activities of this particular category of SMEs in the analysis carried out.

The latest World Bank survey showed that in the top of the biggest obstacles to the business environment of small businesses are workforce qualification, political instability, informal sector, tax rates, and access to finance. Therefore, access to finance for the development of SMEs is vital. The main sources of financing for the activity of SMEs are represented in the figure below (fig. no. 5). In 2013, corruption was considered the biggest obstacle in the activity of small businesses, and in 2019 it ranked sixth. This fact shows that tangible results of the National Integrity and Anticorruption Strategy (NIAS) 2017-2020 have been achieved.

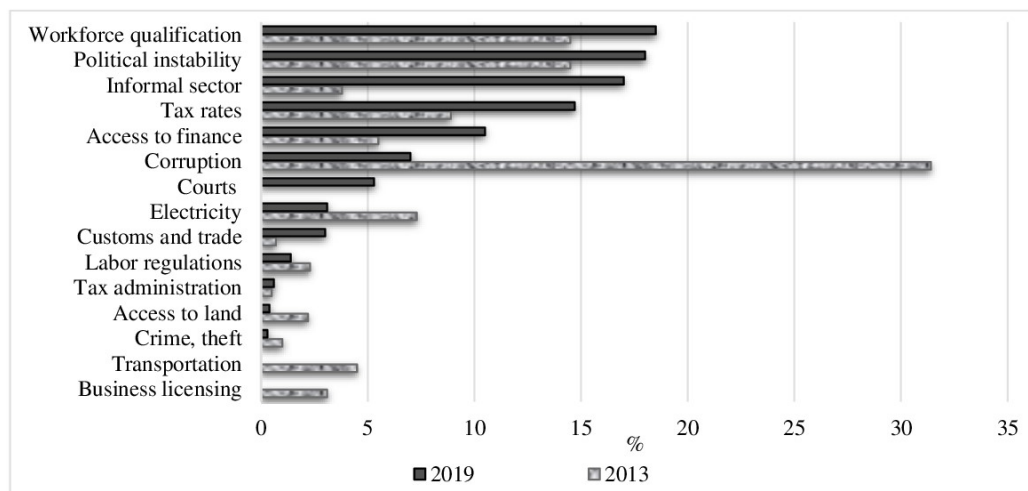


Figure no. 5. The Biggest Obstacles for small enterprises (5-19) in the Republic of Moldova

Source: Authors processing based on results of enterprise surveys provided by the World Bank, published on the websites <https://www.enterprisesurveys.org/en/custom-query#moldova>.

The survey of medium-sized enterprises shows that 8.7% of respondents say that the biggest obstacle is access to finance, which is 1.8 percentage points higher than the share of respondents from small enterprises who share the same opinion (10.5%) in 2019. In Europe & Central Asia, 9.6% of respondents from all enterprises believe that in promoting policies to support entrepreneurship, the state has to improve access to finance. On average in 153 countries the biggest obstacle was considered access to finance in 2019 (the first place).

The main sources of funding for SME activity can be grouped into primary, secondary, and alternative sources (fig. no. 6).

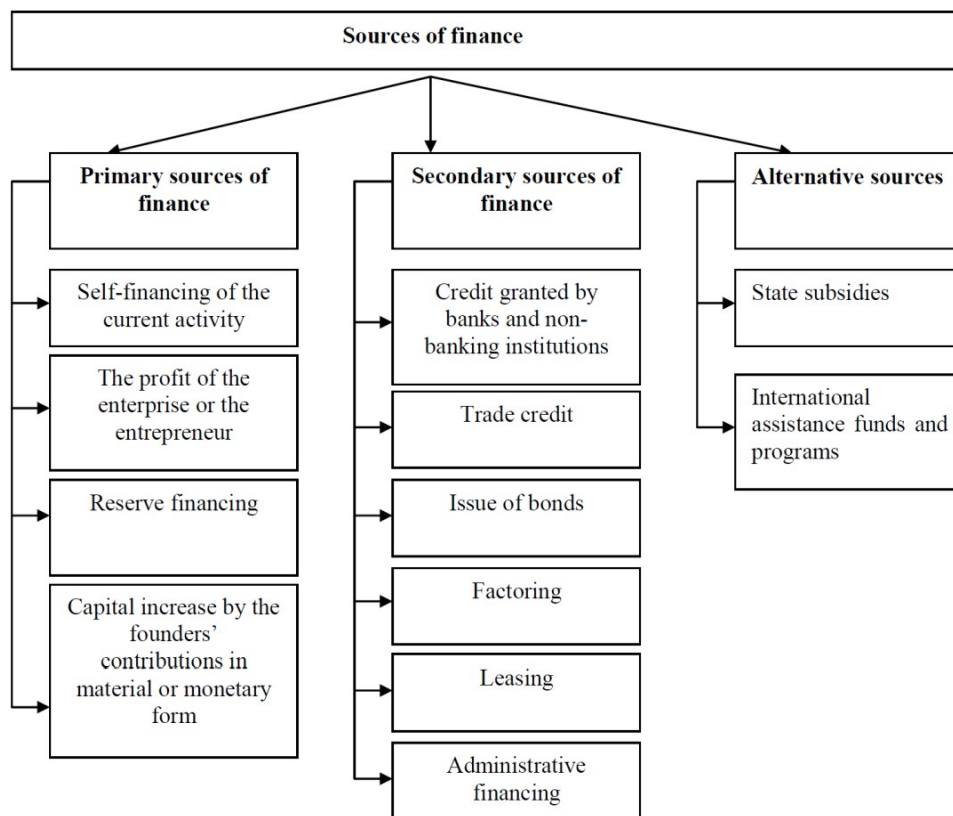


Figure no. 6. The main sources of finance SMEs

Source: Organization for Economic Co-operation and Development (OECD), 2014. *Fostering SME Development in the Republic of Moldova: Access to Finance*.

According to enterprise surveys, the percent of firms whose recent loan application was rejected was 56.1% in 2019, increasing by 32.3 percentage points compared to 2013 (fig. no. 7).

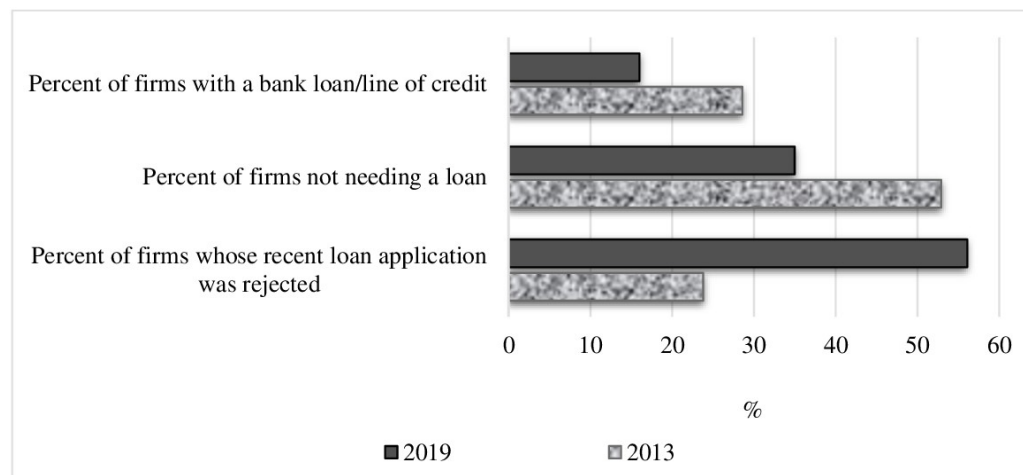


Figure no. 7. Access to finance for small enterprises (5-19) in the Republic of Moldova

Source: Authors processing based on results of enterprise surveys provided by the World Bank, published on the websites <https://www.enterprisesurveys.org/en/custom-query#moldova>.

During the analysis period, the percent of firms not needing a loan and the percent of firms with a bank loan/line of credit decreased respectively by 17.9 and 12.3 percentage points. Companies are turning to banks to finance their activities less and less. The percent of firms using banks to finance investments decreased by 18.6 percentage points, and the percent of firms using banks to finance working capital decreased by 14.6 percentage points in 2019 compared to 2013 (fig. no. 8).

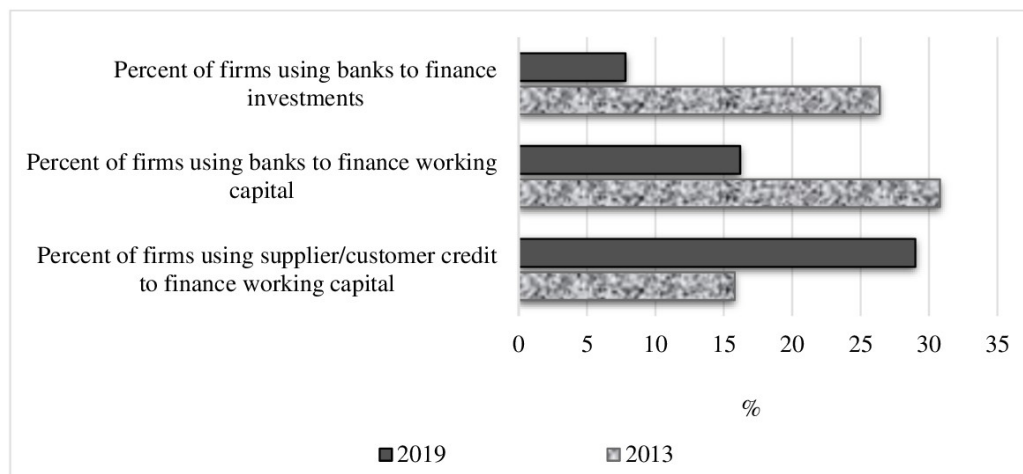


Figure no. 8. Use of financial services by small enterprises (5-19) in the Republic of Moldova

Source: Authors processing based on results of enterprise surveys provided by the World Bank, published on the websites <https://www.enterprisesurveys.org/en/custom-query#moldova>.

One of the reasons why enterprises are becoming more reluctant to apply for loans from banks is the increase in the value of collateral needed for a loan by 64.7 percentage points for medium enterprises and 46.3 percentage points for small enterprises from 2013 to 2019 (fig. no. 9).

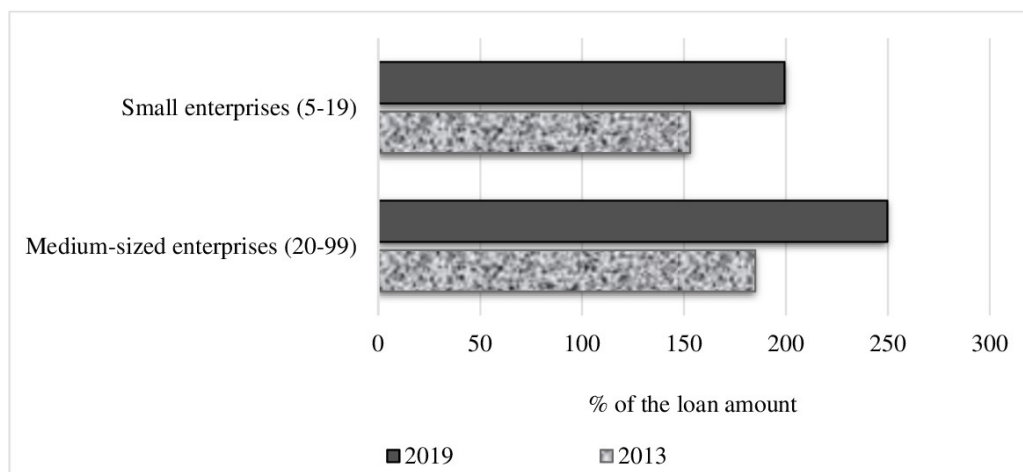


Figure no. 9. Value of collateral needed for a loan in the Republic of Moldova

Source: Authors processing based on results of enterprise surveys provided by the World Bank, published on the websites <https://www.enterprisesurveys.org/en/custom-query#moldova>.

The authors summarized the results of the research and concluded that there are three main pillars of access to finance by SMEs (fig. no. 10), and the main barriers to accessing finance are the following:

- Interest rates;
- Charges and commissions;
- Preparing the loan application;
- Requirements of collateral;
- Risk associated with borrowings;
- Financial education.



Figure no. 10. Three main pillars of access to finance by SMEs

Source: In the authors' vision.

5. The econometric model of the total credits given to SMEs

The purpose of research is to analyze the factors affecting the access of SMEs to loans. To develop an econometric model, the authors used monthly data from the National Bank of Moldova, the National Bureau of Statistics, and the Ministry of Finance from January 2018 to February 2022. In total the number of observations is 50. The endogenous and exogenous variables of the econometric model are presented in Table no. 2.

Table no. 2. Description of the variables

Symbol	Variable	Description	Units
<i>TC</i>	The total credits to SMEs	The total credits given to the small and medium-sized enterprises.	mil. MDL
<i>CPI</i>	Consumer Price Index	The Laspeyres Price Index.	%
<i>BR</i>	Base rate	Is approved by the Central Bank as the reference rate for the main short-term monetary policy operations.	%
<i>NPC</i>	Non-performing credits	Balance of non-performing credit debt to SMEs / Balance of credit debt to SMEs.	%
<i>RS</i>	Redeemed Securities	The amount of government securities paid at the maturity.	mil. MDL

Source: Systematized by the authors.

The total amount of SME loans is an endogenous variable. The descriptive statistics of the total volume of loans issued by SMEs (*TC*) is given in Table no. 3.

Table no. 3. Descriptive statistics of the total loans to SMEs

Indicator	Result
Mean	12 755.57
Median	12 077.31
Maximum	15 968.64
Minimum	10 931.61
Std. Dev	1 555.563
Skewness	0.799541
Kurtosis	2.354230
Jargue-Bera	6.196002
Observations	50

Source: Authors' computations using EViews 9.

The maximum level of the volume of credits to SMEs was in February 2022, and the minimum level was in January 2019. There is not a big difference between the mean and the maximum and the minimum value, which means the volume of credits did not fluctuate a lot in fifty observations.

The authors have developed the following econometric models:

Model 1

$$\ln(TC) = 1.94 \times \ln(CPI) - 0.14 \times \ln(BR) + 0.10 \times \ln(RS) \quad (1)$$

$$R^2 = 0.85$$

Model 2

$$\ln(TC) = 2.01 \times \ln(CPI) - 0.14 \times \ln(BR) - 0.04 \times \ln(NPC) + 0.07 \times \ln(RS) - 0.14D1219 \quad (2)$$

$$R^2 = 0.88$$

where:

$D1219$ – is dummy variable (it takes value 1 in december 2019; it takes value 0 in 2000-2008 and 2010-2020);

R^2 – coefficient of determination.

In both models, the base rate has a negative impact to total SME loans. When the base rate is increased by the National Bank, the rate on loans and deposits also increases, which leads to an increase in the cost of services. Obviously, the higher the lending rate, the less access SMEs have to loans. Another factor negatively affecting access to loans is the non-performing credit debt. When issuing loans, banks take into account the client's payment history. If an enterprise has a non-performing credits, it chances of getting a loan are lower or at a relatively higher cost.

The variable which positively influences access to credit is the price index. Once the CPI increases, the money devalues over time, which is beneficial SMEs as debtors. Given that the main creditors are commercial banks, the volume of the credits depends on their financial disponibility. Banks are the principal investors in government securities 84% of the total government securities issued in the primary market were purchased by the banking sector in the first quarter of 2022 (Ministry of Finance, 2022). Banks' liquidity increases once their government securities are redeemed. Thus, banks have a greater willingness to lend.

The equations (1) and (2) were estimated using least squares, and the results of tests are given in the following tables: for model 1 in table no. 4 and for model 2 in table no. 5. The estimated relationship between the total credits to the small and medium-sized

enterprises and Consumer Price Index, base rate, non-performing credits and the volume of redemption government securities are statistically significant.

Table no. 4. The results of testing the quality of the model 1

Variable	standard error	t-statistic	p-value
$\ln(CPI)$	0.0349	55.6002	0.0000
$\ln(BR)$	0.0189	-7.4161	0.0000
$\ln(RS)$	0.0208	4.6587	0.0000
Value			
R-squared	0.8487		
Adjusted R-squared	0.8423		
Durbin-Watson statistic	1.8720		
Akaike info criterion	-3.2344		
Schwarz criterion	-3.1197		
Hannan-Quinn criterion	-3.1907		

Source: Authors' computations using EViews 9.

Table no. 5. The results of testing the quality of the model 2

Variable	standard error	t-statistic	p-value
$\ln(CPI)$	0.0538	37.2629	0.0000
$\ln(BR)$	0.0171	-7.9415	0.0000
$\ln(NPC)$	0.0282	-2.7052	0.0095
$\ln(RS)$	0.0255	2.7531	0.0085
$D1219$	0.0416	-3.3907	0.0015
Value			
R-squared	0.8824		
Adjusted R-squared	0.8720		
Durbin-Watson statistic	1.7222		
Akaike info criterion	-3.4065		
Schwarz criterion	-3.2153		
Hannan-Quinn criterion	-3.3337		

Source: Authors' computations using EViews 9.

The results of testing the quality of the models showed that the best is model 1 because the values of Akaike info criterion, Schwarz criterion, and Hannan-Quinn criterion are lower for this compared to values for model 2. In addition to the above testing, a check was made for the existence of autocorrelation in the residuals of the model and heteroskedasticity. Both models have neither autocorrelation nor heteroskedasticity.

6. Conclusions

The study shows that the access to credits by the SMEs is influenced by the inflation rate and the volume of redemption government securities at maturity. In addition, the number of loans provided is negatively affected by such variables as the base rate and non-performing loans. The models demonstrate that the access to credits by the SMEs depends significantly on monetary policy decisions of the National Bank and the expectation of the inflation rate.

Recommendations for improving the situation regarding access to finance:

- Improve consumer protection around financial products;
- Broaden the range of what can be used as collateral;

- Promote credit products, consultations, and training;
- Encourage extensions to grace periods;
- Improve credit risk management;
- Promote the public credit guarantee schemes;
- Support SMEs in business planning and financial management.

Acknowledgements

This study was carried out within the framework of the State Program project 20.80009.0807.38 “Multidimensional evaluation and development of the entrepreneurial ecosystem at national and regional level to boost the SME sector in the Republic of Moldova”.

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THE AUTO MTPL MARKET IN A PRESENT CONTEXT

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Abstract: *An insurance policy is an essential aspect of modern life. Without an insurance policy, many elements of today's society and economy could not function. One of the most important insurances on the Romanian market is the compulsory car liability insurance, also called RCA(MTPL). It is an insurance through which third parties injured as a result of a car accident receive compensation for material damage and / or death or personal injury suffered in an accident. This paper aims to study what trends are on the Romanian MTPL car market and what changes this type of insurance has registered. Based on both the quantitative and the qualitative methods, the present paper is an exploratory research, aiming to highlight relevant information in the field. Car liability insurance remains a very important insurance policy on the Romanian insurance market.*

Keywords: *insurance, car insurance, motor third party liability insurance, MTPL, market.*

JEL Classification: *I15.*

1. Introduction

An insurance policy is an essential aspect of modern life. Without an insurance policy, many elements of today's society and economy could not function.

The business branch concerned with insurance policies has made many advances over time, its existence generating other related sectors of activity, such as motor third party liability insurance. In other words, MTPL is the method of protection by which those affected by car accidents are helped by getting compensation that can vary from case to case.

Ciurel V. (2011) states that the MTPL insurance is an insurance by which third parties injured in a car accident, caused by the fault of the insured driver, receive compensation for property damage and / or death or personal injury suffered in that accident.

Due to its social role, the motor third party liability insurance is compulsorily practiced in all states of the European economic area. The compulsory civil liability insurance contract, for damage caused by vehicle accidents, covers the civil liability of the user of a vehicle for the damage caused to a third party by said vehicle. Basically, when an accident occurs, the insurer takes over the payment obligations to the injured party / parties, according to the MTPL insurance contract concluded with the insured driver.

MTPL insurance is mandatory for any vehicle owner. It must be available to all drivers in the event of disastrous road events. This type of insurance only covers damages caused to third parties due to the insured driver's fault.

MTPL insurance is the only type of compulsory insurance that the Romanian state imposes for motor vehicles. (<https://www.toplacservise.ro/blog/ce-trebuie-sa-stii-despre-asigurarea-obligatorie-de-raspundere-civila-auto>, 2018)

According to law no. 132/2017, regarding the compulsory motor third party liability insurance for damages caused to third parties by vehicle and tram accidents, the following can be deduced:

- Once this type of insurance is completed, drivers receive a policy called a Green Card, which is valid when driving abroad.
- In order to be able to purchase liability insurance, the vehicle must be registered and in the possession of the person taking out the insurance.
- According to law no. 132/2017, the compensation limits reach up to 1,220,000 euros for material damages and 6,070,000 euros for bodily injuries. The conditions for granting compensation are strict and may vary depending on the quality of the insurance.

- Compulsory insurance also covers compensation if the guilty driver does not comply with the law or does not have a driving license.
- Lack of MTPL insurance is sanctioned with a fine between 1000 and 2000 lei, withdrawal of license plates and withholding of the registration certificate.
- In some cases, the insurer may claim compensation from the culprit. For example, if the accident occurred intentionally or took place during a crime, the insurer can claim compensation from the culprit.
- The MTPL insurer does not grant compensation if the damaged cars belong to the same person, regardless of whether the person is self-employed or a business owner.
- In case of the loss of the MTPL policy documents, the insurer may issue a duplicate, but only if the driver who took out the insurance policy publishes their plate numbers in a national newspaper before requesting the duplicate.
- The MTPL insurance premium can be refunded if the vehicle is deregistered or sold, exception being leased vehicles.
- Insurers have the obligation to ascertain the damages within 5 days from the notification made by the victims. For settling damages resulted from minor accidents, it is sufficient to use an Amicable Finding Form.

2. Research methodology

Considering the above, the main objective of this paper is the analysis of motor third party liability insurance (MTPL) through specific terms.

The purpose of the research was to highlight the trends of the MTPL car market in the pandemic context, as well as to highlight some measures taken by Romanian insurers.

This paper is based on various types of data provided by the insurance market through various sources of information, which gives it a qualitative and quantitative character.

3. Data analysis

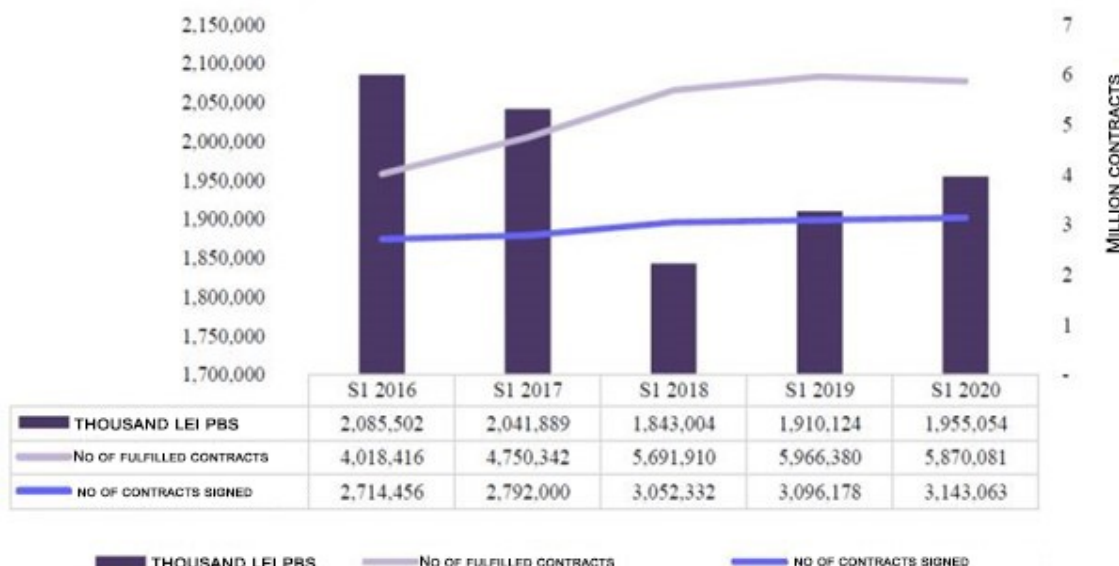
In the pandemic context, the MTPL car market recorded the following data, provided by data gatherers. Thus, the MTPL - motor third party liability insurance market advanced by about 2% in the first half of 2020 compared to the same period last year. At the same time, the annualized MTPL average increased by about 1%, and the average damage increased by 4%. The total value of insurance premiums written for MTPL policies in the first 6 months of 2020 was about 1.96 billion lei. The rest of class A10 (about 2.07 billion lei) represents the carrier's insurance for transported goods and MTPL insurance taken out in the territory of other EU Member States under the right to freedom of providing services.

According to chart no. 1, we find that the number of MTPL contracts concluded until June 30, 2020 was 3.14 million contracts, compared to the first half of 2016 where there were 2.71 million contracts, 2.79 contracts in Q1 of 2017, 3.05 million contracts in Q1 of 2018 and 3.09 million in Q1 of 2019. There is a slight increase compared to the 2016-2019 period.

At the same time, the gross premiums registered for MTPL policies have had a downward trend since 2016, but the first half of 2019 marked a slight return, maintaining this year, 2020, on an upward trend.

Graph no. 1.

EVOLUTION OF MTPL PAYMENTS IN Q1 2016 - Q1 2020



Source: https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor_S1_2020__si_te02102020.pdf

Regarding the evolution of MTPL payments as shown in table no. 1, overall, the first average annualized MTPL increased by approximately 1% in the first half of 2020 compared to the same half of 2019, registering the value of 622 lei per policy on the total market. For individuals, the average payment was 462 lei, while for legal entities it was worth 1,188 lei.

We notice that for individuals, the payment has registered slight changes, and for legal entities we notice that in the period of Q1 2016 – Q1 2020, it is decreasing, the current economic context having its say.

Table no. 1

EVOLUTION OF MTPL PAYMENTS IN Q1 2016 - Q1 2020

	S1 2016	S1 2017	S1 2018**	S1 2019**	S1 2020**
MARKET TOTAL	768	731	604	617	622
INDIVIDUALS	497	538	426	451	462
BUSINESSES	1.650	1.356	1.217	1.184	1.188

Source: https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor_S1_2020__si_te02102020.pdf

According to table no. 2, in Q2 of 2020, the largest shares were held by the policies with a validity of 6 months and respectively 12 months.

Regarding the contracts concluded in the period of Q1 2016-Q1-2020, table no. 2 shows the policies with a validity of 6 months and 12 months, but also noted are the insurance policies with a validity of one month.

Table no. 2. Number of contracts concluded in Q1 2016 – Q1 2020

Time period	Q1 2016	Q1 2017	Q1 2018	Q1 2019	Q2 2020
12 months	41,05%	34,13%	31,73%	30,29%	31,45%
11 months	0,00%	0,03%	0,07%	0,01%	0,02%
10 months	0,00%	0,02%	0,02%	0,03%	0,03%
9 months	0,00%	0,06%	0,10%	0,12%	0,11%
8 months	0,00%	0,10%	0,13%	0,14%	0,09%
7 months	0,00%	0,12%	0,15%	0,13%	0,09%
6 months	51,81%	43,49%	34,87%	34,35%	36,38%
5 months	0,00%	0,09%	0,09%	0,05%	0,05%
4months	0,00%	0,17%	0,21%	0,17%	0,09%
3 months	0,00%	3,56%	6,21%	5,47%	4,59%
2 months	0,00%	2,00%	3,26%	3,06%	2,54%
1 month	7,14%	16,23%	23,17%	26,18%	24,57%
Total	100,00%	100,00%	100,00%	100,00%	100,00%

Source:https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor_S1_2020__site02102020.pdf

From the point of view of the structure of client portfolios, table no. 3 shows that in the first half of 2016 up to quarter 1 of 2020, the share of contracts concluded with individuals in the entire market remained at about 80%, and for the same period the share of contracts concluded with legal entities was 20-21% higher.

Table no. 3. Number of contracts concluded with an individual or a business

	Q1 2016	Q1 2017	Q1 2018	Q1 2019	Q1 2020
Individual	78,57%	78,44%	79,74%	79,67%	79,62%
Business	21,43%	21,56%	20,26%	20,33%	20,38%
Total	100,00%	100,00%	100,00%	100,00%	100,00%

Source:https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor_S1_2020__site02102020.pdf

Regarding the top insurers, according to table no. 4, in the first half of 2020, the degree of acquisitions remains significant for the insurers at the top. The first 2 insurers accumulated about 74% of the MTPL insurance portfolio in Romania, and the first 3 have a share of 81%.

According to the calculations made by XPRIMM Publications based on the data published by the Financial Supervisory Authority, CITY Insurance registered subscriptions on the MTPL market of 815.3 million lei, increasing by 11.2%, being followed by EUROINS Romania, with 639.3 million lei (+ 6.9%), and ALLIANZ-TIRIAC Asigurări, with 130.2 million lei (+ 2%). This ranking is followed by OMNIASIG VIG - 123.2 million lei (-23%), ASIROM VIG - 79 million lei (+ 29.3%), GROUPAMA Asigurări - 65.1 million lei (-36.4%), GRAWE Romania - 57.7 million lei (+ 34.2%), GENERALI Romania - 32.1 million lei (-49.4%) and UNIQA Asigurări - 13.1 million lei (-38.8%).

Table no. 4. MTPL car market- Q1 2019-Q1 2020

Piata RCA

COMPANII	PBS S1 2020		PBS S1 2019		Evolutie (%)	
	EUR m	RON m*	EUR m	RON m*	in EUR	in RON
CITY INSURANCE	168.40	815.30	154.80	733.10	8.79	11
EUROINS ROMANIA	132.00	639.30	126.30	598.10	4.51	6
ALLIANZ - TIRIAC	26.90	130.20	26.90	127.60	0.00	2
OMNIASIG VIG	25.40	123.20	33.80	159.90	-24.85	-22
ASIROM VIG	16.30	79.00	12.90	61.10	26.36	29
GROUPAMA ASIGURARI	13.40	65.10	21.60	102.40	-37.96	-36
GRAWE ROMANIA	11.90	57.70	9.10	43.00	30.77	34
GENERALI ROMANIA	6.60	32.10	13.40	63.40	-50.75	-45
UNIQA ASIGURARI	2.70	13.10	4.50	21.40	-40.00	-37

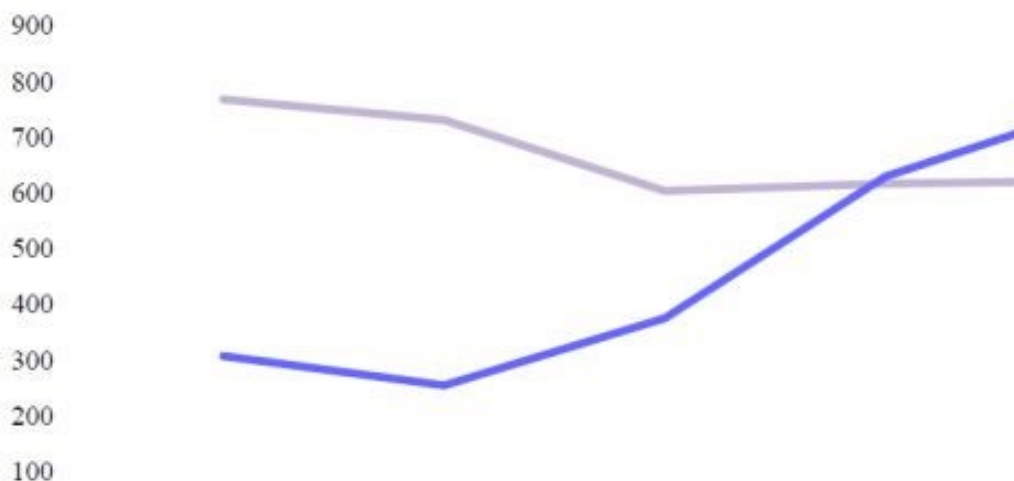
<https://www.iasig.ro/Piata-RCA-in-S1-2020->

Regarding the evolution of damages, according to chart no. 2 during the first six months of 2020, compared to 2019, the average premium increased by about 1%, while the average damage increased by 4%, to 8,609 lei. We notice that the first average is in a downward evolution from Q1 2016 to Q1 2020, this aspect being such due to the number of policies concluded during this period.

Regarding the average damage in the period of Q12016-Q1 2020, we notice an increase to it, due to the occurrence of road events more and more often, these events being caused by an underdeveloped road infrastructure.

Graph no. 2.

Evoluția primei medii și a daunei medii (lei) în perioada S1 2016 – S1 2020



Source: www.iasig.ro/Piata-RCA-in-S1-2020-

According to table no.5, the average total MTPL damage payments paid for bodily

injuries in the first 6 months of 2020 increased compared to the first half of 2019 by about 4%, and this increase is observed in the first half of 2016, 2017, 2018.

Regarding the damages paid to individuals for bodily injuries, we also observe an increase. And for the damages paid to legal entities, we observe an increase in the Q1 2016- Q1 2020 period.

Regarding the damages paid to individuals between Q1 2016-Q1 2020, we observe slight increases in Q1 2016 and Q1 2017, and more accentuated increases in Q1 2018, Q1 2019, Q1 2020.

Table no. 5.

Evoluția daunelor plătite RCA - vătămări corporale

	S1 2016	S1 2017	S1 2018	S1 2019
Daune plătite PF	137.160.858	158.614.095	181.310.300	175.619.625
Daune plătite PJ	81.895.189	96.432.854	112.084.418	117.319.085
Total daune plătite	219.056.047	255.046.949	293.394.718	292.938.710

Evoluția daunelor plătite RCA - daune materiale

	S1 2016	S1 2017	S1 2018	S1 2019
Daune plătite PF	448.580.160	489.713.403	634.965.273	743.142.147

Sursa: https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor_S1_2020__site_02102020.pdf

Regarding the insurers carrying out MTPL policies, on June 30, 2020, on the insurance market *the following were present*: ALLIANZ-TIRIAC Asigurari SA, Asigurarea Romanească - ASIROM Vienna Insurance Group SA, Societatea de Asigurare - Reasigurare CITY Insurance SA, EUROINS România Asigurare - Reasigurare SA, GENERALI Romania Asigurare Reasigurare SA, GRAWE Romania Asigurare SA, GROUPAMA Asigurări SA, OMNIASIG Vienna Insurance Group SA and UNIQA SA. Starting with March 3, 2017, the company Euro Insurances Dac practiced services for class X (MTPL) based on the freedom to provide services (FOS), and in the first half of 2020 it had premiums amounting to 5.3 million lei. The WATFORD Insurance Company Europe branch also started its activity on the MTPL market in the third quarter of 2018, based on the right of establishment on the territory of Romania (FOE), on June 30, 2020 registering a level of gross written premiums of 48.5 million lei. WATFORD has stopped its MTPL subscriptions on the local market.

4. Conclusions

Given the current context, we can see that so far this market seems to have been changed by the pandemic.

Thus, the changes specific to the 1st quarter of 2020 were changes regarding the MTPL policies. The MTPL insurance policy consists of two sub-policies. The first one is the Green Card, which provides protection for road accidents outside Romania, and the second one is a compulsory policy. The Romanian Motor Insurers' Bureau (BAAR) announced that from July 1, the Green Paper will be printed on white paper.

Changes have been proposed on the mode of operation of the "high risk insured individuals": The European Commission considers that the current mode of operation

restricts the freedom of BAAR to charge by imposing a calculated premium. The proposed legislation amendment envisages the elimination of the obligation of BAAR to offer the insurance premium in the case of a high-risk insured individual having an accident. At the same time, it is envisaged to establish the obligations of BAAR to allocate the high-risk insurance policies according to its own policies and procedures, as well as internal procedures that establish the conditions for concluding the insurance. They must be assumed by all BAAR members, as well as establish applicable rules of conduct for its members, including the conclusion of MTPL insurance in the case of high-risk policyholders”.

It is also proposed to repeal the provisions limiting the administrative and sales expenses of the insurance policy that may be included by insurers in the calculation of premium rates. A decrease in the frequency and severity of damage is expected, a situation determined by the fact that the movement of people during this period, including by car, is limited. Consequently, the rate of damage will decrease in turn. In this absolutely unforeseen context a few months ago, several insurance companies considered it necessary to implement measures to protect their customers, but also their own employees.

The following was found:

- New amendments to the MTPL legislation. Elimination of the reference tariff set by the FSA.
- Most insurance companies will develop digitally.
- The car insurance market will have a lower market share.
- Insurers' profitability and capital will continue to be under pressure.

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LOCAL GASTRONOMIC SITES – A WAY FOR RURAL AREAS’ SUSTAINABLE DEVELOPMENT

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Abstract: *Over the last years and in a special context, spending one’s free time in rural areas has become an increasingly sought-after option of tourists. Less crowded tourist destinations, the diversity of outdoor activities, unique culinary experiences all turn rural areas into places with special tourist potential. In this context, Local Gastronomic Sites as a new type of public catering are an option to consider by rural and gastronomic tourism enthusiasts, and also with a view to the chance of sustainably developing rural environment, to preserving and disseminating special traditions, customs, and intangible cultural heritage.*

Key Words: *tourism, rural areas, gastronomy, sustainable development.*

JEL Classification: *Z32.*

1. Introduction

Recent years have brought about major changes, with the tourist phenomenon in rural area acquiring new meanings. Life simplicity and naturalness, spirituality, specific traditions and customs, participation in agricultural or craft activities, including in the gastronomic occupations in a certain area are attracting more and more tourists. In this context, culinary tourism is appreciated as the most active and creative tourist segment.

Defined as an experimental trip to a gastronomic region for leisure, relaxation as well as to visit various local culinary producers, for participation in gastronomic festivals, culinary exhibitions, gastronomic contests, food tastings, culinary tourism directly contributes to the economic development of an area, region or even country, by highly capitalizing on all specific resources.

2. Background of Romanian gastronomy

The history of Romanian gastronomy is closely linked to Romania’s so often troubled history to which an important contribution has also been its geographical position. Here, on the border between the West and the East, today’s authentic Romanian gastronomy has been formed along the years, under various influences.

The archaeological remains over the last decades show that Dacian food consisted of meat, game, boiled cereals (stews made of millet, buckwheat, wheat), boiled vegetables, fruit such as grapes, apples, pears, along with honey and of course indispensable fragrant wines. During the Roman occupation, the Romans brought along new dishes such as bread (flat-bread or leavened bread), cold-pressed olive oil stored in amphorae, and also a variety of soups and juices. In addition to dishes, the Romans improved the cooking techniques with new cooking utensils, such as the “țest” pot, a clay pot with a lid, still used nowadays.

When various migrant peoples came to our land until the thirteenth century, eating habits kept changing, people used to eat in a hurry, they used to eat raw herbs, and also raw tenderized meat. The Slavs from the south of the Danube brought sour meat and vegetable soups into the Romanian cuisine, and in the houses of famous people of the times, they would use two-pronged forks brought by Venetian merchants.

After that period, until 1820, the Ottoman occupation left its mark on the Romanian cuisine to which other influences were added: Greek, Arabic, Armenian, Byzantine. Due to

the large tributes to the Sublime Porte, more and more wheat was grown which the Turks did not want, and more and more pigs were raised, hence the famous dish name “pomana porcului”.

In 1653, following his trip to the Romanian Principalities, Paul of Aleppo wrote about how he was served at the Royal Court: with extremely varied dishes served on platters, with gold and silver spoons and forks. Royal meals did not lack oil, olives, lemons and peas. He also wrote peasants’ food at that time consisted of meat, fish, especially borsches, also milk, ewe-cheese, many vegetables (onion, leek, garlic, cabbage, horseradish, radish, cucumber and celery). In the monasteries, they would mainly eat boiled beans, oil-fried lentils, and vegetables boiled in salted water, with cider instead of wine. At the same time, coffee as well as tobacco and narghile became well-known.

The influence of church was felt, too, with the Romanians being known as a people with strong religious beliefs through their specific monastic dishes: “cozonac,” “sarmale,” “piftie,” nettle food, dock food, green borsch, sarmale with rice and raisins, and also with nuts, mushroom food, bean caviar, eggplant balls, fish cooked in various ways, all those are just some of the contribution of monastery dishes to the current Romanian gastronomy.

As of the year 1700, the westernization of the Romanian cuisine has been going on: the Austro-Hungarian Empire has influenced Transylvania and Banat; Russia has influenced Moldova; France, Greece, and Italy have influenced Muntenia, whereas Turkey and the East have influenced Dobrogea.

Transylvania and Banat, and to a certain extent Bucovina, have been influenced by the Austro-Hungarian cuisine: soups often made sour with sour cabbage or vinegar juice, enriched with eggs and sour cream, paprika, soup, goulash, Hungarian-style sausages are just a few examples.

The 1948 generation, that is boyars’ children returning home from their studies in Western Europe revolutionized the gastronomy of those times. There were the first cookbooks written in Romanian, e.g. “200 Recipes for Dishes, Cakes and Other Housework,” where the authors M. Kogălniceanu and C. Negruzzi stated that the Romanian cuisine was rudimentary, people ate “*neîngrijit, la întâmplare și că nu există mâncăruri alese*” (Eng. “*carelessly, at random and no dainty food.*”)

“Mici/ mititei” meat rolls appeared in the Romanians’ meals over a century ago, thanks to innkeeper Iordache Ionescu. He was famous in Bucharest for his exceptional sausage recipe and discovered the “mici/ mititei” meat rolls by chance. One evening, the innkeeper ran out of sausage coatings and had to put the filling alone on the grill.

Along with “România Mare,” Romanian gastronomy became modern. Luxury restaurants were inaugurated in the big Romanian cities, where master chefs trained in Western Europe used to cook, and there were also the famous slum pubs and bistros which were often the most appreciated. The most famous was by far Casa Capșa - confectionery, hotel, restaurant, the property of Grigore Capșa, whose own recipes had unparalleled taste and refinement. Additionally, there was the famous Joffre cake specially created by modifying an original recipe for the Bucharest festive dinner in honour of Marshal Joseph Joffre.

The communist period was famous by the fact that at least in the beginning they attempted to remove Western-influence dishes as much as possible (served more often and exclusively for the high-class dinners of the time) and gradually ended up with rationalized nutrition. The years right after the 90’s were characterized by the rapid take-over of fast-food or junk-food dishes to the detriment of traditional Romanian dishes.

In conclusion, it can be said that for a long time gastronomy used to be something related only to wealth, at the same time a prerogative and concern of the elites of the time. Since the latter half of the twentieth century, advances in all areas of social life, the

chances of easy access to food have changed that perspective. There have been numberless innovations in the world of cooking, starting with the Nouvelle Cuisine Trend whose representatives focus on fresh, simple and tasty food, and also on simple and elegant food appearance and plating. The idea of cooking complicated dishes which used to require much carefulness and had to be served in a pretentious way has been given up. Consistent intricate dishes have been replaced by quickly healthily cooked food, in small portions, elegantly presented, addressing all five senses, the visual being as important as the gustatory one.

Late 20th century also meant the emergence of *fusion* cuisine characterized by the fact that it allows for and promises the most appetizing cultural transfers. It combines elements typical of several culinary traditions without identifying itself with any of them, starting from its openness to new experiences while observing the growing sophistication of tastes. The trend has taken various forms ranging from the inspired combination in a delicious synthesis of several of regional cooking ingredients and methods on to fantasy explosions which combine elements of various traditions with new ideas in order to create original recipes. It is the dawn of globalization on the plate, combining traditional products with cooking methods, but scientifically regarding what processes take place in the pan. The concept of molecular gastronomy was launched in 1969 to show how physics and chemistry can work together in food preparation.

The 3rd millennium brought about new gastronomic challenges which are generated by a new living standard and implicitly eating habits. Against such a background, there is a risk of forgetting certain traditional dishes, even a certain food culture. It is about a tendency to ignore culinary diversity to the detriment of standardizing taste when it comes to food. Therefore, there is a trend that is spreading both aggressively and efficiently: the *fast-food* concept, very well adapted to the hectic life nowadays, which has profoundly changed the concept of food and meal. Against the background of such gastronomic offensive, another phenomenon has occurred - *slow-food* - an eco-gastronomic trend symbolized by a snail, which started from the idea that the rampant industrialization of food markets and the globalization are destroying culinary diversity, part of cultural diversity.

The phenomenon is also present in Romania, with the confrontation between old, rich gastronomic tradition, built during thousands of years ago versus modernity, namely fast food. Feeding oneself is not just simply getting energy supplies. It means much more than that, it means the entire millennial human existence.

3. Local Gastronomic Sites – A Factor in Rural Areas' Sustainable Development

Local gastronomic sites are private kitchens inside rural houses where culinary products are prepared and served, according to area-specific recipes, directly to the end-user, for a maximum number of 12 people; culinary products must be cooked from raw materials coming mainly from the primary production of their own household as well as from local producers or from officially approved/registered establishments according to health, veterinary, and food safety standards. The new type of public catering unit has been regulated by Order no. 106/2019 on amending and supplementing the Veterinary-Sanitary and Food Safety Regulation for the veterinary-sanitary-food safety registration procedure of obtaining and directly selling/retailing animal or non-animal origin food, as well as of producing, processing, storing, transporting and marketing non-animal origin food products, approved by Order no. 111/2008 of the President of the Romanian National Sanitary Veterinary and Food Safety Authority.

Local gastronomic sites known as family-owned catering units have the following specific elements:

- they can operate in all-year/seasonal households, agricultural farms, fish farms, sheepfolds, wine/fruit farms, wineries, hunting places;
- owners and family members can prepare and serve food directly to end-users (no more than 12 people simultaneously) in their own households;
- food products can be obtained both from primary production in their own farms/households and from other local producers;
- the raw materials used to prepare food must come only from authorized/registered sanitary-veterinary- food safety units;
- in terms of the share of primary products and other raw materials/food, they must predominantly come from their own households or from local producers.

The menus in the local gastronomic sites include a limited range of dishes: at most two kinds of soups or sour soups, two main courses and possibly dessert, in line with the characteristics of the area.

The conditions to set up a local gastronomic site are:

- any form of legal organization such as: authorized natural person, sole proprietorship, family-owned enterprise or limited liability company;
- registration in line with veterinary, health and food safety standards also in compliance with the provisions of Order no. 111/2008 of the Romanian Sanitary Veterinary and Food Safety Authority (ANSVSA), namely observing the steps needed for site registration as restaurants, as defined in Annex 1, Chapter II, Point 1, Letter a) of ANSVSA Order no. 111/2008 with subsequent amendments and completions;
- serving food produced only by themselves and by their family members, and the health of all those preparing food must be checked periodically;
- registration with the Romanian Agency of Fiscal Administration (ANAF).

In order to get a sanitary-veterinary registration, an application must be submitted (including a minimum of data such as: name and address of the unit, object of activity, places to sell products obtained within one's own unit, number of working staff, etc.) to a county sanitary-veterinary department for food safety, or to such department in Bucharest also including other documents such as:

- design of the place where production activities are to take place;
- a copy of the confirmation certificate or, as the case may be, of the registration certificate issued by the trade register office attached to the court whose territorial area the unit carries out its activity in;
- a copy of the identity document of the economic operator's legal representative;
- a proof that the tariffs laid down by the specific legislation in force have been paid.

Before issuing a sanitary-veterinary and food safety registration document for the activities carried out within retail units, the competent sanitary-veterinary department shall verify the submitted documents and carry out an on-the-spot inspection. They check whether those places follow the legislation in force, namely they must be clean and well maintained in such a way as to avoid contamination, and must be provided with adequate sanitation and refrigeration facilities for a proper quality of the working environment and of the products used, and also for keeping and checking appropriate temperature conditions of food products.

The development of rural communities and local tourism can also be achieved by setting up local gastronomic sites in Romanian villages where one can consume dishes made from local products obtained by traditional, authentic methods. Thus, the gastronomic circuit directly contributes to the sustainable development of a rural area, ensuring the harmonization of links among tourism, economic development and environment preservation. It contributes, among others, to the creation of new jobs in rural areas, to keeping the cohesion of local communities and to preserving culinary traditions.

A local gastronomic site is an efficient way to capitalize on the products of peasant households in family-type catering units, taking account of the specifics of each tourist area/region, with well-known gastronomic traditions. Unlike restaurants or guesthouses, local gastronomic sites offer tourists the opportunity to benefit from traditional local dishes produced and served directly by family members in their own households, in accordance with the legal requirements concerning hygiene and without affecting consumers' health.

4. Conclusions

The natural and anthropic legacy of the Romanian village is invaluable. The beauty of the people and places, the traditions, the customs dating back thousands of years, the specific gastronomy, all make the Romanian village an irresistible tourist attraction nowadays. The development of rural communities and local tourism can also be achieved by setting up local gastronomic sites in Romanian villages, where one can consume dishes made from local products obtained by traditional authentic methods. Thus, the products from peasant households in a local community are highly capitalized, meals are served in genuine settings, and the village becomes again a place for socialization and cultural communion.

Local gastronomic sites give extra charm to a Romanian village by generating attractiveness and added value in peasant households, thus consolidating the identity profile of an area.

A local gastronomic site is an efficient way to capitalize on the products of peasant households in family-type catering units, taking account of the specifics of each tourist area/region, with well-known gastronomic traditions. Unlike restaurants or guesthouses, local gastronomic sites offer tourists the opportunity to benefit from traditional local dishes produced and served directly by family members in their own households in accordance with the legal requirements concerning hygiene and without affecting consumers' health.

Local gastronomic sites are new reliable opportunities for rural and gastronomic tourism enthusiasts for whom the authenticity of culinary experiences prevails, thus contributing to the development of rural environment in a sustainable way, by creating new jobs, keeping the cohesion of local communities, and preserving culinary traditions in harmony with nature.

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THE INTERFERING INFLUENCE OF TEACHER MOTIVATION IN QUALITY ASSURANCE IN ROMANIAN PRE-UNIVERSITY EDUCATION

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Abstract: *Analyzing the Romanian pre-university education system, from the perspective of human resources management, we can observe its impact on the performance of teachers and institutions. It is imperative that in pre-university education institutions we reimagine our education and adapt to the latest challenges and changes, delivering a quality education, in order to prevent a learning crisis with long-term effects. Therefore, an analysis of the impact of human resources management policy on teacher motivation and performance, the prospect of improving efficiency and educational equity in schools, is needed. This paper addresses elements of human resources management and quality management, being a document that analyzes the current and future situation of Romanian pre-university education. The objective of this article is to capitalize on the need to consider the relationship between teacher motivation and the results of the instructional-educational process. The authors offer arguments, opinions, explanations regarding the importance of teacher motivation as the main premise in increasing the quality of Romanian pre-university education.*

Keywords: *motivation, human resources, quality in education.*

JEL Classification: *I21, O15.*

1. Introduction

Nelson Mandela said that "education is the most powerful weapon you can use to change the world".

Education is the basic indicator of social development and, as a result, of the quality of life, with contemporary education becoming one of the priority factors in human and social development. The concept of quality in education has a strong cultural charge, depending on the values promoted by individuals, groups and society as a whole.

At a time when quality of work is of prime importance, efficiency can only be achieved by successfully motivating human resources. There is a consensus in the field of human resource management that, in order to remain competitive and achieve organisational goals, managers need to incorporate human resource management and motivation strategies into their overall planning. Human capital theory aims to effectively and proactively use human resource management to increase the value of the organisation's human capital and the value of anticipated returns such as labour productivity.

2. Quality - the added value to the educational process

Romania joined the leaders of the 193 UN member states at the September 2015 Development Summit in adopting the 2030 Agenda for Sustainable Development, a global development agenda for action that is universal in nature and promotes balance between the three dimensions of sustainable development - economic, social and environmental. The 2030 Agenda comprises the 17 Sustainable Development Goals (SDGs), also informally referred to as the Global Goals. Romania fully supports the idea that the 2030 Agenda should be implemented by local institutions, responding directly to the needs of citizens.

Goal 4 of the SDGs - Quality Education: **Ensuring inclusive and equitable quality education and promoting lifelong learning** - was a single goal focused exclusively on

education. This is the first time that such a stand-alone education goal has been established and ratified, where it is clearly specified that education is a human right and a public good, essential for the health and future of the world.

The efforts made in Romania in recent years to achieve a standard of education on a par with that of European countries have been visible and commendable.

The national education system is committed to achieving quality objectives. The education services offered to students, their quality level and the quality of the teaching staff determine the premises for a harmonious development of the Romanian economy.

Quality in education is defined as the set of characteristics of a programme of study and its provider, through which the expectations of the beneficiaries and the quality standards are met. The definition of quality is constantly evolving and transforming in response to the evolving needs of individuals, communities and society. The quality of the school organisation is influenced both by the environment in which the school operates and by the satisfaction of the direct and indirect beneficiaries of the services provided by the school. In order to meet their expectations, the school organisation must take into account the needs of the beneficiaries.

There are similarities between industry and education in terms of the management of organisations; the differences are due to the specific features of the 'end product' which, in the case of school organisations, is the 'pupil' whose personality, training and professional development are achieved in the school, during the years of study, under the guidance of teachers and other school staff.

Quality assurance goes beyond the functioning of the school, measuring 'added value' and 'value created', with the pupil being considered as the lower intellectual input and becoming a higher intellectual output. The educational process is the chain of interrelated and interactive activities that transform inputs into outputs, adding value.

Education has also become a way of directing social development and underpins all the transformations taking place in society. In today's society, the vicious circle of education is the system that creates values and norms, which it imposes and changes according to the state of science, technology and knowledge. Every society and every human being is therefore the fruit of education, which generates effects and results that should be superior to the previous level of knowledge.

U.N.I.C.E.F believes that **quality education means:**

- ***Students' well-being:*** health status, eating style and lifestyle in family and society;
- ***Educational establishments equipped,*** with clean and hygienic conditions and which offer pupils access to learning and equal opportunities;
- The instructional-educational process to be provided by ***qualified human resources***, well trained professionally, of high moral character and outstanding human qualities;
- ***The aims of education*** need to be ***related to the national objectives of education***, which can ensure that graduates are able to participate beneficially in the development of society.

Quality education is underpinned by three key pillars: ensuring access to quality teachers, providing quality learning and professional development tools, and establishing safe and supportive quality learning environments.

3. Teacher motivation - a source of quality assurance in education

Motivation is an important aspect of achieving quality by staff. The process of motivating human resources includes a set of incentives, recognition of their success, but also rewards of different kinds (financial and non-financial). Managers have a particular

role to play in motivating employees and must have the ability to appreciate and publicise their achievements and to guide them towards success.

With the increasing value of employees as individuals, the traditional approach to human resource management is no longer satisfactory, and attention is now turning to a more up-to-date treatment of the importance and effectiveness of human resources. The main reason for such an approach is the desire of as many organisations as possible to understand the human factor. It has been observed that engaging individuals effectively through force and intimidation is not possible and as a result the focus has shifted to methods and opportunities that enable people to work willingly. Positive employee attitudes and social behaviour can generate effective implementation of HR practices which in turn helps shape the culture and work in the organisation strengthens the employee's position with the organisation and increases the levels of effort that employees put into achieving the organisation's goals.

School organisations that invest in the development of human resource skills seek to create working conditions that are compatible with their requirements and desires, and are thus the ones that achieve success and in turn build a well-trained human resource. Employees are the essential resource that institutions need in times of change, so organisations that have succeeded in satisfying their employees and have been able to implement loyalty and trust, can get through difficult times with greater ease. Giving people credit not only increases personal and work productivity, but also raises the quality of the company and the team. The main goal of human resource management is to approach human resources in the most competitive and productive way.

Acquaah asserts that human resource management and motivation practices enhance organizational effectiveness and performance by attracting, identifying and retaining employees with knowledge, skills and competencies that will support the organization's mission and goals. In the instructional-educational process, ensuring the quality of educational activities depends on how human resource management produces and implements motivating employee attitudes and behaviours.

Armstrong considers that motivation refers to factors that influence people to behave in certain ways and defines this concept as a reason, a rationale for doing something. Thus he specifies that "Motivating people means getting them to move in the direction we want them to move to achieve a result. Motivation can be described as goal-directed behaviour".

Abraham H. Maslow's theory states that motivation is formed due to a hierarchy of needs. First, physiological needs such as clothing, food and shelter. Secondly, the needs for physical, psychological and intellectual security. Third, social needs, such as recognition of existence and appreciation of others. Fourth, the need for prestige, as all people need recognition of their existence and status by others. Finally, the need for self-actualisation in the sense of opportunities to develop potential and transform it into real skills and competences. He states that every manager who wants to motivate his subordinates must understand the hierarchy of human needs, because the continuous satisfaction of human needs is the key to employee motivation and effective motivation is the key to productivity, in the case of the educational act, the key to a quality instructional-educational process.

Maslow also says: "What a man can be, he must be". Maslow's quote refers to self-actualization, which is the highest level or stage in his model of human motivation: the "Hierarchy of Needs". According to the hierarchy of needs, self-actualization represents the highest order motivations that drive us to realize our true potential and achieve our "ideal self". Self-actualization needs are also referred to as the needs of our "being"; they include personal and creative self-growth, which is achieved by fulfilling our full potential. Maslow studied "exemplary" people, or individuals considered to have achieved their full

or near full potential in their particular area of expertise or focus. These individuals included Mahatma Gandhi, Viktor Frankl and Albert Einstein, who "personify a reality of self-actualization".

4. Conclusions

The active participation of educational actors and the valorisation of human resources ensure quality education. People are the essence of any organisation, their involvement and their professional development depend on how they use their competences for the benefit of the organisation.

The teacher, one of the major contributors to the school, is a major factor influencing learning outcomes and a fundamental way in which educational performance can be developed. The teacher is also an active participant in achieving the mission of any school, namely education. In general, a teacher who is well prepared, competent and motivated to do his or her best can be worth more than the teaching resources and materials and even more than the social, financial or cultural background of the pupil.

Prioritising the development of teachers' performance and motivating them are probably the most effective methods of ensuring quality in pre-university education, methods that can lead to substantial gains in pupils' education.

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DIVERSIFICATION OF FINANCING OF THE RESEARCH SECTOR IN THE REPUBLIC OF MOLDOVA IN THE CONTEXT OF THE INTERNATIONALIZATION OF SCIENCE

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Abstract: This study presents an analysis of alternative financial resources for the research sector in the Republic of Moldova, in the context of internationalization. The indicators proposed by The Forum of the European Science Foundation on internationalization were used to assess the internationalization of science funding.

Keywords: research sector, research and development funding, internationalization of science.

JEL Classification: O32, O33, O39.

1. Introduction

The research sector is empowered with the function of producing new knowledge, innovations and new technologies, which are expensive. The main source of funding for scientific and technological activities is government funding, but due to the process of internationalization of science, there have been changes in the mechanism of funding for scientific activities, which have contributed to new opportunities for financial support for research and development-innovation. In terms of global innovation capacity, the Republic of Moldova ranks 109th out of 141 countries, with a score of 29.9, which is quite low compared to neighboring countries. The internal expenditures for research and development in the Republic of Moldova constitute 0.3% of GDP, which places it on the 81st place out of 141 with a score of 10.1.

Table nr. 1. Global Competitiveness Index - Innovation capability

The country	Global Competitiveness Index - Innovation capability, year 2019
Russia	32
Romania	55
Ukraine	60
Republic of Moldova	109

Source: authored by World Economic Forum, 2019.

This study aims to perform an analysis of financial sources entered in the Republic of Moldova resulting from the internationalization of the research and development sector. In order to achieve the proposed goal, the works from the specialized literature of the authors were studied, both abroad and in the country, among which we can mention: J. R. Cunha-Melo (2015), G. Mesnita and F. Dumitriu (2006), G. Cuciureanu (2007), G.Cuciureanu and S. Manic (2010) etc.

2. Materials and methods

For the present study, were used the classical evaluation methods:

- economic-mathematical methods, for calculating the relative and absolute indicators specific to the study;
- analytical-comparative method, for analyzing and comparing the dynamics of funding indicators for scientific and technological activities;
- the graphical method, for the graphical representation of the funding of the research sector resulting from the internationalization process.

The methodology used in this study is the one proposed by the European Science Foundation (European Science Foundation, 2012), which proposed a complex set of indicators to measure the internationalization of research institutions, which are grouped into indicators for funding research agencies and indicators for research institutions.

Eight indicators are proposed to assess the agencies' funding:

- *Budget for Joint Research Programmes*, use for: intensity of funding for collaboration; european integration at the level of joint funding; international collaboration, mutual learning.
- *International co-authored papers* - use for: monitoring the international orientation of the research funded by the funding organisation and through this the effectiveness of the internationalisation of the organisation.
- *International co-patenting*, use for: monitoring the contribution of research funded by a funding organisation to international innovation; monitoring the effectiveness of the internationalisation of the organisation.
- *Budget for attracting researchers from abroad*, for: analysis of funding for mobility.
- *International Mobility*, use for: assess bi-directional international mobility; indicators provide information on integration into international science.
- *Co-funded research output*, for: measuring the level of the de facto integration at European or international level of research funders, through activities of researchers who jointly decided to collaborate.
- *Evaluation procedure*, for: internationalisation of peer review to enhance objectivity in selection process; and benefits from experiences and perception of foreign panellists and reviewers.
- *Openness of programmes*, use for: understanding the extent to which national programmes are open to funding people working abroad.

Indicators for research organizations are:

- *Budget coming from abroad*, use for: measuring the capability to attract funding from non-national sources in terms of volume of funding and of type of sources attracted.
- *Budget coming from abroad: output generated*, use for: measuring the capability to attract funding from non-national sources in terms of volume of funding and of type of sources attracted.
- *International co-authored papers*, for: measures the level and growth of international collaboration.
- *Recruitment of researchers from abroad*, for: attract talent to the organisations to add external knowledge to the organisations' human resources and attractiveness of the organisation.
- *International Mobility*, use for: the inward mobility indicator measures the additional resources and changing attractiveness of an organisation over time; this is a flow indicator measuring fresh inflow in the investigated period.
- *Budget for Joint research programmes or projects*, for: measuring the level of integration at European or international level of research performers, which

- jointly decided to plan and to manage programmes and/or projects where one or more functions are shared.
- *International use of own infrastructures*, use for: monitoring the international use of infrastructures.
 - *Recruitment committees*, use for: measuring international participation in the process of recruiting researchers.
 - *Evaluation procedure*, for: internationalisation of peer review to enhance objectivity in ex-post evaluation process; benefits from experiences and perception of foreign panellists in order to enhance the international perspective of the research agenda.

3. Results and discussions

In the context of the internationalization of the research sector, new funding opportunities are emerging for participants in the research sector. In addition to state funding and alternative funding, such as capital venture, crowdfunding and bussines angels, a new source of funding for scientific activities is emerging, which is developing due to the internationalization of the research sector.

According to some authors (Cuciureanu, 2007; Cuciureanu and Manic, 2010), the Republic of Moldova can benefit as a result of the process of internationalization of science if it will orient its own research-development system towards international cooperation. External companies opt for internationalization because it offers them quality scientific products at low cost (Mesnita and Dumitriu, 2006).

Indicators of appreciation of the internationalization of research funding are still under development (Cunha-Melo, 2015). At the same time, we note that there are developed indicators that can be measured. For example: Budget for attracting researchers from abroad, which uses data from annual bank reports on the entry of financial resources for scientific and technological activities.

In table no. 2 presents the bank data on the inflows of financial means for research and development and information services.

Table nr. 2. Budget for attracting researchers from abroad, years 2012-2021, million USD

Name / Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
IT services	42,2	48,6	58,8	59,0	66,4	102,4	154,7	200,8	258,2	349,8
Research and development services	2,0	2,2	1,3	1,1	2,0	3,0	2,6	2,7	3,0	6,0
Total research services, including IT	44,2	50,8	60,1	60,1	68,4	105,4	157,3	203,5	261,2	355,8

Source: authored by BNM, 2022. Report Balance of payments, years 2012-2021. [online] Available at: <<https://www.bnm.md/bdi/pages/reports/dbp/DBP16.xhtml>> [Accessed 15 March 2022].

In the last ten years, the Republic of Moldova has registered positive performances in the internationalization of the financing of the research-development sector, as well as of the IT sector. Research and IT services provided abroad amounted to an average of 136.7 million USD per year, which increased ≈ 8 times, from 44.2 million USD in 2012 to 355.8 million USD per year 2021.

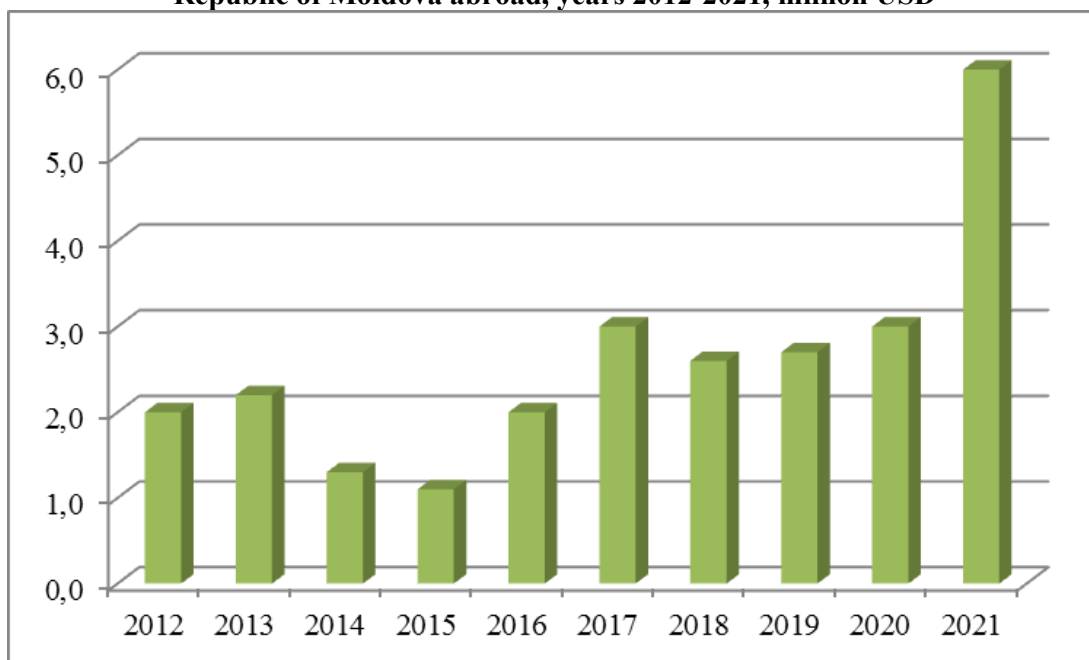
The annual growth rate of these services was on average 124.4% and increased 1.4 times in 10 years.

The highest value of the annual growth rate is attested in 2017 compared to 2016, year in which both types of services increased due to the entry into force of the association agreement European Union - Republic of Moldova.

Research and development services constitute 1.9% of the total services identified as a component part of scientific-technological activities, and 98.1% are IT services.

In figure no. 1 presents the dynamics of the entry into the country of the financial means for research and development services, for the years 2012-2021.

Figure no. 1 Dynamics of research and development services provided by the Republic of Moldova abroad, years 2012-2021, million USD



Source: authored by BNM, 2022. Report Balance of payments, years 2012-2021. [online] Available at: <<https://www.bnm.md/bdi/pages/reports/dbp/DBP16.xhtml>> [Accessed 15 March 2022].

The research and development services provided by the Republic of Moldova abroad registered a positive oscillating trend, being on average 2.6 million USD annually.

From 2012 to 2021, the country's inflows of financial resources for research and development services increased ≈ 3 times, from 2 million USD to 6 million USD.

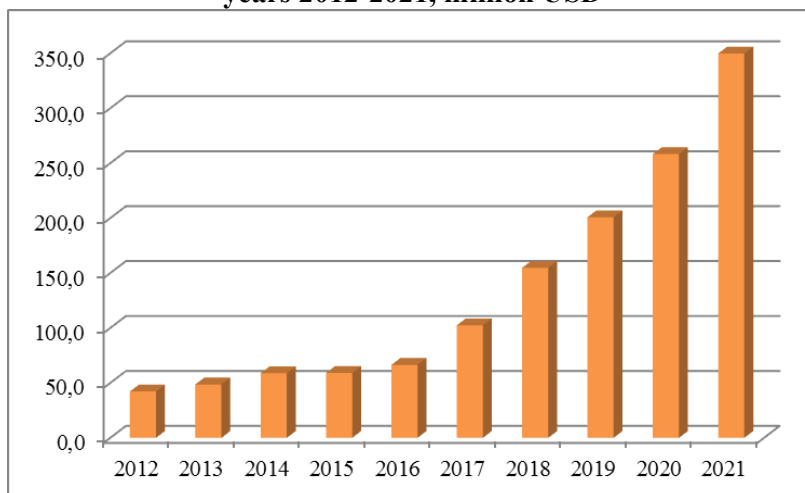
The lowest value was recorded in 2015, and the highest - in 2021. This year, the amount for research services has doubled compared to 2020.

In figure no. 2 presents the dynamics of the entry into the country of the financial means destined for the IT services, for the years 2012-2021.

In the last decade, the Republic of Moldova has provided an average of 134.1 million USD of information services abroad. We notice an increase of about 8.3 times, from 42.2 million USD in 2012, to 349.8 million USD in 2021.

The growth trend is a constant one, due to the affordable costs for IT products that our country offers.

Figure no. 2 Dynamics of IT services provided by the Republic of Moldova abroad, years 2012-2021, million USD



Source: authored by BNM, 2022. *Report Balance of payments, years 2012-2021*. [online] Available at: <<https://www.bnm.md/bdi/pages/reports/dbp/DBP16.xhtml>> [Accessed 15 March 2022].

In 2015 compared to 2014, the lowest annual growth rate was recorded (100.3%), and the highest annual growth rate was set in 2017 compared to 2016, due to the expansion of the sector on the foreign market, but also the entry of foreign IT companies in the Republic of Moldova.

For example, the foreign company "ENDAVA", which has over 10,000 employees, located near customer locations. The Endava subdivision of the Republic of Moldova has about a thousand employees and has been present on the Moldovan market since 2000.

4. Conclusions

An alternative source of funding for scientific and technological activities is the financial resources resulting from the process of internationalization of the research sector.

In the last decade, the Republic of Moldova has provided research and development and IT services in the amount of 1366.8 million USD. The trend is a positive one, and the increase was about 8 times.

IT services are the main share and have increased in the analyzed period by ≈ 8.3 times. And research and development services have increased about 3 times.

Large foreign companies opt for the internationalization of scientific activities to underdeveloped countries, due to qualified staff and low costs of scientific and technological products.

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ACCOUNTING PROFESSION IN TODAY'S ECONOMIC REALITIES. THEORETICAL ASPECTS AND PRACTICAL APPROACHES

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Abstract: *In this study, the author aims to show the role of accounting in the management of the contemporary entity, which develops the business in competitive economy by constantly modernizing and implementing new policies and technologies, and last but not least improving the expected results. At the same time, the author aims to mention the need for a revolutionary change in the accounting system, as a tool that allows the communication of economic information and a common economic language for business, which is the basis of daily management decisions and directly or indirectly influences these decisions information provided. So, it is these landmarks that signify the need to transform the accounting profession into the current economic reality, because non-compliance, irrelevance of economic information can generate non-performing managerial decisions. Solving these paradigms is the current concern of the accounting profession both nationally and globally.*

Keywords: *the accounting profession, professional conduit, skills, accounting standards, financial management, financial statements, economic entity.*

JEL Classification: *M41.*

1. Introduction

Modern economic reality in constant change, the deployment of new policies and technologies, result in the change of the accounting profession and its role within the entity. In this sense, as a tool that allows the communication of economic information and at the same time a common economic language for business, the accounting system is the basis of daily managerial decisions, which are directly influenced by the veracity of the information provided by it. It turns out that a priority direction for accounting reform lies in the professional training of the accountant, which can meet the current challenges and reintegrate the role of accounting in the management processes of the entity.

Degree of approach to the subject in scientific literature. Digitization, globalization, and integrated business solutions are at the top of the challenges of the accounting profession both nationally and globally. Therefore, the biggest challenges facing the accounting profession are integrated thinking, globalization, along with information technologies. These are the challenges that shape the future of the accounting profession, which today are being debated by authors from local and other countries, by expert accountants. Analysis of a series of scientific, methodological, and practical works, of the legislation, of the normative acts at the national and international levels, allowed the author of the study to formulate opinions related to the approached issue.

Research goal. Today's challenges on the future of the accounting profession and the opportunity of reintegrating its role in the management of the modern entity caused many discussions in the field. These benchmarks signify the need to transform the accounting profession into the current economic reality because non-compliance and irrelevance of economic information can lead to non-performing managerial decisions. Settlement of these paradigms constitutes the current preoccupation of the accounting profession; the given area is in a continuous process of development and restructuring of the activity at the management level of the entity and requires further study. All these aspects brought their contribution to the establishment of the research topic and determined the formulation of the appropriate goal of the given study.

2. Research methodology

Methodological and theoretical-scientific support in the investigations carried out by the study author constitute the contemporary approaches of the accounting theory, the regulation, and development of the accounting profession, the researches of different foreign and local authors, accounting experts; together with the methodology approached in the specialized economic literature relating to the evolution of the management system, the change of business models, the permanent modernization and implementation of new policies and technologies in the realization of the planned strategies, the minimization of the risks which can influence the business, etc. In order to achieve the established goals, the author of this study applied the following methods of scientific research, such as: quantitative and qualitative, inductive and deductive, comparative method, methods of analysis and synthesis.

3. Results of this study

The accounting profession differs from other professions by taking responsibility for all parties concerned in the activities conducted by the economic entity (shareholders, employees, suppliers-creditors, banks, budget, banking institutions, investors, etc.). Therefore, all the events in the activity of an entity go through the accounting profession, the fact by which it is involved in all economic fields (industry, trade, services, and media) and the quality of these services affects the social life. In turn, the economic entity, in the conditions of the competitive economy has a role not only economic but also has a social role, a role in relation to customers, a role in relation to staff, and a role in relation to owners (Bârsan-Piu and Popescu, 2003, p.11; Dolghi, 2020, p.37).

What each of these roles of the modern entity represents, the author further examines them as follows:

- *economic role* – the production of goods and/or the provision of services, their sale on the market for the purpose of creating added value, which has the following destinations: benefit, coverage of all costs, and risk fund;
- *the social role* of the entity in competitive economic conditions lies in:
 - contribution to the satisfaction of the needs of the population through the goods and services provided;
 - input to the development of human civilization by promoting technical and scientific progress;
 - ensuring a work and living environment for the entity's staff;
 - exercising of training and education functions for employees and the population.
- *the role in relation to the customers* requires the identification of their needs, the design of the offer in accordance with the characteristics of the demand, the attraction of the customers, the conquest, the maintenance, and the development of the markets;
- *the role in relation to the staff* - ensuring the conditions for maximum utilization of the labor resource that they buy on the labor market. From the employees' perspective, the entity offers them jobs and tasks with certain responsibilities, adequate working conditions, and remuneration;
- *the role in relation to the owners* – a means of surplus value of the capital, bringing them profit.

Based on the above, we find that the role of the entity in the economy is different depending upon its business objective and position in the economic system. Although, the performance of the contemporary entity is mainly influenced by the efficiency of its management activity and the generation of expected results.

Therefore, under the given conditions, the supply and demand in accounting reports have increased considerably, because at all stages of the decision-making process different information is used and in these situations, the role of accounting is significant, because accounting controls whether the information meets the requirements set out to be useful and necessary in the managerial decision-making process, in order to make qualitative decisions.

The effectiveness of the information-accounting system within today's entity is determined to a very high degree by the strategic purpose and the tasks that accounting has to perform in the business management process. The Law on Accounting and Financial Reporting establishes that accounting has a complex system of collecting, identifying, grouping, processing, recording, generalization, and presentation of information on accounting elements. Moreover, the law divides accounting into management and financial accounting. Management accounting processes the information for planning, controlling, and analyzing the activity of the entity, in order to prepare internal reports for management decisions, and the financial one presents information on the existence and movement of assets, equity, debt, income, and expenses for the preparation of financial statements [10, art.3].

Financial accounting information is intended for external users, such as investors, creditors, employees, and is presented to them by reporting the financial statements of the entity, which includes the balance sheet, profit, and loss statement, statement of changes in equity, cash flow statement and explanatory notes to the financial statements.

In a competitive economy, the information presented in the financial statements plays a major role, as it is the only source of high-quality information and the most reliable source of the entity's financial condition for external users. By providing the public with truthful information, accounting has an important impact not only on the financial situation of the entity, plus on the security of business partners and at the state level.

Management accounting information is intended for internal users, respectively for the management of the entity, and includes information on the cost of products, profitability per product, etc. In order for this to be useful in the decision-making process, it must meet the following main qualitative characteristics: *intelligibility, relevance, credibility, and comparability* (Dolghi and Macovei, 2013, p. 24).

Next, we examine the qualitative characteristics of information.

Intelligibility. An essential quality of the information provided in the financial statements that must be easily understood by users. For this purpose, it is supposed that users have sufficient knowledge of business and economic activities, and notions of accounting.

Relevance (appropriateness). In order to be useful, the information must be relevant to the decision-making of the users. It is relevant when it influences the economic decisions of users, helping them evaluate past, present, or future events, to confirm or correct their previous assessments.

Credibility (reliability). In order to be useful, information must be credible. It is credible when it does not contain significant errors, is not biased, and users can trust that it represents exactly what it set out to represent or what it expects to represent. In order for the information to credibly present the events and transactions that it intends to represent, it is necessary that they be accounted for and presented in accordance with their source and economic reality, and not only with their legal form.

Comparability. Users should be able to compare an entity's reported financial statements over time to identify trends in its financial position and performance. Users should also be able to compare financial statements between different entities in order to assess the results of their work and compare economic and financial indicators.

Based on the fact that the financial statements ensure the presentation of a true and fair image regarding the position and financial performance of the entity, the accounting system in our country and in several countries has undergone a series of reforms that involve the implementation of unique accounting practices worldwide in order to ensure their compatibility and comparability, whereby national rules or regulations differing from one country to another are improved to be comparable and to reduce these differences.

Therefore, in the General Conceptual Framework of the International Accounting Standards Board (IASB) are provided a series of qualitative characteristics of financial information, which complement the quality assurance of financial information. International Financial Reporting Standards (IFRS) are mandatory in many countries around the world for certain categories of entities or are accepted as an alternative to national standards. These include both the member states of the European Union and many other countries, including the Republic of Moldova, which applies IFRS for public interest entities. In this context, we refer that the harmonization of accounting regulations implies a broad international cooperation in this field.

Accounting reforms in the country include several processes, among them: accounting harmonization with IAS / IFRS, compliance with EU Directives, transposition of European Parliament Directive 2013/34 / EU into the CNS, etc. All these reforms have substantially improved the requirements for accounting information and ensured the quality and unification of the information presented in the financial statements reported by local entities.

If we come back to the functions of accounting in the decision-making process and the need for accounting information in business management processes, we should mention that in order to be useful, it must meet all the characteristics presented above, cumulated and simultaneously. This is not always possible, and therefore the aim is generally to strike the right balance between those characteristics in order to meet the requirements of users. In various cases, the importance of the characteristics is a matter of professional reasoning of those involved in the organization and management of the entity's accounting. Romanian researcher N. Feleaga stresses, „The simple enumeration of the criteria for evaluating the quality of financial information is very useful for normalizers, practitioners, and accountants, for business managers and external users of synthesis documents. These qualities are necessary, in particular, for normalizers and representatives of the profession, in order to formulate accounting rules that are in line with the objectives of financial reporting” (Feleagă, 1995).

Consequently, in order to generalize and be aware of the role and importance of accounting information in the decisional process, it is necessary to correlate it with economic activities and the need of users in the process of substantiating economic decisions. Accounting information is the most real, accurate, complete, and operational. Its use drives to the substantiation of optimal economic decisions aimed at ensuring and carrying out an efficient activity in the current conditions of business development.

From our anterior research, we conclude that the main goal of accounting is to provide enough information to satisfy the requirements of a wide variety of internal and external users. Within the entity, managers, as decision-makers, need different information to help them make decisions at all stages of business management: planning, production processes (cost calculation), control, and analysis (Dolghi, 2010, p.271). Moreover, accounting provides specialized services to other departments within the entity. The chief accountant of the entity has the role of the financial manager, liable for providing financial information, preparation, and presentation of financial statements, but also for the assistance of the entity managers in carrying out the set tasks. As a result, in addition to the accounting function, the duties of accountants include the performance of management

accounting functions. Therefore, the treatment, that an accountant is a specialist who keeps the accounting within the entity, deals with the registration of economic operations, prepares primary documents, knows the legislation, normative acts, is concerned about the preparation and presentation of financial statements and tax reports is currently insufficient and the employees of the accounting service, who consider themselves more accountants than managers, will experience troubles in fulfilling their functions in the future.

Due to the fact that, the automation and continuous implementation of new technologies have an inevitable influence on changing business models, the accounting profession today needs transformations that require reintegrating the role of accounting in the management of the entity by providing real-time high quality information to the management of the entity for the purpose of prompt decisions at all stages of business management. Consequently, it is vital to create an appropriate mechanism for the performance of professional functions by an accountant within the entity, in particular through the training of skills at the level of studies and continuing education. The primary aim in their training is to improve the qualification level of the specialists who currently participate in the decision-making together with the management of the entity.

The three major instigations facing the accounting profession - integrated thinking, globalization and technology, and the future they outline for the profession are being debated by accounting experts at different forums. The necessity to adapt the activity of professional accountants to the digital era, to the requirements of the business, in order to provide it with integrated services, and to guide its directions of action, in such a way that the result is business development, is currently vital, especially for the management of the entity. As it has already been stated, solving these paradigms is the current concern of the accounting profession both nationally and globally.

Digitization, globalization, integrated business solutions are among the challenges of the accounting profession discussed and in the XXIII edition (September 29-30, 2021) of the Congress of the accounting profession in Romania (Body of Expert and Licensed Accountants of Romania, 2022), an event organized by the Body of Expert and Licensed Accountants of Romania (CECCAR).

International Federation of Accountants (IFAC) has deployed an approach to the development of global accounting education with the topic: "*Re-imagining the Role of Future Accountants - Our Call to Action*". Accounting education worldwide is a key focus in this approach and plays a key role in advising on ways to help professional accounting organizations reinterpret their future accounting professions and to train accountants prepared for the future (International Federation of Accountants (IFAC), 2022).

2018 report on the future of jobs conducted by the *World Economic Forum* specifies that in the near future, 75 million jobs could be replaced as a result of changing the division of labor between manual and automated work, *a process that is a reality today*. It is suggested that as the requirements for the profession evolve we need to anticipate: areas where there is a high demand for our skills; the conduct and skills needed to succeed in the future business ecosystem; and changing expectations about what it means to be an "accountant." However, it was noted that 133 million jobs could be created - a sign, which indicates global economic growth, not a decline (WE Forum, 2018).

Then, what do all these changes entail for reintegrating the role of accounting into the management of the contemporary entity? In the author's opinion, *of course*, not the disappearance of the profession, but the expectations regarding the change of the profession of "accountant", which include the *professional conduct and the skills of future accountants*. Thus, it is necessary to train professional skills and competences *starting with the training of high-performing financial-accounting personnel* so that they have the skills to reinterpret the "*future accounting profession*" and to meet the requirements of employers

regarding *the future of jobs in the given field*, and for the purpose of contributing to the development of the business over a sustainable period. Absence of advanced techniques, and competent personnel causes the appearance of problems that negatively influence the business in the current conditions of development of the competitive economy.

More and more business decisions are based on statistical data and the results of analyzes performed by employees in the financial-accounting field based on their professional judgment and skills. Nowadays, professional accountants need to assess and realize that the impact of new technologies on their business and current changes in business models are significant. In this respect, I support the opinion of some researchers and businesspersons, that through digitalization it has been possible to bring accounting to the level of business requirements of the 21st century (Popescu, 2001). Purposely, digitization has made managerial decisions based on available figures in real-time, therewith digitizing business processes and accounting, have permanent access to the entity's information.

All this puts forward high expectations in the reorganization of the activity of the accounting profession and as a result, have a great impact on the evaluation of the economic and financial activity of the entity. Competition and the highest possible level of user requirements for financial and accounting information have led to considerable progress in its preparation and presentation to stakeholders. At the same time, the interest in relevant and credible financial-accounting information has increased.

4. Conclusions

The development of the competitive economy in recent years, the change in the management system within the entity, including the modernization and implementation of new policies and technologies have contributed to the development of accounting systems, based on high-performance accounting standards and good practices of other countries. Within this framework, the accounting profession and accounting as one of the most effective business management techniques, have a major responsibility in several of its processes: investment, profitability, the credibility of partners, accurate presentation of information on the financial position of the performance, and the change in the financial position of the entity, etc. In this sense, the future of the accounting profession presupposes the specialists in the financial-accounting field to fulfill some managerial functions within the management accounting.

Furthermore, the accounting profession is evolving to respond in a manner appropriate to the current requirements put forward. The knowledge and skills needed by professionals in the field of accounting are changing starting with the training of high-performing staff in educational institutions by accumulating new skills in terms of the impact of information technology on the accounting profession.

In agreement with these changes for the accounting profession, is very important to acquire new professional skills and abilities that enable it to provide services at a high level of quality, in order to serve the interest of the development of the progress-oriented entity and to increase the relevance of the information presented in its financial statements.

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SOME RISKS AND CHALLENGES IN ACHIEVING ROMANIA'S EXTERNAL BALANCE

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Abstract: *In this article¹, the author aims to identify the main challenges and risks in achieving Romania's external balance, given our country's intention to achieve sustainable economic development. The methodology used combines literature review, empirical analysis of statistical data and their interpretation, with identification of causalities. Romania's external position has deteriorated during the pandemic crisis and it remains a vulnerability for our country's economy. From the analysis, it can be concluded that among the challenges and risks to Romania's external balance there are the structure of exports and imports, the deterioration of the external deficit financing way, the large fiscal deficits, the large public net external loans, from 2017 till present, the legislative unpredictability. The evolution from recent years of cost competitiveness and of factors that determine non-cost competitiveness have affected and will continue to influence negatively Romania's external balance. In addition, the low number of people with higher education employed, the low capacity for innovation of the economy, the increase in unit labor costs, the low level of labor productivity and the low technological achievements do not support the qualitative and quantitative increase of our country's exports, the production of goods of high added value and incorporating high technology, and thus the achievement of external balance.*

Keywords: *foreign deficit, risks, vulnerabilities, challenges, structural factors.*

JEL Classification: *F10, F14, F41.*

1. Introduction

The external equilibrium can be defined as a balance of the current account of the balance of payments that can be supported by capital inflows, under conditions compatible with the growth prospects of the economy, without resorting to trade and foreign relationships restrictions, so that the level of international reserves should be adequate and relatively stable.

In 2020, the world economy has suffered a severe exogenous shock, caused by the covid-19 pandemic, which has resulted in an economic recession and has led to unprecedented challenges in recent years. Trade has been among the sectors the most affected by the pandemic, due to disruptions in global supply chains, and as a result of declining global production in the context of the pandemic, of the measures taken by the authorities to prevent the spread of the virus and to limit the negative effects on the economy.

In Romania, in 2020, the economic growth had a significant contraction, as a result of the effects of both the demand and the supply generated by the covid-19 pandemic, with consequences as the deterioration of internal macroeconomic balances, including from the perspective of the structure and financing cost of the budget deficit, and of the external equilibrium. But the recession was smaller compared to other EU member states, with a 3.9% drop in GDP in real terms, despite the contraction of private consumption (the main driver of economic growth in the years prior to covid-19) during the spring lockdown. Thus, there have been external demand shocks and supply chain disruptions with effects on exports. On the other side, investments had a significant contribution to GDP formation, due to the performance of the construction activity.

¹ The article is based on the research project "The issue of the external balance in the current international conditions. Requirements for Romania ", elaborated in CFMR "Victor Slăvescu" in 2021, under the coordination of Camelia Milea, Ph.D.

Therefore, the assessment of the challenges and risks to achieving the external equilibrium of our country, mainly driven by the existing vulnerabilities, is influenced by the emergence and occurrence of covid-19.

The implementation in Romania of expansionary fiscal and revenue policies in a period of economic growth has led to the deterioration of the budget balance and the current account deficit. These pro-cyclical policies have diminished the state's ability to interfere in the context of adverse economic developments, such as the covid-19 pandemic, given the high level of the budget deficit before the outbreak of the pandemic (NBR; 2021). Over the past year, the political actions have focused on mitigating the impact of the covid-19' shock and on facilitating the recovery. This has increased Romania's public indebtedness, but should support the medium-term adjustment. Looking into the future, the Recovery and Resilience Plan provides an opportunity to address imbalances, investment needs and reforms.

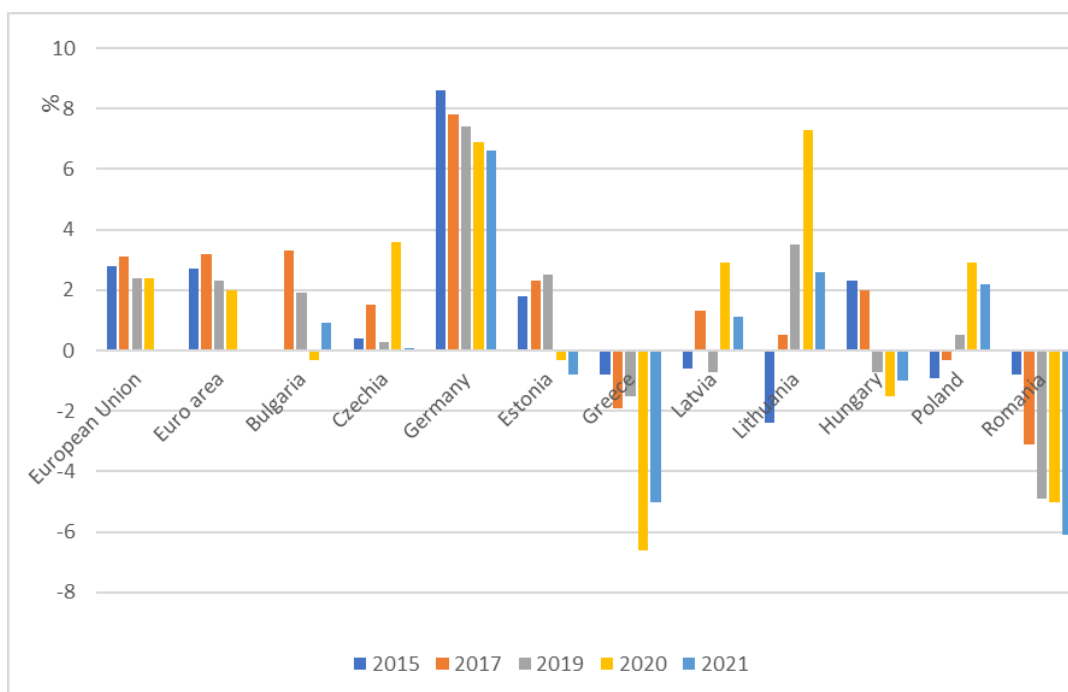
In the article, the period 2006-2021 will be analyzed, in order to compare the situation existing in 2021 (the second year of the covid-19 pandemic and its effects) with that of the year before the integration of our country in the European Union.

2. Risks in achieving Romania's external equilibrium

Macroeconomic imbalances in Romania are influenced by the risks of losing cost competitiveness, of deteriorating the external position, and of increasing the current account deficit, in the context of an expansionary fiscal policy and an unpredictable business environment. These vulnerabilities have risen to the surface both in 2019, 2020 and in 2021. Next, we will particularize those *risks that may affect the external equilibrium in Romania*:

➤ The marginal deterioration of the current account deficit to 5% of GDP in 2020 and 7.1% in 2021, as a result of a lower decline in imports compared to exports, which have decreased sharply (in 2020), respectively due to faster increase in imports versus exports (2021). Romania's current account deficit continues to be one of the highest in the European Union (see Figure 1). The net international investment position (NIIP) is negative and worsened to -47.3% of GDP in 2020. The decline in the NIIP during 2020 was determined almost exclusively by the negative current account flows. The NIIP is now slightly lower than the prudential threshold, but considerably higher than the "NIIP norm", which is currently at -11% of GDP (European Commission, 2021)¹. The composition of the NIIP is favorable, as it consists mainly of foreign direct investment. However, the net external debt has risen recently.

¹ European Commission (2021), Commission staff working document **In-Depth Review for Romania** in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances, Brussels, 2.6.2021, SWD(2021) 411 final



Source: AMECO data, processed by the author

Figure no. 1 - The current account balance in the European Union, the euro area and in some Member States of the European Union in the period 2015-2021 (% of GDP)

➤ The structure of imports and exports influences negatively the evolution of the external deficit in Romania. Thus, exports consist mainly in intermediate goods, although the share of exports of capital and consumer goods has increased in recent years. The evolution of the structure of imports is worrisome, given that from 2016 until 2021, imports of consumer goods have grown, generally, faster than imports of other goods.

➤ Another negative aspect that can be considered a source of vulnerabilities and risks is *the change in the way of financing the growing external deficit*, namely the transition from financing mainly through foreign direct investment flows to financing through debt-generating flows (loans and portfolio investments)¹. Thus, the inflows of foreign direct investments have high values until the burst of the economic and financial crisis (8.7 billion in 2006, 7 billion in 2007 and 9.3 billion euros in 2008). If in the period 2013-2017, foreign direct investments covered more than 100% of the current account deficit, the degree of financing from these sources decreased in 2018-2020, reaching 27% in 2020, as a result of the 39% reduction in net inflows of foreign direct investments (partly due to the reduction of intra-firm debt) (only 1.85 billion euros). The significant decrease in the net balance of foreign direct investments in Romania in 2020 (when it was recorded the lowest level after 2003), is due to the risk aversion of investors in the context of the uncertainty generated by the effects of the measures adopted to stop the spread of coronavirus. In 2021, the situation has improved, foreign direct investments inflows increasing, with positive effects in the sense of increasing the coverage of the current account deficit to 43%.

The trend of reducing the financing of external imbalance through foreign direct investments has appeared in 2015, as a result of the sharp increase in the current account

¹ Long-term debt instruments in the form of securities.

deficit, although non-residents' direct investment inflows have increased during the period 2013-2019, and in 2021, reflecting improved foreign perception of our country. The increase of the net balance of foreign direct investments in the period 2015-2019, shows the raise of Romania's commitments towards non-residents, with negative consequences on the international investment position.

In 2020 and 2021, *capital transfers* (mainly European funds) have increased by 51.5% and 55.5%, respectively, compared to the value of the corresponding previous year. This development can be positive for the sustainable financing of the external disequilibrium of our country if it continues in the coming years.

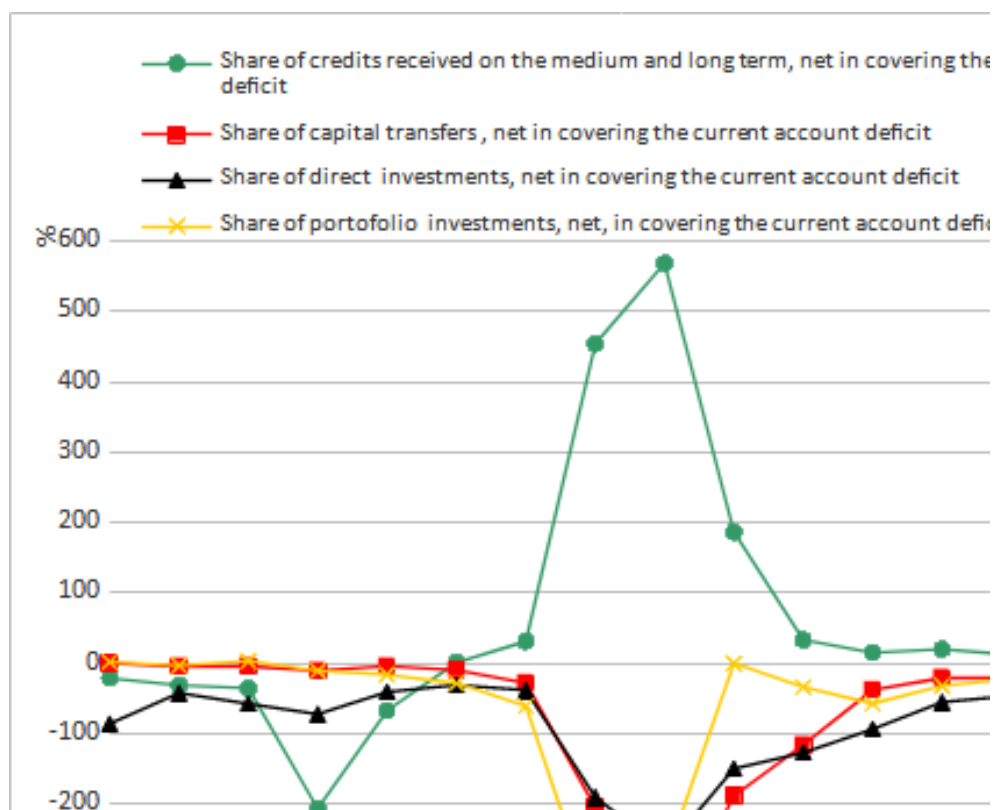
After the peaks from 2013, 2014, *portfolio investments* have become again in 2020 the main source of financing the current account deficit (see figure no.2), increasing largely by 468%, representing the highest value since 1990 of this indicator, standing at about 6.5% of GDP, most of which have been issued by the government (NBR, 2021, European Commission, 2021). In 2021, portfolio investments inflows have declined, reaching approximately the level of the period 2017-2019.

Thus, the net inflows of portfolio investments have increased from EUR 2436 million in 2019 to EUR 13837 million in 2020, contributing to the sharp increase in the medium and long term external public debt.

Analyzing the composition of portfolio investments in 2020, we find that most of them are long-term debt instruments. So, in 2020, Romania has indebted itself heavily from private creditors, which implies an increase in costs, and implicitly in the risks related to the repayment and sustainability of external debt.

If between 2011 and 2019 there are capital outflows from our country for the return of medium and long-term *external loans* contracted in the previous years (1991-2010), in 2020 Romania has received loans from abroad, for the first time since 2010. In conclusion, in 2020, Romania's net external financing needs have been mostly met by increases in the government's external debt. In 2021, the trend from the period before 2020 has been resumed, namely external loans have been repaid.

Figure no. 2 - The current account financing sources in Romania in the period 2006-2021



Source: NBR data, processed by the author

➤ Further deterioration of the fiscal position, despite a less important recession than in other EU Member States, and a moderate package of emergency measures meant to support the economy to cope with the economic and social effects of covid-19 (including plans to back up the level of employment, of the medical system, and tax incentives). *The large fiscal deficits in Romania even before the outburst of covid-19 together with the fiscal effort necessary to face the sanitary crisis and to bolster up the economy generated the worsening of the external position of our country, being financed from abroad more and more, which has led to a sharp increase in external public debt since 2017.* Total public debt has been 47.3% of GDP in 2020, and 35.3% of GDP in 2019, and it is expected to grow at least until 2022. From the data above, we can see that a significant share of the public debt is financed. from abroad, in foreign currency. Despite the still low public debt-to-GDP ratio, *Romania faces substantial short and medium-term fiscal sustainability risks.* Moreover, *there are risks arising from the high share of public debt held in foreign currency (approximately 46%) and from the high share of debt held by non-residents (41%).* This situation was determined by the expansionary fiscal policy in the years of economic growth before the covid-19 pandemic. In addition, the expansionary fiscal policy also supported high demand and high consumer spending, and thus the worsening of the current account balance. The budget deficit has increased sharply in 2020 (to 9.6% of GDP), from 4.4% in 2019, driven by the high external financing needs of the Romanian economy, as a result of the fiscal effort to fight the covid-19 pandemic, but also due to the measures from previous legislations that have led to a sharp increase in spending. There has been an improvement in 2021 (6.72%, (Finance Minister (2021))), largely due to the

economic recovery and also reflecting a certain reduction in spending and an increase in budget revenues. The government intends to reduce the deficit below 3% of GDP by 2024. (European Commission, 2021). However, the poor getting in of budget revenues and the high share of rigid expenditures in the fiscal revenues are structural vulnerabilities that will slow down the process of fiscal consolidation.

➤ The significant increase in medium and long-term external public debt from 18% of GDP in 2019 to 26% of GDP in 2020 (24% in 2021), due to the sharp growth in 2020 of net portfolio investment inflows (most being long-term debt instruments), is another factor that influences negatively the external balance, by increasing the current account deficit due to the rise in outflows through the sub-accounts of Income from other investments and Income from portfolio investments.

The massive indebtedness from private creditors implies an increase of the costs, and implicitly of the risks related to the repayment and sustainability of the external debt, especially in the context of the high yields to the Romanian government bonds.

The analysis of the debt sustainability risk confirms that our country is listed with a high risk in the medium term¹. Thus, Romania's sovereign debt has been downgraded, until the spring of 2020, by all three major rating agencies from "stable" to "negative", on grounds of concerns about fiscal sustainability, reaching the lowest investment grade². At the beginning of 2021, S&P improved the prospects for our country's sovereign debt from "negative" to "stable", while maintaining the investment grade, amid a reduction in short-term fiscal risks, following the adoption of the first consolidation measures by the government. However, Fitch maintained the "negative" outlook due to Romania's poor track record in terms of fiscal consolidation and the high share of rigid spending in the budget.

Also, the increase of the external debt generates risks at the microeconomic level (effects on the Romanian banking sector and the rise of the exposure to a possible external shock). The effects of rising medium and long-term external debt can be diffused through the exchange rate channel (the sharp depreciation of the national currency would lead to a significant increase in the cost of external financing), through the trust channel (changing investors' sentiment and perception leading to increased risk premium and implicitly of the cost of external financing), through contagion (by a regional economic, political or social shock), or even through a shock intrinsic to the national economy, of conjectural or structural nature. In 2019 and 2020, there were some consequences (unfavorable perception of investors, high cost of external financing, fluctuations in the exchange rate of the national currency).

Given that Romania's external debt was 58% of GDP in 2020 (56% in 2021), and public debt accounted for 61.3% of the medium and long-term external debt in 2020 (60% in 2021), we can say that public debt is the main cause of the increase in Romania's external debt.

¹See SWD (2021) 530 accompanying the Commission Recommendation for a Council Recommendation under the Excessive Deficit Procedure and the "2020 Sustainability Debt Monitor" available at https://ec.europa.eu/info/publications/debt-sustainability-monitor-2020_en for detailed methodological issues.

²Fitch confirmed Romania's sovereign rating at "BBB minus" with a negative outlook, this being the last level in the "investment-grade" category (recommended for investments). The negative outlook reflects continued uncertainty over the implementation of policies aimed at solving structural budgetary imbalances in the medium term and the impact on Romania's public finances of persistent pandemic risks and rising energy costs, according to Fitch.

Consequently, it can be stated that the large net loans of the public sector, from 2017 till present, have significantly concurred to the high and persistent current account deficit, and implicitly to the deterioration of Romania's external balance.

➤ Another factor with a potential negative impact on the external balance of our country is the depreciation of the national currency which would increase the effort in national currency needed to return the public debt borrowed in foreign currency, especially given its increase in recent years.

➤ The *pressures related to cost competitiveness, which came mainly from labor costs growth more than productivity increase in the years of strong economic growth and low and declining unemployment, before the covid-19 crisis*. Although unit labor costs continued to rise considerably in 2020, reflecting the impact of low productivity amid declining output, they are expected to increase much less in 2021 and 2022 than in the years before the covid-19 crisis (European Commission, 2021). The prognosis show a productivity improvement amid a recovery in the economic activity and a moderation in wage growth which has began in 2020 and has become increasingly visible. In the long run, *non-cost factors* such as skills shortage and the high share of low-skilled workforce in the context of rapid demographic decline, together with shortcomings in education and training, limited availability of infrastructure, both quantitatively and qualitatively, low innovation capacity, cumbersome business environment or the seemingly unpredictability of the policy-making process *can hinder non-cost competitiveness gains*. Thus, *the evolution from the recent years of cost competitiveness and of the factors that determine non-cost competitiveness have affected and will continue to influence negatively Romania's external balance*.

➤ *Legislative unpredictability remains a concern for the business environment*. The lack of transparency concerning the direction of certain public policies, if prolonged, can increase the perception of an unstable business environment and *may have a negative impact on the country's financing costs, investors' confidence and capital inflows (foreign investments, loans), with negative effects on investments, economic growth, but also on the external balance by increasing capital outflows through the income sub-accounts of the current account (each corresponding to a type of financing)*.

Prior to the outbreak of the pandemic, relatively strong GDP growth rates helped to improve investors' perception. But a number of legislative initiatives in recent years have led to a decline in international investors' confidence. Among others, the measures concerning the banking sector, although subsequently largely revised, but also some measures generating the increase in public spending. Moreover, the uncertainty regarding the 40% increase in pensions that was to be put into practice starting with September 2020 and the associated implications on Romania's fiscal outlook had also repercussions on credit ratings.

3. Essential structural factors generating risks and challenges for the achievement of the external balance in Romania

Other essential structural elements generating risks and challenges for the Romanian economy, in general, and, *for the achievement of the external balance*, in particular, are briefly presented in table no.1.

Romania is a net importer of energy, given that the *share of energy-intensive industries in the economy* had increased slightly in the period 2012-2018, standing at around 12%. Also, the dependence on energy imports increased in 2016, 2017 (reaching 23%), after having decreased in 2013 and 2014 (16.4%). This development affects negatively the current account of our country both directly through the contribution of the negative balance of the energy balance of trade and indirectly, because high energy

consumption represents a brake for the production of high quality goods with high added value that can be exported at elevated prices.

The large differential between the level of the domestic interest rate and that of the international interest rate stimulates the entry of capital in Romania as portfolio investments and external loans, with negative effects on the external borrowing costs, and implicitly on the external balance.

The very high level of *foreign capital in the banking system*, although declining in recent years, shows a high dependence on foreigners of the capital needed by the Romanian economy, with unfavorable effects on achieving external balance.

The investment in research and development (R-D) remains extremely low. The intensity of R-D (i.e. R-D expenditure as a percentage of GDP) has remained unchanged since 2000, standing at 0.5% in 2018 compared to 2.7% in the European Union as a whole (the lowest in the EU, representing only one quarter of the national target). Public funding for R-D is insufficient and declining, and the government has no clear plans to address this issue.

The trade balance of high-tech products is negative throughout the analyzed period, with negative effects on the external balance, showing the low level of development of the Romanian exports.

The small number of people with higher education, as well as the relatively high and constant level of people leaving early the education and training system are impediments to supporting research and innovation, with effects in the sense of non-developing high-added value and high technology products. which negatively affects the achievement of long-term external balance.

The small and relatively constant number of *people employed with higher education and / or of people employed in the science and technology sector* (% of total employment) is an inhibitory factor for the production of goods with a high level of technology and a high degree of processing, which could be exported internationally at high prices, thus contributing to the improvement of our country's external deficit.

Table no. 1- The main structural factors which might represent challenges and risks for the achievement of Romania's external balance

	2012	2013	2014	2015	2016	2017	2018	2019
Energy import dependency¹ (%)	22,3	18,1	16,4	16,4	21,6	23,1	*	*
Energy balance of trade² (% GDP)	-3	-1,9	-1,4	-0,9	-0,94	-1,3	-1,6	*
Share of energy-intensive industries in the economy³ (% GDP)	11,6	11,4	12	12,3	12,4	12,4	12,33	*
Long-term interest rate spread versus Bund⁴ (basis points)	*	384,4	333,1	297,8	322,9	364,1	429	479,2
Private debt (% GDP)	*	*	62,1	58,0	53,7	50,9	47,4	46,7

1 Energy import dependency represents net energy imports divided by gross inland energy consumption plus fuels consumption of international sea transportation.

2 The energy balance of trade is the balance of energy exports and imports, expressed as % of GDP.

3 The share of energy-intensive industries in the economy represents the share of gross added value of the energy-intensive industries in GDP.

4 Bund is a debt instrument issued by the German government in order to finance spending. Bunds are issued with a maturity of 10 or 30 years. Bunds are generally considered to be the German equivalent of US treasury bills.

		19	21	21,8	19,6	19,0	18,0	17,3	17,2
Gross external debt (% GDP)	public								
	private	28,2	25,2	22,8	20,9	19,1	16,7	15,1	14,9
Foreign ownership of banking system (% of total assets)		*	*	90,0	90,5	91,4	77,3	74,9	74,5
Trade balance of high technology products (% GDP)		-1,79	-1,96	-1,66	-1,75	-1,6	-1,87	-1,78	*
General government expenditure on education (% GDP)		3	2,8	3	3,1	3,7	2,8		*
R&D Intensity		0,48	0,39	0,38	0,49	0,48	0,5	0,5	0,48
No. of persons having completed tertiary education (% of people aged 15-64)		14	14	14	15	15	15	16	*
Early leavers from education and training system (% of people aged 18-24 years)			17,3	18,1	19,1	18,5	18,1	16,4	*
Employed people with tertiary education and/or people employed in science and technology sector (% of total employment)		24	24	24	26	27	27	27	*
Unit Labor Cost index growth (t/t-1, %)									
- in industry									6,6
- in construction			-3,55	0,59	-0,06	7,24	6,6	10,74	
- in market services			-3,96	-12,1	4,96	-2,9	21,33	19,2	
			3	5,72	-0,17	10,65	7	13	
Growth of labor productivity per person (t/t-1, %)									
- in industry		-6,38	3,98	0,19	8,52	2,17	4,37	3,27	3,1
- in construction		9	4,72	2,7	6,84	5,37	-3,25	4,87	
- in market services		35,86	3,85	0,64	3,1	3,6	5	-0,04	

Source: Eurostat and NBR data

Since 2016, wage increases (in the public sector and the minimum wage) have far exceeded the relatively strong increase in productivity, which has led to an advance of *unit labor costs*, with negative implications for competitiveness. In turn, this led to an appreciation of the real effective exchange rate based on unit labor costs. Both developments have influenced the external deficit in the sense of growth, by reducing the attractiveness of exports and stimulating imports.

Despite the increase in labor productivity per person until 2018 inclusive, *labor productivity* in Romania is at a low level compared to other European Union countries (the main trading partner of our country). This shows an unfavorable situation in terms of quality and prices of exported goods and services, not supporting the achievement of the external balance.

4. Conclusions

In the short term, the economic evolution is affected by the dynamics of the pandemic, by the profile of an excess demand shaped since the beginning of 2021, by the effects of the turbulence on global value-added chains, and by the implications of a war in the country's neighborhood, which cumulatively slow the activity of domestic economic recovery. In addition, the evolution of the covid-19 pandemic, the recovery capacity and the possible structural implications of the crisis are still uncertain.

Macroeconomic imbalances in Romania are directly influenced by the risks of loss of cost competitiveness, of deterioration of the external position and of a growing current account deficit, in the context of an expansionary fiscal policy and an unpredictable business environment. These vulnerabilities have come to surface in 2019, 2020 and in 2021.

Romania's external position has deteriorated during the pandemic crisis and it remains a vulnerability for our country's economy. The covid-19 crisis does not seem to have fundamentally changed the dynamics of the external sector. In general, policy action over the past year has focused on mitigating the impact of the covid-19 shock and on facilitating recovery. This has increased Romania's public indebtedness, but should support the adjustment in the medium term.

The evolution in recent years of the cost competitiveness and of the factors that determine non-cost competitiveness have affected and will continue to negatively influence Romania's external balance and investments.

Analyzing the essential structural elements generating risks and challenges for the Romanian economy, in general, and for achieving the external balance, in particular, we can say that the low number of people employed with higher education, the low capacity of innovation in the economy, increased unit labor costs, the low level of labor productivity and low technological achievements do not support the qualitative and quantitative increase of our country's exports, the production of high value-added goods that include high technology, and thus the reduction of our country's external deficit.

In general, while policy risks have been largely mitigated by subsequent corrective policy measures, legislative unpredictability continues to affect business environment, fiscal outlook and investors' perceptions.

We can say that the trend of our country's current account deficit since 2015 is a source of vulnerabilities for the sustainable development of the economy (a growing external deficit requires additional sources of financing), but also for the prospect of joining the euro area (being exceeded the limits allowed in the procedure regarding the macroeconomic imbalances within the alert mechanism of the European Commission), whereas Romania's current account deficit continues to be one of the highest in the European Union.

The structure of Romanian imports and exports (predominantly exports of intermediate goods, and imports of consumer goods growing faster than imports of other goods from 2016 to present), the depreciation of the national currency, the change of the way of financing the growing external deficit, in favor of debt generating flows (loans and portfolio investments), the sharp increase in external public debt since 2017 (meant to finance large fiscal deficits recorded in Romania also before the emergence of covid-19, but also to cope with the health crisis) can be considered sources of vulnerabilities and risks, with negative effects on the evolution of the external deficit in Romania. The massive indebtedness from private creditors implies an increase of costs, and implicitly of the risks related to the repayment and sustainability of the external debt. Public debt is the main cause of Romania's external debt increase.

The lack of continuous reform efforts, the increase of the budget deficit and of the current account deficit endanger the sustainability of Romania's economic growth. The strong domestic demand, driven by tax cuts and high wage increases, was the engine of economic growth in the period prior to the emergence of covid-19. This consumption-based growth model has led to an unceasing increase of our country's current account and budget deficits. In addition, unfavorable demographic developments have led to a significant shortage of labor force and skilled personnel, thus limiting the country's growth potential. If the upward trend in the external deficit is not adjusted and if there is no firm commitment to structural reforms, there is a risk that Romania will face significant obstacles in her efforts to place the economy on a sustainable development trend.

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SUSTAINABLE PUBLIC PROCUREMENT – METHOD OF ATTAINING SUSTAINABLE DEVELOPMENT NATIONWIDE

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Abstract: *The article approaches new issues about the transition to sustainable development from the perspective of sustainable public procurement. Achieving sustainable development is one of the most urgent issues confronting all of the countries around the world. The goal is to ensure economic revival and, at the same time, to protect existing resources and the environment, taking account of the interests of future generations. Sustainable development also includes the stability of the main socio-economic and environmental indicators of economic system. At the same time, the sustainability of economic growth also presumes a set of conditions, factors and regulatory measures which provide the stability of final indicators due to economic balance. In this context, the authors point out on the fact that one of the most effective mechanisms for implementing sustainable development postulates at state level is through sustainable public procurement. Being the largest buyer on the market, the state is able to influence producers and consumers through public procurement and promote sustainable production and consumption. The practical implementation of sustainable procurement promotes the stimulation of green production, resources recycling, stimulation of the activity of small enterprises and the creation of new jobs. Thus, public procurement truly contributes to sustainable development.*

Keywords: sustainable development, economy, society, environment, ecology.

JEL Classification: Q01, Q56.

1. Introduction

The term "sustainable development" conceived 30 years ago as a solution to the ecological crisis caused by the intensive industrial exploitation of resources and environmental pollution, nowadays, it has become a multidimensional and constantly evolving concept. The definition given to this term in 1987 by the World Commission on Environment and Development (WCED) in "Our Common Future: Report", also known as the Brundtland Report: *"sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (Perciun, Ganea, Țurcan, Țurcan, 2021, pp. 165-172). Currently, we are talking about the rational use of material resources associated with the modern level of technology and social organization, and also the biosphere's capacity to deal with the consequences of human activity both now, but also for the future.

Economic growth, in order to be sustainable under the conditions of an informational society and the avalanche of crises present in the last few years, can be ensured only through developing a set of objectives and indicators of the sustainable development of society, economy and nature. In this context, it is obvious that a certain amount of government spending can help stimulate market transformation towards innovation and sustainability, thus allowing enterprises to become more environmentally accountable and move towards a greener economy. In the context of sustainable development, over the past decades, the economy has become one of the biggest challenges, as it represents the cornerstone for building a new socio-cultural model. In the sense of created and generated conditions worldwide, a sustainable economy is needed as a component of sustainable development, which is viable in the long term, but which at the same time holds the

capacity of responding both to the needs of conservation of the natural environment, and also of social requirements towards improving the quality of life.

An effective instrument for implementing sustainable development strategies it is represented by the *sustainable public procurement* system (SPP). The notion of sustainable public procurement is defined as the process in which goods, services or various works are procured by the government and state enterprises in order to perform their primary functions and simultaneously a method of protecting the environment, sustainable economic development, alleviating social problems, etc.

For the Republic of Moldova, sustainable public procurement can become one of the effective instruments that can help in implementing a sustainable development, due to the fact that the state is considered the largest buyer on the market, so through this instrument it can influence producers and promote sustainable production. Sustainable public procurements will contribute at stimulating the ecological production, recycling of raw materials, supporting small and medium-sized enterprises, including by creating new jobs, etc. Lately, it is noted that the state is making major efforts to support and promote organic products, which is interpreted by consumers as a signal of confidence to buy organic goods on the market under fair trade conditions. On the other hand, among the state's priorities in the field of science and innovation we can find radical changes in the methods and means of environmental protection, which, due to practical application, will reduce the technogenic impact on the biosphere in the future. Therefore, sustainable public procurement for small developing economies can become an effective instrument for implementing the "Moldova 2030" Strategy. The state being the largest buyer on the domestic market and having the will and political power can directly influence producers and consumers to promote sustainability in production and consumption.

2. Description of the Problem

The specific challenges of sustainable development are at least as heterogeneous and complex as the diversity of human societies and natural ecosystems from all over the world. As a concept, sustainable development remains an open, dynamic and evolving idea which can be adapted to suit different contexts. In this context, the concept of public procurement becomes one of the effective implementation mechanisms of sustainable development policies. At the World Summit on Sustainable Development (WSSD), held in Johannesburg in 2002, public authorities were advised "to promote the development and dissemination of sustainable goods and services through public procurement".

Public procurement is the subject of numerous studies, thus in 2009 English authors Walker H., Brammer S. for the first time (Walker, Brammer, 2009, pp.128–137) have defined this notion in the context of sustainable development referring at ensuring a strong, healthy and fair society; living within the boundaries of the environment; and promotion of good governance.

Another key study in this field was realized by Hoejmoose and Adrien-Kirby (Hoejmoose, Adrien-Kirby, 2012, pp. 232-242), which completed one of the first systematic literature analyzes of public procurement from a social and environmental point of view (SERP), based on both a quantitative as well as a qualitative approach.

German authors Akhavan and Beckmann consider that sustainable auction processes constitute a multidimensional approach based on the following three axes: social, environmental and governance. They built a category-based model that includes a valuable framework for analyzing the way how sustainability can be included in contracting strategies and practices:

- internal integration and governance;
- selection procedures of providers based on social or environmental considerations;

- the empowerment of providers, with particular reference to social or environmental considerations;
- external governance and inter-organizational cooperation (Akhavan, Beckmann, 2017, pp.137-151).

Special attention has been given to the role of the state in the promotion of sustainable public procurement. Thus, we support the ideas of researchers that in their studies come up with pertinent arguments sustaining the fact that the states must strive to make public procurement an instrument for integration growth, on the one hand, and focus on national priorities and increased protectionism to protect against the competition, on the other hand, that becomes especially relevant during a crisis.

3. Methodology and Data

The key research methods applied in the present paper were analysis, comparison, evaluation, systematization, graphical and tabular presentation, etc. The authors' publications were analyzed on the topic of defining and applying in practice a sustainable public procurement. The information presented in this paper is based on a systemic evaluation of the legislation in force, analysis of the EU and Republic of Moldova statistical databases with the analysis of the reports issued by the Agency of Procurement and the Ministry of Finance of the Republic of Moldova. This paper was supplemented with information provided by the *M Tender* platform.

4. Results

Public procurement is normally regulated by both national laws, as well as by international and regional trade through agreements that influence national law. The national legislation in the field of public procurement is regulated by the Law no. 131 of 03/07/2015 on public procurement, that regulates this procedure and sets out a set of general principles regarding the public procurement process, such as: efficient use of public money, ensuring competition, transparency, environmental protection, liberalization and expansion of international trade, free movement of goods, equal treatment, impartiality, non-discrimination with regard to all tenderers and economic operators, taking responsibility in public procurement procedures (Legislație. Agenția Achiziții Publice, 2022). Law no. 74/2020 on procurement in the energetic, water, transport and postal services sectors, which partially applies the Directive 2014/25/EU and concerns to SPP conducted by entities from the stipulated fields (Legea nr.74 din 21-05-2020).

At international level, public procurement in the Republic of Moldova is regulated by the directives of the European Parliament and of the Council of 26 February 2014: 2014/24/EU which mentions the importance of SPP in the Europe 2020 Strategy "for smart, sustainable and inclusive growth". The types of procedures are described and how they can be deployed and the instruments applied for different types of procurement. The document allows at the discretion of the authorities at different stages of the procurement procedure to include environmental analysis, technical specifications, award of contracts and performance stage. 2014/25/EU on procurement realized by entities which operate in the water, energy, transport and postal services sectors and abrogation (European Parliament, Council of the European Union, "Directive 2014/24/EU"; European Parliament, Council of the European Union, "Directive 2014/25/EU"). The provisions at international level, and especially at European level, are transposed into major strategic macroeconomic policies acts at national level (Hotărâre nr.377 din 10 iunie 2020).

The regulatory documents emphasize the achievement of social development objectives based on the public procurement process. These objectives include environmental protection, social responsibility, innovation, combating climate change,

employment, public health and other social and environmental considerations (Legea nr.131 din 03-07-2015).

The sustainable development objectives of the Republic of Moldova with reference to public procurement, mentioned in the National Development Strategy “Moldova 2030” (Hotărâre nr.377 din 10 iunie 2020), can be found in the chapter “Revenue growth from sustainable sources and attenuation of economic inequalities”. A priority action identified in this regard is the development of the abilities of young specialists in the business environment by establishing a mechanism through which will be given the access to the public procurement market to young innovative enterprises.

It is also an essential aspect to ensure responsibility and minimize corruption. Transparency in the Republic of Moldova is ensured by The Agency of Public Procurement, which monitors the conformity of conducting the public procurement procedure and performs the analysis of the public procurement system.

According to the report regarding the activity in the field of public procurement carried out during 2021 (Agenția Achiziții Publice. Raport privind activitatea în domeniul achizițiilor publice desfășurate în perioada anului 2021) transparency is ensured by the publication of the application on the official WEBSITE – www.tender.gov.md; The Public Procurement Bulletin (PPB) is published regularly; the list of public contracts is published regularly; workshops, round tables and meetings are organized.

However, we note that at the moment the notion of sustainable public procurement is lacking from the legislation and public documents. *The authors consider that under the current conditions of the national economy sustainable public procurement describes the process by which public authorities seek to achieve the right balance between the three pillars of sustainable development – economic, social and environmental, and can be defined as an effective instrument for improving the quality and promoting goods, works and services on the market, while avoiding in the same time the additional burden on public finances.* In these circumstances, we believe that SPP will rely on the following principles:

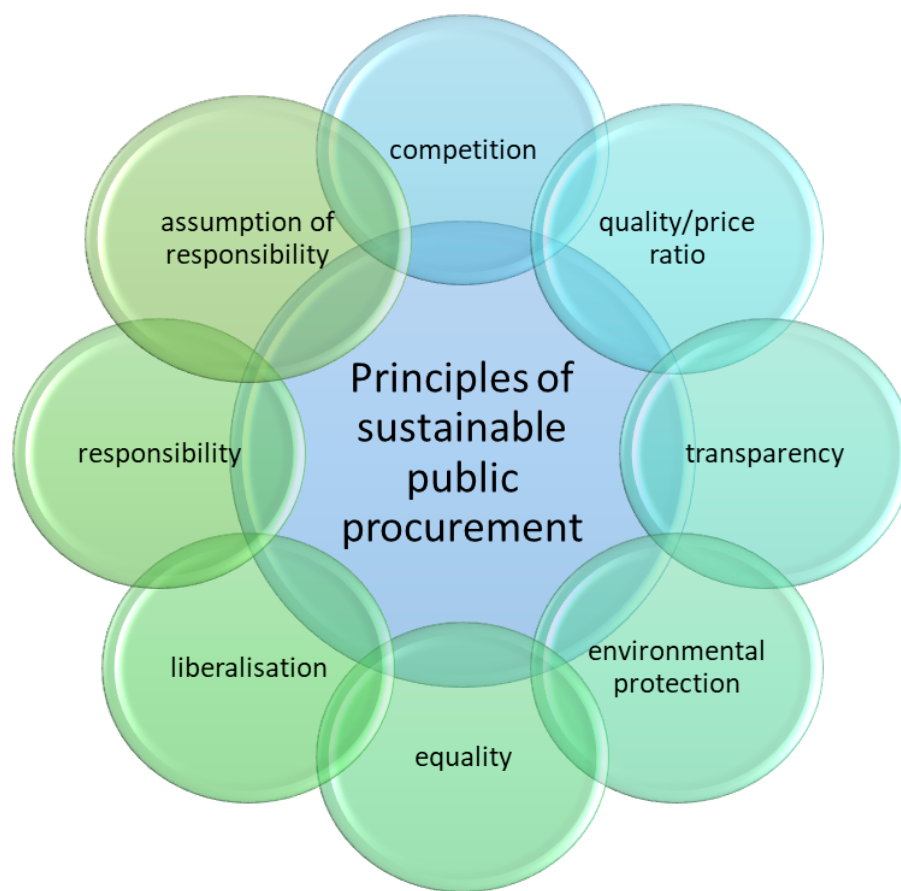


Figure 1 - Principles of the application and implementation of sustainable public procurement

Source: Developed by authors

The principle of *assumption of responsibility* is significant in the public procurement procedure that ensures fair competition by preventing corruption. Violation of this principle can cause serious problems related to the code of conduct, which in the case of public procurement has a much greater impact compared to professionals in other fields.

Competition in the field of public procurement is ensured through competitive auctions of products and services. To initiate the public procurement process, it starts with the notice of commencement where all requirements are indicated and is launched an invitation to tender from the relevant providers. After that the tenders are registered and handed over to the tender committee for the evaluation of tenders if they meet all the announced requirements. The credibility of providers and the relevance of the cost are checked along the way. After the tenders' evaluation, the tender is attributed to the most competitive and credible provider. This competitive bidding process reduces the chances of favoritism, corruption and fraud. In addition, it encourages and increases the participation of more providers, also the high competition leads to the reduction of costs and improving the quality of products and services (Albert Sanchez-Graells, 2015, pp.80-87).

Quality/price ratio is a basic principle which requires public organizations to administrate public money in an efficient way, thus contributing to policy development by setting the rules and priorities to achieve the best reimbursements and results in relation to expenditure.

Liberalization, Equality and Transparency refers to the open system, which makes it very important for the procurement process.

Responsibility is an imperative principle of public procurement; contracting authorities constitute working groups, which are responsible for the whole process (Agenția de Cooperare Internațională a Germaniei, 2014, p.10).

Environmental protection through the promotion of public procurement involves the elimination of environmental damage and aims the capacity growth of enterprises with sustainability criteria to respond to public tenders.

In the context of the national economy, competition conducted in a fair and transparent manner is a basic principle for public procurement. The procurement process should be carried out in a manner that provides all interested parties a fair trial. The announcement and conduct of tenders shall be performed openly (see Table 1). Each method has its own strengths and weaknesses, thus the interested parties are instantly informed about the strengths and weaknesses of their own tenders. Transparency ensures that any deviations from fair and equal treatment are detected early and makes such deviations less likely to occur.

Table 1. Procurement methods announced for 2021 in the Republic of Moldova

Indicators	Amount, million lei	Additional contracts and agreements	Cancelled	The rate of canceled procedures
The announcement and conduct of an open auction through the information system	6449	6163	407	18,86%
Announcement and conduct of procedures by requesting the price offers through the automated information system State Register of Public Procurement (M Tender)	1278	5645	556	56,91%
Conduct of public procurement procedures through negotiation without prior publication of a contract notice	475	710	-	-
Conduct of public procurement procedures through the framework agreement	11	3	-	-
Conducting the public procurement procedures through the automated information system State Register of Public Procurement	229	929	-	-
Totalization	8445	13450	963	-

Source: developed by the authors based on (***)Agenția Achiziții Publice, 2021)

For the Republic of Moldova it would be beneficial to learn from the experience of the countries that have already demonstrated effectiveness in this field. Thus, the OECD study (Organisation for Economic Co-operation and Development) regarding the public procurement established that most countries are oriented into treating environmental

concerns and sustainable public procurement as development policies. This approach is widely accepted in Sweden, Finland, and Denmark. In terms of environmental impact, public procurement increases the demand for agricultural products that produce lower greenhouse gas emissions. A significant benefit of purchasing supplies from local producers is the growth of sustainability in correlation with the country's food system (Risku-Norja, 2016; Sorensen N. et al., 2020, pp. 3428-3435).

The transition to ecological public procurement is also significant in Italy. The main features of the public procurement system in Rome are: consistent implementation of quality requirements while offering manufacturers the time needed to meet these requirements; the availability of sufficiently long contracts for the provision of products which will ensure the stability of supplies; supporting the participation of local providers, including small producers, by breaking the contract into small batches; the presence of a dialog between providers and buyers to discuss problems and find common solutions; constant monitoring of contractors' projects with daily testing and control (Barling, Andersson, Bock, et al., 2018).

The French government proposes that by 2023, at least half of all aliments purchased by the public sector for educational institutions, hospitals and other public institutions must be organic or produced at a local level. This initiative outlines the role of public procurement in supporting national agriculture (France Strategy, 2021, pp. 262-263).

Compared to the indicators of the EU countries, the expenditure on public procurement of goods and services in the Republic of Moldova is twice as low (see Figure 1), but, however, the state is still the largest customer of goods and services in the country. In order to support the business environment, when concluding contracts, the state could firstly priorities local small and medium-sized businesses.

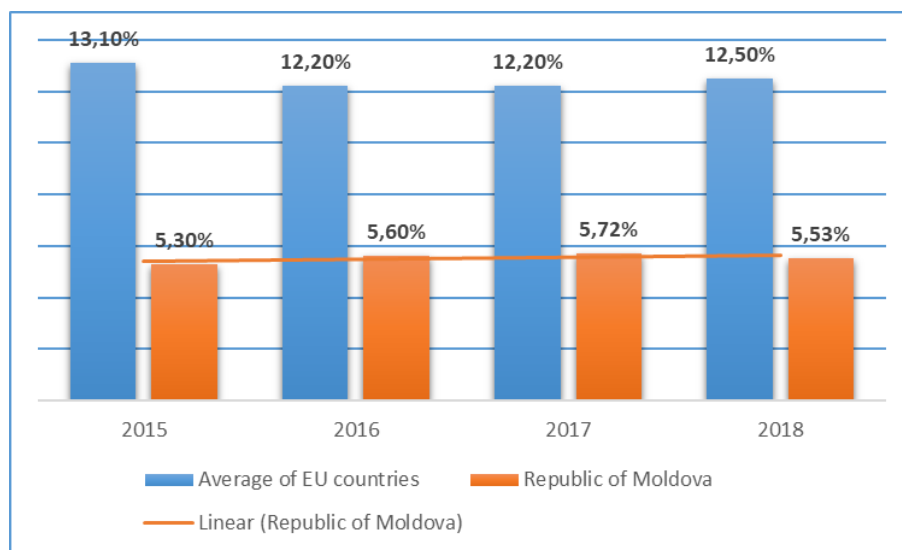


Figure 2 - Estimation of public expenditure as % of GDP in the Republic of Moldova and the average in EU countries

Source: developed by the authors based on (***Agenția Achiziții Publice, 2021; ***Public Procurement Indicators, 2018)

The public procurement mechanism can undoubtedly be an effective instrument for the transition to sustainable development. According to the data taken from the official public procurement portal of the Republic of Moldova, in 2021, the total cost of completed

tenders was over 8445 million lei, which is equal to 3.49% of the total amount of state budget expenditures for 2021 (Biroul național de statistică). In general, it can be observed that in the average for the last five years were spent 186,181 million lei and about 4.9% of GDP (Agenția Achiziții Publice, 2021, p. 18), which reveals that the expenditures from the state budget are made for the purchase of products, services and other works. Consequently, these expenditures enable the government to use the power of the market to achieve economic, social, as well as environmental results. Plus value, the market is stimulated to produce and consume in a sustainable and innovative manner.

Therefore, for the Republic of Moldova, the task of creating and implementing a comprehensive program regarding the ecological activities for sustainable public procurement is relevant. The state must actively support the process from a political, organizational and financial point of view. By acting actively in this direction, we will be able to correspond to the global trend of ecological change in economic, social and environmental life by ensuring security and respect for the interests of future generations.

5. Conclusions

Public procurement policies emphasize and build a relevant framework and implement the public procurement concept in the context of the economic, social and environmental perspective when procuring projects, products and services. The Government has the responsibility to regulate and control the execution of public procurement in accordance with the normative framework and the provided principles. Also, are provided methods of integrating sustainability and innovation issues into public procurement. This will increase the understanding of public procurement policies and their relevance to sustainability and innovation.

In worldwide practice, sustainable public procurement as a mechanism of implementation the sustainable development policies is becoming increasingly widespread. In order to successfully implement the principles of sustainable public procurement in the Republic of Moldova, it is necessary first of all to improve the legislation in the field of public procurement, which will stimulate the activity of national producers, as well as to pay more attention to the environmental component of the country.

The volume growth of government public procurement for ecological goods would influence private consumers to purchase ecological products and goods, thus stimulating the production of organic products and the development of socially responsible businesses. SPP becomes an effective mechanism in the implementation of sustainable development policy and encourages the procurement of certified goods, the use of reusable packaging, the use of energy-efficient equipment, the limitation of gas emissions, according assistance to NGOs, small enterprises, ethnic minority enterprises, creating new jobs and many other are examples of sustainable public procurement.

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MORAL AND SOCIAL RESPONSIBILITY - ESSENTIAL ATTRIBUTES OF THE FINANCIAL AUDIT PROFESSION

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Abstract: Financial auditors carry out an activity of confirming and certifying the accounts of a company coupled with a duty to protect the public interest, i.e. all those who are interested in the content of the financial statements and the audit report. To do this, it is mandatory going through all the obligatory steps of carrying out an audit engagement. They will have to consider it not only their own interest, but also a priority for the public interest as a whole. Financial auditors also contribute to the morality of business life by ensuring that conduct complies with the law and by promoting credibility and transparency of financial information. Thus, the concept of social responsibility is about fulfilling the obligations and meeting the standards imposed by the profession. Financial auditors which are promoted on the basis of the trust given by society will feel the pressure of social responsibility, but also moral responsibility. To maintain trust, they must respect the profession's specific principles of integrity, honesty, impartiality, objectivity and, above all, independence in representing the interests of stakeholders. In this context, the social and moral responsibility of financial auditors also refers to the obligation not to act in any way that brings the profession into disrepute.

Keywords: financial auditor, moral responsibility, social responsibility, public interest, stakeholders, accurate view.

JEL classification: M42.

1. Introduction

The indispensable linkage created between the responsibilities assumed by the financial audit profession and the profession's commitment to protect the public interest leads to an analysis highlighting the importance of social and moral responsibility with respect to the public interest axiom, demonstrating that these are essential attributes of the financial audit profession.

Responsibility towards the public interest is inherent to the profession. In this context, the responsibility - social and moral - that financial auditors have, is at the forefront of meeting the public interest trust needs. Sometimes, however, financial auditors are likely to serve it first and foremost.

Deontology is the adoption of a set of rules, and the origin of the word is "deon" from the Greek language meaning responsibility and "logos" meaning discourse. Thus, deontology would mean the discourse of responsibilities, principles and rules adopted by a specific professional group (Carreira et al., 2008).

The increased attention to the public interest represents the desire for financial auditors to harmonise with the social and moral responsibilities that are incumbent upon them. Commitment to the social and moral good creates a positive image and provides a reference point for the financial audit profession especially when they face ethical conflicts.

2. Research methodology

The present article is concerned with identifying how support for the financial audit profession's commitment to protecting the public interest is directly influenced by the social and moral responsibilities it assumes. The research topic is the impact of auditors' commitment to prioritise the public interest in the conduct of their audit and more specifically the impact of this commitment on building trust in the profession. In this respect, we have addressed the notion of public interest as applied in auditing. The object of promoting the public interest is to strengthen the position of the profession. I have built the argument on the demarcation between the private (economic) interest and the public interest, emphasising the need to prioritise the public interest. Through an argumentative analysis we have highlighted how moral and social responsibility contribute to the positive trust of the general public in the financial audit profession. The personal contribution is represented by my own view on the causal link that can be formed between moral and social responsibility and the financial audit profession in order to strengthen trust in the profession through commitment. In this context, I have determined the relationship that best highlights that social and moral responsibility are essential attributes of the financial audit profession.

3. Importance and objectives of the research

The profession of auditors is based on serving the public interest, and a precise knowledge of the notion of public interest is a prerequisite for its advancement. The profession's commitment to supporting the public interest is factual, a condition of its presence. Self-interest must not be subordinate to the public interest, and the reconciliation of the two is conditional on the consistent application of ethical and professional standards in accordance with public expectations. Thus, the International Code of Ethics for Accounting Professionals, 2018 Edition of the International Ethics Standards Board for Accountants (IESBA), published by the International Federation of Accountants (IFAC) in July 2018 in English, translated into Romanian by the Romanian Accounting Experts and Certified Accountants Association (CECCAR) in December 2019, with the support and under the supervision of the Authority for Public Oversight of Statutory Audit Activity (ASPAAS), and reproduced with the permission of IFAC, protects both public and private interests, and the ethical values promoted by the Code of Ethics guide auditors in case of conflict of interest.

Arguing how upholding the profession's commitment to protect the public interest is interlinked with respecting the social and moral responsibilities assumed by the profession, determines the importance of the research work. In the research, we aimed to highlight that public perception has a direct bearing on the upholding of the professional commitment it places on the audit profession, as auditors represent the interests of all beneficiaries of the audit report, given that they fulfil the role of public interest trustees. Thus, trust is generated on the basis of the commitment made through professional accountability. If it is high, it supports the financial audit profession.

The objective of this article is to provide an analysis of the potential relationships between the social and moral responsibilities of the financial auditor (as assessed by reference to the rigours of the Code of Ethics) and trust in the profession (as assessed by the quality of financial audit engagements).

4. Literature review

Deontology was adopted by Kant in its original sense and as a result he states that action is only moral if it is "performed with responsibility" (Preuss, 1998).

Within Kantian deontology, private interest is distinct from morality. This belief holds that the moral value of action is only confirmed if it is performed with responsibility (Preuss, 1998). Thus, Kant's merit was to highlight the rationality that is needed for intelligibility and for the reasoning that precedes an ethical opinion.

Parker (1994) believes that professional ethics encourages social responsibility of members, but at the same time justifies self-interest. By considering that ethical values are not owned by the auditor, the auditor runs the risk of accepting ethical compromises that undeniably damage the reputation of the profession. In this sense, ethics education is important because it allows for the improvement of individual ethical standards.

On the effects of moral conduct (Jones, 1991) found that people hold themselves less accountable than they would hold others in the same circumstances, attributing their conduct to situational forces.

The importance of auditors' ethical conduct is rooted in the obligation of responsibility - social and moral - that auditors have primarily to the public interest that they are likely to serve most. Chiang (2016) notes that "auditors must seriously consider obligations that may restrain conduct inclined to maximize personal benefit" so as not to interfere with serving the public interest.

5. Importance of the responsibility assumed by financial auditors

Financial auditors do not have a clear responsibility to detect fraud, they must practice professional scepticism and have the necessary care to uncover misrepresentations of financial information presented by management. Investigating evidence with scepticism does not necessarily lead to the identification of irregularities, because the audit is not an investigation and the auditor does not act as a detective. The auditor's responsibility is to obtain reasonable assurance about whether the financial statements are free from material misstatement due to fraud, as stated in ISA 240 (clarified). Thus, financial auditors have an additional responsibility to detect fraud and error associated with "operational independence" (Chiang, 2016), as management and those delegated with governance bear primary responsibility. The primary objective of the audit is to provide an objective, professional and independent opinion on the accuracy of the financial statements, ensuring that the risk of fraud will not materially influence the audit opinion expressed (Martin, 2007). In this context, we believe that through the role they perform auditors hold a privileged position of being the bearers of public confidence and thus have a responsibility to provide an objective and credible audit to all parties interested in the audit opinion. The way in which the auditing profession responded to public dissatisfaction in the 1980s in the United States and to the expectation gap between public expectations that once a company received an unqualified audit opinion the risk of bankruptcy and short-term tax fraud would be eliminated by issuing new auditing standards is considered inadequate. The level of user expectation of desired assurance on balance sheet items is expected to be particularly high.

Indeed, auditors are required to express reasonable assurance on the risk of material misstatement due to fraud or error (Kandemir, 2013), with ISA 200 specifying that reasonable assurance is a high but not absolute level of assurance. On the other hand, with regard to the measures adopted to reconcile the expectation gap, Lee et al. (2008) have assessed that these measures have only a cosmetic role, without providing real solutions to reduce the expectation gap. The general view is that the auditor symbolises a warning system designed to expose less than honest practices (Kandemir, 2013), and the fact that

various companies have started bankruptcy proceedings shortly after receiving an unqualified audit opinion has contributed to widening the gap. However, after all, it is not within the auditor's remit to express a firm opinion on going concern; he does not make forecasts, but only certifies compliance with the audited company's financial reality. In fact, the origin of the expectation gap lies in the concern about the proper discharge of the auditors' social responsibility so that the public interest is given priority in the attestation function.

Taking a Kantian and utilitarian approach, serving the public interest implies the primacy of compliance with professional standards and the Code of Ethics over personal interests and obligations to third parties. According to the Code of Ethics, which contains this philosophy, serving the public interest is a primary focus of the profession. As described in a previous section, the Code of Ethics details the threats to compliance with fundamental auditing principles, principles which ensure that the public interest is protected and therefore that the social and moral responsibility of auditors is fulfilled. The argument is that auditors' moral commitment to society will prevent them from unethical actions. Auditors' responsibility is social and moral at the same time (Blome and Paulraj, 2013). It is social because auditors are promoted on the basis of trust, and therefore fiduciary, by society to represent its interests. It is also moral because it is only by respecting the principles of integrity, honesty, impartiality, objectivity and independence that auditors maintain the public trust, which is a *sine qua non* for the existence of the profession. But the responsibility of auditors also refers to the obligation not to act in any way that brings the profession into disrepute.

An audit involves professional judgement and responsibility to all its users (Citron and Taffler, 2001). Clearly, auditors have a significant social responsibility and at the same time a moral responsibility to disclose the truth of financial statements (Blome and Paulraj, 2013). Frankel (1989) is of the opinion that society gives power and privileges to the profession so that its members contribute to the good of society in accordance with the values promoted. It follows that the auditor's real client is the public and the responsibility to the public takes precedence over any commercial or financial gains.

Owen (2005) argues for the need for auditors to assume a social responsibility through the attestation function that is deeply rooted in the optimal functioning of the capital market with an impact on society as a whole. Auditors must not only take responsibility for their actions and decisions, but also make responsible decisions. At the same time, professional bodies such as the International Federation of Accountants - IFAC and the American Institute of Certified Public Accountants - AICPA (2014) have emphasised the need for auditors to protect the interests of the public.

Singhapakdi et al. (1996) confirmed the link between ethical principles and values and attitude towards social responsibility. We can speak of a positive association between recognized norms of professional ethics and ethical conduct. This is because professional ethical standards are assimilated to an individual ethical philosophy of auditors, influencing a socially responsible conduct. Taking responsibility in an ethical manner leads to increased trust in the profession (Caldwell et al., 2008; Garcia-Marza, 2005), in a context of the need to restore public trust (Gates et al., 2006).

Auditors' responsibilities to society include the duty to contribute to the good of society by avoiding situations that cause collateral damage through unethical conduct and to achieve the highest quality by making effective assessments of financial information. Specifically, auditors provide reasonable assurance that financial statements are free from material misstatement due to error or fraud (Fogarty and Rigsby, 2010). As Ricchiute (2006) notes in his assessment, auditors consider a "fraud triangle" to determine whether management or employees have the motivation and opportunity to commit fraud and

whether certain constraints are imposed as a result of committing fraud. Even if users would like to see an assumed responsibility for fraud (Albrecht et al., 2009), the principle of reasonableness about detecting significant misrepresentations remains the foundation for establishing auditor responsibility (Messier et al., 2008).

6. Social responsibility of financial auditors

The profession of financial auditors is distinguished by the fact that auditors assume social responsibility towards the public interest (Citron and Taffler, 2001). The notion of "public" refers to all parties with an interest in the audited financial statements, more specifically it includes and refers to shareholders, employees, suppliers, creditors, banks, investors, the state and its bodies and other categories of public. By certifying an entity's financial statements, auditors are addressing a wider range of users than just the direct beneficiary with whom the audit contract has been concluded, and auditors must therefore consider and protect the interests of all these users.

Auditors are among those who have a supervisory role in the market by ensuring the strict implementation and control of financial and accounting legislation. It is therefore desirable to improve and develop the role of auditors in the market in order to ensure their contribution to increasing financial stability. The audit sector plays a fundamental role in the healthy functioning of capital markets, as investor confidence is based on the financial statements provided by listed companies.

However, as auditors do not act as guarantors or insurers, they are formally liable to the client if they fail to fulfil their specific professional obligations. However, auditors have extended responsibilities, not only to the client who has engaged their services, but also to all the beneficiaries of the audit opinion through their extended public oversight role for the benefit of society (Citron and Taffler, 2001). Formally, auditors are only liable to third parties in cases of obvious negligence that could be construed as fraud. However, as noted above, economic practice imposes a broader liability on auditors than that described by legal rules. Generally Accepted Auditing Standards (GAAS) as well as Statements on Auditing Standards (SAS) are international standards that govern the audit process and influence the public perception of audit quality, in the sense that these standards provide benchmarks and assurance that compliance has resulted in an effective audit process. Compliance with International Standards on Auditing is all the more important from the point of view of the beneficiaries of the audited financial statements as they do not have access to the actual audit procedure or the way in which the financial statements subject to an audit procedure are given credibility.

Accordingly, auditors need to meet the needs and expectations of those who rely on their work, as this profession is supposed to work in the public interest, that of investors and capital markets (Citron and Taffler, 2001). Audit firms are likely to provide serious assurance that the assertions made by management in annual reports are reliable and that the fair value requirements of the audited financial statements are met. Although it is management that provides financial information about the audited entity by exercising professional scepticism, the role of auditors is to act in this way from the point of view of the recipients of the audit opinion (Mintz, 2018; Kusumawati and Syamsuddin, 2018).

Next, we determined the relationship that best highlights that in social and moral responsibility are essential attributes of the financial audit profession:

$$P = (R_s + R_m) + a$$

Where:

P = Profession

Rs = Social responsibility
Rm = Moral responsibility
a = Unknown variable

The above relationship determines moral and social responsibility as attributes of the financial auditing profession, where "a" is the unknown variable that is an essential element in determining quality and that we have identified as representing ethics in auditing. Thus, by considering social and moral responsibility as essential attributes that directly contribute to sustaining the profession's commitment, it follows:

$$P = A * (Rs + Rm)$$

Where:
A = Engagement

If we consider that the social and moral responsibilities assumed by the profession will be practised to the highest degree, then they will ensure that the profession's commitment to protect the public interest is sustained and will unquestionably become essential attributes of the financial audit profession.

7. The impact of fulfilling social responsibility on audit legitimacy

Legitimacy is understood as the perception that a particular action fits within a system of norms and values defined by society. According to Scott's (1995) study, legitimacy refers to the authorization and justification given to auditors by society. Legitimacy thus encapsulates social norms, values and perceptions from society of what is right or wrong, conforming or not conforming to society's expectations.

Thus, society assigns legitimacy to certain institutions in order to strengthen their capacity to act, and audit can be associated with such an institution (Herrbach, 2005). This position is "linked to the perception of auditors as professionals, which justifies the privileges and trust that are accorded to them" (Herrbach, 2005), and professionalism is confirmed by the quality of audits.

Fogarty and Rigsby (2010) recall what confers legitimacy and refer to the professionalism of the profession dictating the rules to be followed. Structures such as IFAC support professional competence and encourage ethical professional conduct. Thus, codifying ethical norms into rules such as developing a code of ethics applicable to the profession is a fundamental part of the legitimisation process (Preston et al., 1995). In this regard, Preston et al. (1995) note that "on the face of it, much of legitimacy is simply having rules".

Society confers legitimacy on the profession of auditors, and auditors in turn confer legitimacy through the attest work they perform. According to Power's (2003) approach, auditing seeks both to gain legitimacy and to confer legitimacy. In this context, audit is equivalent to an institutionalised mechanism that enables financial decisions to be taken at the societal level, a position also confirmed by the reputation and trust that members of the profession enjoy. The perceived quality of an audit, which is verified by the performance of the auditors, is in fact the basis of trust and therefore of their legitimacy.

Trust theory was developed in the 1930s by Professor Limperg of the University of Amsterdam, and according to it auditors will work to meet the expectations of the public, the latter being the focus of the auditor's concerns. Maintaining user confidence in the audit function is the objective of the profession because, as stated earlier, strong confidence in

the usefulness of auditing gives it legitimacy. In fact, the ISA framework states that the objective of an audit is to provide increased confidence to all users of the audit report.

Further, we can accept that the need for legitimacy of auditors lies in the ambiguity of the concept of audit quality. Audit quality is traditionally defined as the likelihood that an auditor will discover and report on possible dysfunctions in the accounting system (DeAngelo, 1981). A certain standard of quality is set at the level of the profession from which one cannot deviate and which takes the form of compliance with auditing standards including ethical ones. Maintaining quality in auditing is equivalent to assuring all stakeholders that auditors will provide a qualified audit opinion in accordance with the regulations, without any bias or self-interest or influence on audit judgment. This strengthens confidence in the ability of auditors to fulfil their legitimate role of objectively attesting to the compliance of financial reporting.

Confidence underpinned by the assumption of social responsibility produces legitimacy for auditors, and this ownership causes auditors, through the opinion they issue, to produce legitimacy in turn (Power, 2003). In order to confirm the legitimacy of auditors, confidence in the usefulness of auditing for society is a *sine qua non* for justifying their presence in the market. Therefore, a high level of trust will justify the legitimacy of auditors, while a low level of trust will call into question the need for auditors' presence in the market.

As public confidence is the barometer for determining the legitimacy of auditors, it is vital for the profession to maintain and strengthen trust. A positive reputation and image (understood as the totality of public attitudes towards auditors) generates credibility which in turn gives confidence in the effectiveness and usefulness of auditors in meeting society's expectations. In particular, trust as a barometer of audit legitimacy has two facets: on the one hand the trust that members of the profession place in the transparency and reliability of audit procedures, and on the other hand the trust that direct beneficiaries and the general public place in the irreproachable business ethics. The evolution of society's expectations is also reflected in the level of trust they place in the profession in terms of usefulness.

Big4 firms enjoy legitimacy in the market based on the recognition they are given, and then we are looking at cognitive legitimacy, on the one hand, and on a good reputation for effective auditing, and then we are looking at moral legitimacy. The rationale is due to the fact that Big4 audit firms are likely to have a strong ethical climate through the training they implement, hence the presumption that they allow for qualitatively superior judgements (Gary et al., 2007). In addition, there is a striving for and consolidation of legitimacy within the profession.

In the context where an audit no longer corresponds in terms of utility to the beneficiaries as a whole, we can speak of a loss of social legitimacy of auditors. Earley and Kelly (2004) speak of a crisis of trust amidst a loss of credibility. For example, when dishonest practices by auditors were revealed, the reaction of society was one of perplexity, as such behaviour was not accepted. For auditors, the need to fulfil their social responsibility has an authoritative value, and if "ethical conduct is flawed, the credibility of the entire profession is at risk" (Higgs-Kleyn and Kapelanian, 1999).

We have already stated that by adopting the code of ethics, the profession has sought to strengthen its legitimacy through an approach in line with society's expectations. Thus, by adopting audit opinions that take account of ethical rules and principles, auditors seek to show that their work serves the public interest without tolerating any misconduct that might cause it harm. Especially since auditors "owe loyalty to the public interest first" (Eynon et al., 1997). Davenport and Dellaportas (2009) recall the functionalist view of the profession in which the public good it serves through a commitment underpinned by social obligations appears as its end in itself. Serving the public interest designates auditors as a

professional group for whom ethics is the axis around which the audit activity revolves. Auditing is only moral and legitimate if it is based on consideration of the public interest.

The legitimacy conferred by the application of ethical principles in the course of an audit is part of the logic of a culture centred on morality, and the effect of legitimacy is an advocacy of the usefulness of the profession to operate in the public interest. Thus, the legitimacy of auditors justifies the role, necessity and usefulness of the profession to society.

8. Conclusions

Financial auditors, being assigned a moral and social responsibility, must avoid acting in a way that can be considered unethical. Any breach of their responsibilities would contribute to a lack of confidence in their professional commitment. A lack of trust amidst negative public perception calls into question the very profession of financial auditing. Therefore, meeting social and moral responsibilities is an assurance to society that the professional commitment is fulfilled for the common good.

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IS MONETARY POLICY - STOCK PRICE BEHAVIOUR EFFECT SECTOR-SENSITIVE? EVIDENCE FROM NIGERIA

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Abstract: *Monetary policy variables are theoretically expected to exert significant positive or negative effect on performance of the capital market. Most empirical studies on the relationship between monetary policy and stock prices in Nigeria have not taken cognizance of the fact that the relationship can be sector-sensitive. This study was conducted to examine effect of monetary policy on stock prices of listed firms in Nigeria from a two-sector comparative perspective: banks and manufacturing. Specifically, the study examined effects of seven selected monetary variables on stock prices of 15 banks and 15 manufacturing firms listed on the Nigerian Stock Exchange between Q1 of 2006 and Q4 of 2019. We employed panel dynamic ordinary least squares and panel causality models to analyze average quarterly stock price (STP) and monetary policy variables. We found that for banks, broad money supply (M2), monetary policy rate (MPR), exchange rate (EXCH) and interest on savings (SDR) significantly affect stock price negatively ($p = 0.0147$; $p = 0.0000$; $p = 0.0110$ and $p = 0.0003$ for the variables respectively). We also found that Treasury bill rate (TBR) significantly affects stock price positively ($p = 0.0000$) while cash reserve ratio (CRR) and lending rate (LDR) have insignificant effect on stock prices of banks. For manufacturing firms, MPR negatively and significantly affected stock prices ($p = 0.0110$) but M2, Treasury bill rate, EXCH, LDR, CRR and SDR have insignificant effect on stock prices. All monetary policy variables except broad money supply have causal relationship with stock prices of banks but only exchange rate has causal relationship with with STP for manufacturing firms. We concluded that monetary policy significantly affects stock prices of Nigerian banks and manufacturing firms.. However, the effect is more pronounced in the banking industry than in manufacturing firms. It was also concluded that the effect of monetary policy on stock prices of banks is markedly different from that of manufacturing firms. The study recommended a disaggregated, sector sensitive monetary policy, a monetary policy re-appraisal and a reduction in monetary policy lags.*

Keywords: Monetary Policy, Banks, Manufacturing Firms, PDOLS, Causality.

JEL Classification: E52, G21.

1. Introduction

In recent years, stocks of the banking firms have done better than manufacturing firms in terms of their prices on the Nigerian Stock Exchange (NSE, 2019). Knowing that these two sectors (as others) are exposed to the same MPs by the CBN, the question arises as to why is the stock of the banking firms doing better than that of the manufacturing firms? For example, NSE (2020) reported that the "financial services sector outperformed other sectors with 68.17% contribution to total volume traded on the Nigerian bourse in 2020 as against 76.07% contribution recorded in 2019. While the sector traded 64.48bn shares in 2020, combined sectors such construction/real estate and conglomerates sectors were second and third with 9.90bn and 5.03bn stocks traded respectively. Out of ten (10) top dealing stocks, banks accounted for nine (9).

Several efforts have been made by the Central Bank of Nigeria through monetary policy (henceforth MP) to ensure that the stock market grows faster and equitably. However, as revealed in empirical evidence from literature, these efforts have not yielded the desired results. Observers posited that policy summersaults, domestic capacity underutilization, international pressures occasioned by global events (e.g oil price changes, terrorism/banditry, political upheavals etc.) and insider dealings in the stock market among others are factors that have consistently impaired these efforts. In Nigeria, Osisanwo and Atanda (2012); Ogbulu and Uruakpa (2011) and Nwakoby and Alajekwu (2016) observed that while tight and relaxed MP have high tendencies of impacting negatively and positively respectively, Abanewe and Undugbu (2012) found no significant relationship exist between MP and price of stock. The inconsistencies in existing literature on the link

between MP and stock prices in Nigeria provides enough motivation and justification for this study, but study opines that more than using inconsistencies in findings as the premise for the research, a better and stronger gap should be identified. Most reviewed empirical literature that addressed the link between stock price and MP variables in Nigeria have viewed the non-financial and the financial sectors of the economy as a whole in their research. The differences in the structural, operational and institutional arrangements between these two sectors should not be overlooked because it may render the results from the latter not to be directly applicable to the former. So, understanding the interconnection between MP and stock prices in a different sector context is useful to both monetary authorities and investors alike. The banking industry is the primary executor of the MP churned out periodically by Central Banks. It is hypothetically (albeit reasonably) assumed that, based on their vantage position, banks can anticipate MP changes and proactively act in anticipation of such changes to their advantage. Hence it is necessary to examine the effect of MP on stock prices of banks and manufacturing firms and whether there exists any significant difference between the effects of MP on the stock prices of the banking and manufacturing firms in Nigeria. Finally, this study provides answer to the question of whether causality exists between MP variables and stock prices of quoted firms in Nigeria on a two-sector basis.

The present study used convenience sampling by taking all the 15 “deposit money banks” (DMBs) and selecting 15 manufacturing firms that are listed on NSE as at December, 2019. The two sectors selected are germane to the growth of any economy, hence their choice for this study. Deposit money banks, on their part, are the intermediaries through monetary policy announcements by the CBN are executed while most monetary policy variables are targeted at growing the real economic sector (manufacturing). The manufacturing firms were selected from food and beverages, health, building and construction, household goods, oil and gas, breweries, conglomerates and agro-allied processing sections out of 100 manufacturing firms (total number of firms listed was 169 out of which computer technology and financial institutions account for 69) listed on NSE. These firms are selected from industries with relatively active stock prices.

2. Literature Review

2.1. Concepts

2.1.1. Trends in MP and Stock Prices in Nigeria

Monetary policies embarked upon by the CBN are set to achieve two-pronged objectives: external and internal economic stability. One indicator of internal economic wellness is a strong stock market consistently improving its capitalization and the ASI. CBN (2019) reports that for years, MP instruments have focused two areas, namely monetary controls during the pre-SAP era and substantive reliance on market forces during the post-SAP era. Figure 2.1 shows the trends in the All-Share Index (ASI) of NSE and selected MP rates (Treasury Bill, broad money supply, CBN MP, exchange, lending and savings deposit) between 1985 and 2019.

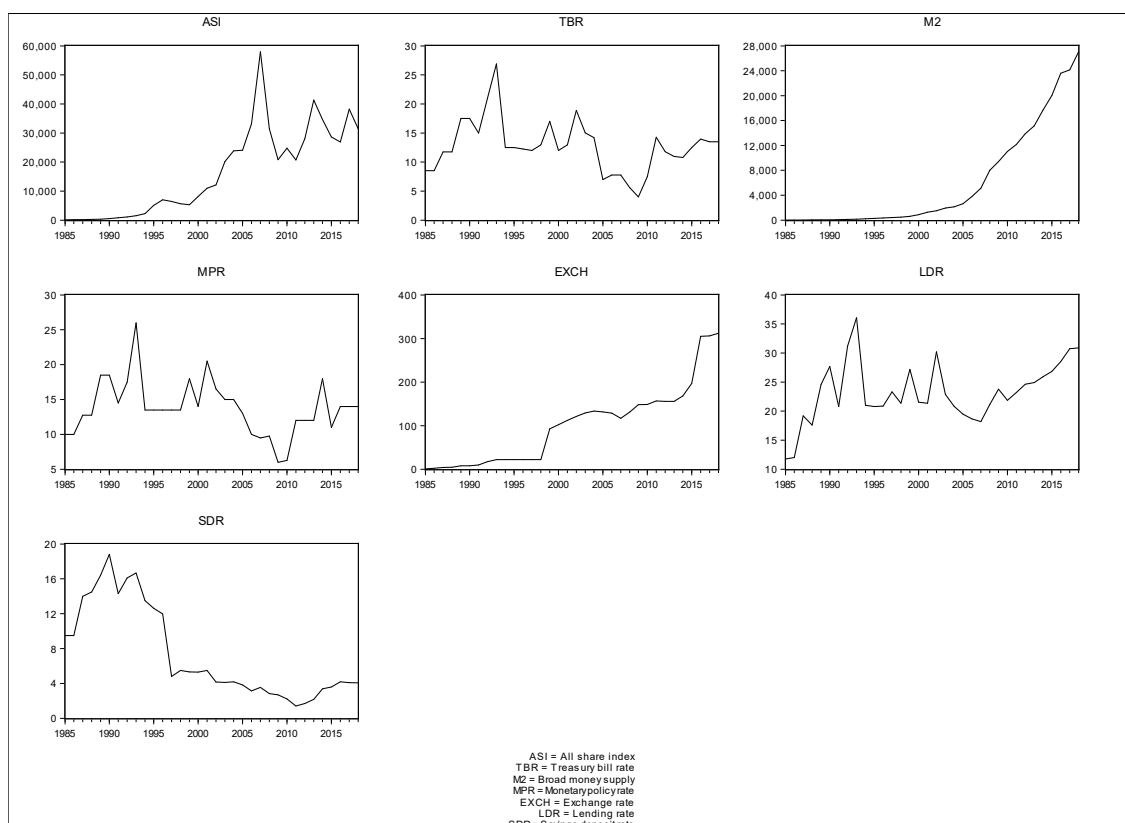


Figure 2.1: Trends in MP and Stock Price in Nigeria (1985-2019)

Source: Author's Design (2022)

On Figure 2.1, (ASI) which measures annual stock price index steadily rose from 1985 and peaked in 2006 (most probably due to banking system recapitalization exercise of 2004/2005) but fell drastically thereafter until around 2013. The consistent fall in ASI during this time can be attributable to the global economic meltdown that adversely affected the NSE. After its sharp rise in 2013, the ASI dropped again till 2017 when it mildly picked up. The Treasury Bill rate (TBR) maintained a steady rise from 1985 to 1990, dropped stylishly in 1991 and increased sharply in 1993. However, the rate pummeled and took a zigzag nature till 2003 when it rose mildly. Thereafter it fell continuously till 2010 when it picked up again but fell and remained stable afterward. Broad money supply (M2) maintained a relatively stable but flat behaviour from 1985 to around 1986/87 after which it consistently rose till 2019.

On its part, the MP rate (MPR) rose during 1985 and 1986 after which it fell till 1991. It then increased sharply in 1993 but became constant from 1994 to 1998. In 1999, the rate increased mildly but fell in 2000. It still fell from 2002 to 2010, picked thereafter in 2014 from when it had remained steady. Exchange rate (EXCH) was relatively stable from 1985 to 1990 but increased mildly from then till 1998. Ever since then, the rate had continued to increase sharply. There was consistency in rise in lending rate (LDR) from 1985 to 1992. The rate however peaked in 1993, remained constant between 1994 and 1996 and increased sharply from 1999 to 2003. It however fell amid 2004 to 2007 after which it had consistently been on the rise. Finally, the savings deposit rate (SDR) rose from 1985 till 1989 before it mildly fell (1990) and rose (1994) respectively. Again, the rate fell after then till 2011 when mild increases set in.

2.1.2 MP Transmission Mechanisms and Stock Prices

For effective MP to exist, regulators must rightly assess the timing and anticipated effects of such policies on the economy. One way is to have requisite understanding of monetary transmission mechanisms and channels through which MP affects economic activities. For instance, effect of changing interest on loans prescribed by the apex bank on other money market rates and financial market conditions will depend on the expectations attached to such changes, how the changes affect expectations regarding future policy and price stability (Claus & Grimes, 2003). Wang, (2020) asserted that in times of unconventional MPs, and its transmission to the stock market, highly liquid firms may enjoy lower interest on borrowing thereby able to repurchase more stocks while highly levered firms may become restraining in stock repurchases. In essence, unconventional MP announcements can spur or reduce investment in stock and prices.

Early study by Tobin (1969; 1978; cited in Erhmann and Fratzscher, 2004)) supported direct transmission of changes in monetary policies to stock prices. According to Tobin (1969), financial policies changes play important roles influencing market value of a company's assets in vis-à-vis the assets' replacement cost. This effect (in ratio), the author termed the Tobin's q . Tobin (1978) argued that a restrictive MP, which is likely a result of increased inflation rate will most probably reduce the PV of expected cash inflow thereby depressing stock markets. However, as noted by Erhmann and Fratzscher (2004), Tobin's position is debatable since MP changes may be endogenous because the financial authority (the Central Bank) may formulate such policies as a form of reaction to events in stock markets.

While Yoshino *et al* (2014) identified three main channels through which MP influence stock prices: interest rates, inflation and exchange rate, However, Nwaogwugwu (2018) listed five possible channels through which MP can influence stock prices: foreign exchange rate, savings, wealth, credit and monetary channels. Pai and Garg (2019) stated that four MP transmission channels (interest, equities, lending and balance sheets) work via investment expenditure. One (exchange rate) works via net exports while two (interest and wealth) influence it through consumption expenditures. Yoshino *et al* posited that broad money affects stock price in four different ways. First, increase in it can induce inflation which can impair stock prices. Secondly, when a change in volume of money in the system, economic activities may increase thereby having a positive effect on stock. Thirdly, according to portfolio theory, when money supply increases, investors may shift their preference to equity and other interest-bearing financial assets. Finally, money supply may cause price increase when changes in it signals potential inflation and investors want to take advantage of the present stock price to acquire more thereby pushing up stock prices.

From Qing and Kusairi (2019) point of view, exchange rate – stock price connection depends largely on how rising rate of interest results in capital inflows plus increase in exchange rate itself. The authors believe exchange rate increase negatively affects equity prices for exporting firms since they will earn more in local currency through exports. On how interest rate channel can influence stock prices, Keynes' (1936) position is particularly relevant. The author evaluates impact of low interest rate on aggregate demand, positing that since easy MP leads to fall in interest fall, investment increases and aggregate demand also increases. Increased aggregate demand will also reflect in a higher demand for stock which will invariably increase stock prices. Avci and Yucel (2017) believed that an evaluation of effectiveness of MP should be premised on degree at which the prevailing interest rate affects other money market rates and financial assets prices.

Again, Yoshino *et al* (2014) argued that a big puzzle ensues on the link of exchange rate and stock prices. The authors believe overall effect of the former on the latter remains undetermined. These authors examine equity price versus exchange rate from two directions. One, decrease in exchange rate of a local currency against a foreign one will lead to increase in exports which will benefit local firms who produce for exports and stock prices may likely increase. Conversely, depreciation in local currency will heighten cost of importing raw materials by local firms and this may impair their stock price.

Ogbulu and Uruakpa (2011) stated that basic a theoretical underpinning of monetary transmission mechanism to asset price holds that an increase in, for instance, the MP rate (MPR) in Nigeria, by the CBN raises the lending rate of banks which, all things being equal, would force business firms to look in direction of capital market to raise funds for their operations and expand their real physical assets. This increases aggregate supply of securities in capital market, thereby leading to reduction in equity price. According to these authors, similarly, increase in money volume (expansionary MP) lowers savings and lending rates, thereby making bank credit more attractive than raising funds from financial market. This reduces aggregate supply of securities in the market leading to surplus demand for securities and hence an increase in prices. Thus, an ease MP which lowers interest rates and spurs stock price.

Alessi and Kerstenfisher (2016) posited that popular macroeconomic theories predict a rapid response of asset prices to MP shocks, which conventional empirical models are unable to reproduce. However, these authors argue that such response results from paucity of information. Accordingly, forward-looking economic agents observe vastly more information than the handful of variables included in standard VAR models hence making results from such models prone to biasness. To prove this, they estimate a structural factor model (SFM) for a large euro area dataset and find quicker and larger effects of tight MP shocks on stock prices.

Grenville (1996), (cited in Gruen, Romalis and Chnadra, 1997) identified six main channels through which interest rates alteration can affect economic activity. These channels are inter-temporal substitution; induced exchange rate changes; interest rate power on security prices; effect of cash flow on the deficit unit (borrowers); effect on supply of credit and effect of MP on future expectations. In essence, interest is a fundamental factor influencing stock prices. Eichenbaum and Evans (1995) stated that, in respect financial markets, economic theory teaches that stock prices rapid response to MP changes should be expected once the changes become apparent, but this hardly occur. Instead, the authors notice that changes in MP on stock prices and entire economy is usually gradual and most times prolonged. Patelis (1997) argued that stocks are claims on projected economic output, hence if MP variables have tangible economic impacts, then stock markets will be impacted by MP actions.

According to Abanewe and Undugbu (2012), the MP/stock market relationship can be tied to the transmission mechanisms of MP, in line with the position of Goodhart and Hofmann (2000) who see stock market itself as a transmission mechanism of MP actions that affect stock price that are connected to actual economy through influences on consumption investment spending. In Bordo, Ducker and Wheelock's (2008) view, policy makers and operators in an economy often attribute changes in market performance to attendant changes in inflation and MP. These authors observe that MP – stock prices link is more evident during rapid increase or declining stock prices. This means stock market also serves as a form of transmission mechanism for MP. Next, we shall review the previous empirical evidence linking MP and stock prices.

2.2 Theoretical Literature

2.2.1 Efficient Market Hypothesis (EMH)

Clarke, Jandik and Mandelker (2001) restated the EMH proposed by Fama (1965). In the words of the authors, “EMH is a proposition that current stock prices fully reflect available information about the value of the firm, but there is no way to earn excess profits, (more than the market overall), by using this information”. That is, in efficient markets, averagely, competition cause full effects of fresh news on inherent values to reflect immediately in definite prices. The foregoing are the assumptions behind the whole EMH thoughts. The hypothesis attempts to clarify why and how stock prices vary in security markets. Clarke *et al* stated that the EMH submits that profiting by predicting movements in equity prices, it may be, indeed, very hard and improbable because there are different kinds of information that can influence security values. So, Clarke *et al* (2001) distinguished three forms of efficiency in security markets, depending on available information:

➤ The “weak form” EMH

The “weak-form” EMH states that the current stock price completely integrates information in historical prices only so that no investor can spot mis-priced securities or outsmart market by assessing historical stock prices. The weak-form EMH assumes security prices are public which its information is easily available. Therefore, it is not possible to gain unduly from using information available to all investors. Clarke *et al* (2001) further stated that the empirical evidence for this form of market efficiency, and therefore against the value of technical analysis, is very strong.

➤ The “semi-strong” EMH

The “semi-strong” form EMH argues that current price completely incorporates all obtainable information which also companies’ financial report information (earnings and dividend announcements, mergers (actual or planned), competitors’ financial positions and expectations in respect of macro-variables like unemployment, inflation, exchange) apart from historical stock prices. Actually, the hypothesis holds that public information does not compulsorily imply financial terms. The position of the semi-strong efficiency is equal to that of the weak form: that it may be difficult or impossible making profit from information that is available to all people. The only difference is that this position under the semi-strong efficiency is stronger than in the weak form efficiency.

➤ The “strong form” EMH

This hypothesis posits that current stock price fully captures all available information, be it public and inside (private). However, the distinguishing feature of strong form EMH is that here, no investor should systematically make profits even if trading on information is not available to everyone at the time. That is, even a company’s management (insiders) cannot use his privileged inside information by acquiring his company’s stocks a few hours after issue decision (not yet announced to public) to gain inequitably from the issue (Fama, 1965).

The EMH was criticized as Clarke *et al* (2001) stated that four major criticisms trail the position of the hypothesis on price reactions to information. First, the claim of EMH that investors cannot outsmart the market does not translate to investors not able to outperform it. Since constant availability of information can make prices fluctuate, investors can exploit price fluctuations caused by new available information to acquire or dispose more stocks. Critics of EMH believe that its claim that no investor could predictably and consistently outperform the market may not stand the test of time as, according to them, some investors can, by chance, outperform the market consistently even in efficient market. Second, the EMH posits that a no need for technical financial analysis position because it wastes time. However, the services of financial analysts are of great

effect since they are consistently part of market. Selection of optimal portfolio depends much on accurate and reliable predictions through financial analysis which a randomly selected portfolio most probably cannot achieve. Through high technical financial analysis, Lo, Mamaysky and Wang (2000) observed that such analyses, can, at times have elements of predictive power on stock price because it can help to identify mis-priced stocks through new information analysis. Third, the EMH posits that all new information is always absolutely captured in prices of stocks. But, as noted by Malkiel (2003), the daily, hourly or minute by minute dramatic changes in equity price can point to presence of efficient market since new information arrive all the time and they affect stock value and prices.

Finally, an assumption by EMH that every investor is well-informed, skilled with analytical prowess to always analyze information is incorrect. Clarke *et al* (2001) stated that not all investors must be well-informed about the workings of stock market. Efficient market is also possible when only a small, but core number of investors are well-informed and skilled. Despite these criticisms, early empirical studies such as Fama (1965) and Fama, Fisher, Jensen and Roll (1969) agreed with both the weak and semi-strong forms of EMH, while others (such as Jaffe (1974) and Rozeff and Zaman (1988)) disagreed with the strong form.

2.2.2 Capital Assets Pricing Model (CAPM)

French (2003) stated that the CAPM was developed by Markowitz (1952) as a model for evaluating assets returns in given combination of securities (portfolio) but was built upon by later theorists. Tobin (1958), Sharpe (1963), Lintner (1965) and Mossin (1966) made further simplifications and into the model. The CAPM states that expected stock return by investors is usually a function of risk-free rate and risk premium dictated by the market. This indicates that expected returns on asset is the risk-free rate plus market risk-premium. Sharpe's (1964) modification to the model recognizes two components of risks: systematic (uncontrollable, non-diversifiable) and unsystematic (controllable, diversifiable). The systematic risk also affects stock return and price, hence, an important factor to be considered in pricing of stocks. Sharpe (1964) develops concept of efficient frontier on which all investors will hold some portfolio, irrespective of their dispositions to risks. Hence, to have an efficient portfolio, an investor can hold a portfolio of risk-free plus risky assets situated at the point of intersection of capital market line (CML) and efficient frontier. A basic assumption here is that the CML entails all possible combination of risky and risk-free investments that all investors will consider for investment. According to Sharpe (1964), efficient portfolio is when, in capital market, investors cannot expect returns greater than market returns.

The CAPM has been subjected to empirical tests over time. For example, while Black, Jensen and Scholes (1972) and Fama and MacBeth (1973) established evidence that are in agreement with the CAPM, Lakonishok and Shapiro (1986); Roll (1977) and Fama and French (1992, 1993, 1996, 2004) found that results that are not consistent with the position of CAPM. Miller (1999) criticized the CAPM for its use of single risk element which is not sufficient to describe financial market cross-section expected returns. Dempsey (2013), in particular, advocated a total replacement of CAPM considering global financial crises in the last decade. The author posited that the model be substituted with a "*paradigm of markets as vulnerable to capricious behaviour*". In essence and as noted by Balling and Gnan (2013), CAPM should take cognizance of foreign exchange exposure risks and become International Capital Assets Pricing Model (ICAPM).

2.2.3 The Smart Money and Noise Traders Theory

Campbell and Kyle (1993), in their “smart money and noise trading theory” posit that exponentially de-trended stock prices and dividends are usually normally distributed and they possess constant variance thus utility-maximizing investors are natural risk averters. In the authors’ view, this implies that expected return from stock by these investors (called the “smart money” investors) will fall as stock prices rises and that investors will react sharply to dividend news (at equilibrium) because stock prices discount dividends at relatively low riskless rate. Again, the authors hold that some investors invest exogenously, regardless of whether their utility is maximized or not. This group of investors (called “noise traders”) also influences stock prices due to risk-averse behaviour of “smart money” investors though such influence is largely dependent on interest rate.

2.3 Empirical Literature

Zhang (2015) did a comparative analysis on China, Japan and the US Stock Markets by analyzing the relationships between macroeconomic variables (real-economy variables and monetary-policy (variables) and stock price volatility in each country. Estimated EGARCH model results reveal that despite China’s stock price volatility being far greater than in Japan and US, China was less impacted by global financial recession of 2007/2008 than Japan and USA. Conversely, Japan and US stock prices became rather volatile in the wake of the global economic crisis in 2007, which suggests that Japanese and U.S stock markets were hugely affected by the crisis. For China, stock price volatility was greater in early 1990s, shortly after stock market was established, than in 2007 when global financial meltdown set in. In addition, covariance among China, Japan and US stock prices became fairly greater after the global downturn in 2007, which suggests that linkage of these countries’ stock prices increased in this period. Moreover, according to the researcher, causality test reveals the following results: Japan’s industrial output affects stock price changes, while China and US’s consumer prices affect China and US’s stock price volatilities, respectively. In addition, US interest rate affects stock price volatility, while China and Japan’s MP variables (M2 and lending rate) do not affect their stock price volatilities, respectively.

Tang, Lou, Xiong, Zhao and Zhang (2013) examined impact of changes in MP on activities in money and stock markets of China. The authors use the Pearson correlation and other techniques to run daily data (stock price and money market rates) for period October 2006 to May 2012 and find a close relationship between changes in MP variable (MP rate) and stock and money market of China. Furthermore, these researchers find that when MP instruments shift forward (increases), the Shanghai Interbank Offering Rate (SHIBOR) fluctuates more than when it shifts backward (falls). On average, the study finds that changes in MP take about three days to have considerable impact stock price.

In a three-country study, Hsing (2013) examined the potential impacts of fiscal and monetary policies on stock market performance in Poland, Germany and the U.S.A. The researcher uses GARCH model to analyze data from Poland Stock Exchange during Q2, 1999. to 2012.Q and finds that Poland’s stock index is not affected by ratio of government deficits or debt to GDP but is impaired by money market rate. Stock price and M3/GDP ratio reveal quadratic linkage with critical value that suggests positive effect if M3/GDP ratio is below 46.03% and negative relationship if M3/GDP ratio is above 46.03%. Also, the author finds that Poland’s stock index positively correlates with industrial production like what obtains in Germany and U.S. but is impaired by nominal effective exchange and inflation rate in these latter countries.

In an inter-country study, Narayan and Narayan (2012) examined effect of exchange and short-term interest rates of United States on stock returns of China, India,

Philippines, Malaysia and Singapore using OLS and GARCH models to analyze data between 2000 to 2010. The authors find that, on the short-run, the US interest rate has no statistically significant effect on stock returns of India, China and Malaysia. Only result for Philippines was different with significant effect. Additionally, these researchers find that in China, exchange rate has negatively significant effect on stock returns. However, on long-run, the relationships of stock price and MP were weakened by financial crises in studied countries. In yet another cross-country study of European Union equity indexes versus MP measures, Stoica and Diaconasu (2012), using co-integration and Granger tests, find t significant long/short-run relationships between assets prices and interest rates. Specifically, they find co-movements between money market and stock, though the co-movements are lower during economic upheavals than when there is economic stability.

In an elaborate cross-developing countries comparative study by Al-Naif (2017) to examine link which interest rate has with stock market prices in five Arabian countries, the author uses correlation, Johansen cointegration, VAR, Granger causality and Variance Decomposition to find out how interest rate influence stock market indices. Stock indices include Arabian Monetary Fund Indices (AMFIs) for Jordan, Oman, Qatar, Egypt and Kuwait while interest rate is taken as commercial banks' lending rate for each country. The author finds that: interest rate significantly negatively impacts stock price in Egypt; negatively and insignificantly affects it in Qatar and Kuwait; but positively and significantly affects it in Jordan and Oman. In addition, tests of causality reveal no causal linkage between them in Oman, Qatar and Kuwait, a uni-directional causality that runs from stock price to interest rate exist in Egypt and a bi-directional causality between interest rate and stock price exist in Jordan. Finally, the author finds through Variance Decomposition that while interest rate plays a major role in explaining variation in Jordan and Kuwait stock prices, it only plays very little role in Egypt, Oman and Qatar.

In Zambia, Musawa and Mwaanga (2017) attempted to find how interest rate relates to stock index using cointegration analysis. The authors find that on both long- (through cointegration) and short-run (ECM), interest has significant negative influence on stock index. This agrees with findings by Shula (2017) who, using regression analysis, finds that negative association between interest rate and stock index in Zambia. Ndunda, Kingori and Ariemba (2016) examined connection among GDP, exchange rate, broader money supply (M3) and inflation and average market capitalization of Nairobi Stock Exchange. The researchers find a positive and high connection between them using correlation analysis. But with regression analysis, Ndunda *et al* (2016) find that interconnection of exchange rate, GDP and stock capitalization is statistically insignificant. Still in Kenya, Nyongesa and Muchoki (2016) examined effect of volatility in exchange rate on performance of Nairobi Stock Exchange between 1996 and 2011 using correlation and Engle and Granger co-integration analyses. Findings show that, in Kenya, very weak correlation exists between exchange rate volatility and stock price index and no long-run co-integration between them.

Nijam, Ismail and Musthafa (2015) while studying effect of macroeconomic variables (GDP, forex rate, inflation, BOP and interest rate) on the stock price of firms listed on Colombian Stock Exchange found the existence of strong causality between macroeconomic variables and stock prices. In order to ascertain the link between MP and stock price, Nguyen, Do and Nguyen (2016) examine impact of MP on stock prices of firms listed on Vietnam Stock Exchange using ARDL and GARCH models. Specifically, the researchers find that M2, interest rate and reserve ratio exert negative effect on listed firm's stock prices in Vietnam. In Bangladesh, Rifat (2015) studied impact of MP on stock prices of firms listed on Dhaka Stock Exchange from 2003 to 2013. The author uses Johansen Co-integration, VAR and VECM models to examine effects of exchange rate,

index of consumer prices, M2 and discount rate on market indices and finds no significant relationship between stock price and MP in Bangladesh. However, when Saidjada, Hossain and Rahman (2014) studied relationship between MP and stock returns in same Exchange using same Johansen co-integration, they find a negative relationship between price of stock and treasury rate. The difference in findings may be caused by a one-year gap or type of MP variable used. Yoshino, Taghizadeh-Hesary, Hassanzadeh, and Prasetyo (2014) examined the way Asian stock prices respond to MP shocks with the use of VECM basing their analysis on three transmitting channels where MP can affect stock prices: money, exchange and inflation rate. The researchers discover that, in Asia, stock prices increase continuously in response to expansionary or easing MP.

In Jordan, Al-Smadi and Omoush (2019) examined long- and short-run link between six macroeconomic indicators and stock index using ARDL. The authors find that on long run, five of the indicators have positive effect on stock index while one has negative effect on it. The result is same in short-run. Years before, Bekhet and Matar (2013) analyzed long-run relationship between stock price and M2, interest and exchange using ARDL for a data spanning 1978 to 2010. The researchers find that variations in stock prices respond to fluctuations in stated macroeconomic variables with a speed of about 49.3% on long-run. Javed and Akhtar (2012) used the GARCH model to investigate risk-return relationship between broad money, interest rate and term structure with stock prices of fifty (50) firms listed on Karachi Exchange in Pakistan for period July 1998 to December 2008. These researchers find that M2 positively affects prices of listed stock.

To find how Nigerian capital market performed vis-à-vis MP manipulations, Anaele and Umeora (2019) used ARDL to analyze a 22 year-dataset (1986 – 2017). Representing MP instruments by cash ratio (CRR), MPR, loan/deposit ratio (LDE) and liquidity ratio (LR) and ASI as proxy for capital market performance indicator, results show that MPR, CRR, and LDE adversely and significantly affected ASI but LDE has a strong correlation with ASI. Other related studies in Nigeria include Nwaogwugwu (2018), Bala and Hassan (2018), Adeyeye, Aluko and Migiro (2017), Onyeke (2016), and Nwakoby and Alajekwu (2016) among others.

3 Methodology

3.1 Data Sources

For convenience and equal representation purposes, 15 firms were selected from each of the sectors under consideration (banks and manufacturing firms) listed on the NSE as at December 2019 (a total of 15 banks were listed). Also, the choice size of 15 banks and 15 manufacturing firms is premised on the availability of data. The study covers 2006Q1 to 2019Q4. The span of years chosen is determined by data availability on one part and need to restrict the analysis of data obtained to the era of post-consolidation of the Nigeria banking sector, on the other. The dependent variable, stock price, is estimated as the quarterly average of monthly opening and closing stock prices for each firm under study. The variables representing MP are broad money supply (MS2), MP rate (MPR), lending rate (LDR), exchange rate (EXCH), cash reserve ratio (CRR), savings deposit ratio (SDR) and Treasury Bill rate (TBR). The deposit money banks selected include Access Bank, First Bank, Diamond Bank (now merged with Access Bank), First City Monument Bank, United Bank for Africa, Union Bank, Fidelity Bank, GTB, Unity Bank, Wema Bank, Sterling Bank, Stanbic IBTC, Ecobank, Zenith Bank and Skye Bank (now Polaris Bank). The manufacturing firms randomly selected from the NSE list are: Patterzon Zocchonis, Guinness PLC, West African Portland Cement (WAPCO), Flour Mills Nig. PLC, Total Nig PLC, Cadbury Nig PLC, May and Baker PLC, Nestle Nig PLC, Mobil PLC, Beta

Glass, First Aluminum, Julius Berger, Berger Paints, Unilever Plc and Livestock Feeds PLC

3.2 Estimation Process

We carried some preliminary tests that dictated the preferred estimation techniques used in the study. These include the descriptive statistics, correlation coefficients, stationarity and co-integration tests. The tests are applied to the pooled/panel data of selected firms and quarterly data of MP variables.

Based on the dictates of these tests, we proceeded to use the Panel Dynamic Ordinary Least Squares (PDOLS) estimation technique to ascertain the effect of monetary policy on the stock prices of the firms. A general PDOLS model for our estimation is expressed as:

$$\begin{aligned} \log STP_{Ri} = & \alpha_0 + \beta_1 \log M2 + \beta_2 \log TBR + \beta_3 \log MPR + \beta_4 \log EXCH + \beta_5 \log CRR + \\ & + \beta_6 \log LDR + \beta_7 \log SDR + \\ & + \sum_{j=-p}^q \beta_{1cj} \Delta \log M2_{ct} + \sum_{j=-p}^q \beta_{2cj} \Delta \log TBR_{c,t+j} + \sum_{j=-p}^q \beta_{3cj} \Delta \log MPR_{c,t2+J} + \\ & + \sum_{j=-p}^p \beta_{4cj} \Delta \log EXCH_{c,t3+j} + \sum_{j=-p}^p \beta_{5cj} \Delta \log CRR_{c,t4+j} + \sum_{j=-p}^p \beta_{6cj} \Delta \log LDR_{c,t5+j} + \\ & + \sum_{j=-p}^p \beta_{7cj} \Delta \log SDR_{c,t6+J} + \varepsilon_{ct} \dots \dots \dots (3.9) \end{aligned}$$

where “ $\beta_{1cj} \dots \beta_{8cj}$ = coefficients of lead and lag q and p respectively differences that estimate unbiased estimates of $\beta_1 \dots \beta_8$ and remove asymptotic endogeneity and incidence of serial correlation or multi-collinearity” (Kao & Chang, 2000). We further examined the causal relationship between the dependent and independent variables using a stacked data test (common coefficients) panel causality test.

All the monetary policy variables except broad money supply (M2 – which can have positive or negative effect) are theoretically expected to inversely affect stock prices.

4. Results and Discussions

4.1 Summary of Preliminary Tests for Banks and Manufacturing Firms

4.1.1 Banks

▪ Descriptive Statistics

Appendix 1 shows that on average STP, M2, TBR, MPR, EXCH, CRR, LDR and SDR is ₦10.16653, 13.60282(trn), 9.446034%, 11.17982%, ₦179.6677, 11.29441%, 16.77441% and 2.642570% for banking firms respectively for period under consideration. While the maximum stock price for the period is ₦53.24300, maximum values for M2, TBR, MPR, EXCH, CRR, LDR and SDR are 24.14, 19.97, 14, 306.7127, 31, 31.18 and 4.22 respectively. Inversely, the minimum values for STP, M2, TBR, MPR, EXCH, CRR, LDR and SDR are 0.5, 2.91, 1.71, 6, 117.7449, 1, 8 and 0 respectively. The coefficient of skewness of study variables reveals that two of the variables, MPR and SDR are skewed to the left of the distribution with coefficients -0.742976 and -0.684886 while STP, M2, TBR, EXCH, CRR and LDR are all skewed to the right with coefficients 1.696434, 0.01724, 0.034275, 1.240926, 0.387085 and 0.765738 respectively. Only STP is leptokurtic with kurtosis above given benchmark of 3 while M2, MPR, EXCH, CRR, LDR and SDR are all platykurtic having kurtosis below 3. TBR and EXCH are approximately 3. Four out of

seven variables (STP, TBR, MPR and SDR) are normally distributed with Jarque-Bera coefficients and probabilities [(537.3729 (0.064405); 11.437135 (0.487450); 77.56572 (0.070032) and 74.04197 (0.8325000)] respectively. The other variables (M2, EXCH, CRR and LDR) are not normally distributed due to their Jarque-Bera coefficients and probabilities [(38.10644 (0.000000); 183.7631 (0.000000); 67.17989 (0.000000) and 84.30377 (0.000000)] respectively.

▪ **Correlations**

From Appendix 2, it is revealed that the coefficients of correlation between STP and independent variables are negative and weak, implying that there exists no strong co-movement to the same direction between them. All the coefficients are between 1 (EXCH) and 20% (M2). However, there are considerable positive correlation coefficients among independent variables (between 38% for SDR/TBR and 89% for CRR/M2). This is expected as MP variables tend to move in same direction except for SDR. Nonetheless, Brooks (2008) argues that if correlations coefficients fall below 0.8 among most variables analyzed, multi-collinearity issue could be overlooked.

▪ **Stationarity Test**

Appendix 3 reveals that no variable is stationary at level and that all employed variables are stationary at first difference, that is, a null hypothesis that used variables have unit root cannot be accepted at order 1. These results provide the premise upon which the choice of estimation technique is made.

➤ **Co-integration**

The Johansen – Fisher combined (Trace and Max-Eigen) cointegration test is employed in this study to ascertain if there exist at least one cointegrating equation between stock price and MP variables. From Appendix 4 the probabilities of both Trace and Max-Eigen statistics indicate at least 6 (six) co-integrating equations among variables selected for the study which are 0.0000, 0.0007, 0.0025, 0.0000, 0.0000, 0.0000 and 0.0000 for model equations respectively. The null hypothesis of no cointegration cannot be accepted.

4.1.2 **Manufacturing Firms**

▪ **Descriptive Statistics**

Appendix 5 shows that on average STP, M2, TBR, MPR, EXCH, CRR, LDR and SDR is ₦94.50028, 13.60282(trn), 9.446034%, 11.17982%, ₦179.6677, 11.29441%, 16.77441% and 2.642570% for manufacturing firms respectively for period under consideration. While maximum stock price for the period is ₦1522.500, maximum values for M2, TBR, MPR, EXCH, CRR, LDR and SDR are 24.14, 19.97, 14, 306.7127, 31, 31.18 and 4.22 respectively. Asides, minimum values for STP, M2, TBR, MPR, EXCH, CRR, LDR and SDR are 0.27, 2.91, 1.71, 6, 117.7449, 1, 8 and 0 respectively. The skewness coefficient of the variables reveals that two variables, MPR and SDR are skewed to the left of the distribution with coefficients -0.742976 and -0.684886 while STP, M2, TBR, EXCH, CRR and LDR are all skewed to the right with coefficients 4.504533, 0.01724, 0.034275, 1.240926, 0.387085 and 0.765738 respectively. Only STP is leptokurtic with kurtosis above a benchmark of 3 while M2, MPR, EXCH, CRR, LDR and SDR are all platykurtic having kurtosis below 3. TBR and EXCH are approximately 3. Four of seven variables (STP, TBR, MPR and SDR) are distributed normally with Jarque-Bera coefficients and probabilities [(20545.19 (0.0550614); 11.437135 (0.487450); 77.56572 (0.070032) and 74.04197 (0.8325000)] respectively. The other variables (M2, EXCH, CRR and LDR) are not normally distributed due to their Jarque-Bera coefficients and probabilities [(38.10644 (0.000000); 183.7631 (0.000000); 67.17989 (0.000000) and 84.30377 (0.000000)] respectively.

ii. **Correlations**

Appendix 6, it is revealed that among the manufacturing firms, the correlation coefficients between STP and independent variables are all positive and weak contrary to what obtained among the banking firms. This implies a co-movement in same direction between the variables. The correlation coefficients between STP and M2, TBR, MPR, EXCH, CRR, LDR and SDR are 0.115442 (11.54%), 0.083644 (8.36%), 0.084771 (8.48%), 0.088489 (8.88%), 0.116190 (11.62%), 0.077869 (7.79%) and 0.06945 (6.95%) respectively. Again, as noted under banking firms, there are considerable positive correlation coefficients among independent variables (between 38% for SDR/TBR and 89% for CRR/M2).

ii. Stationarity Test

Appendix 7, it is revealed that none of the variables is stationary at level and that all variables are stationary at order 1, that is, null hypothesis that variables have unit root cannot be accepted at first difference.

iii. Co-integration

Results of panel cointegration tests on Appendix 8 reveal that there is long-run relationship between MP variables and stock prices of selected manufacturing firms in Nigeria. As stated previously, the deciding rule in co-integration is to compare both Trace and Max-Eigen statistics probabilities with significance level (5%) to decide whether not to accept or the null hypothesis. From Appendix 7, probabilities of both Trace and Max-Eigen statistics indicate at least 6 (six) co-integrating equations among of selected variables which are 0.0000, 0.0000, 0.0001, 0.0000, 0.0000, 0.0000 and 0.0000 for the equations respectively. The null hypothesis of no cointegration cannot be accepted and alternative hypothesis of at least one (1) cointegration equation cannot be rejected.

4.2 Comparative Analysis of the PDOLS Effect of MP on Stock Prices of Banks and Manufacturing Firms

The objective is to establish whether effect of MP on stock prices of banking firms is significantly different from that of selected manufacturing firms. The relevant null hypothesis to be tested here states that no significant difference exists between effect of MP on stock prices of selected banks and manufacturing firms. Table 4.1 contains the extracts of the results of PDOLS and a comparative analysis between the two firm groups.

Table 4.1: Comparative Analysis of Effect of MP on Stock Prices of Banking and Manufacturing Firms

Dependent Variable: STP. Method: PDOLS							
Variable	Banking Firms			Manufacturing Firms			Conclusion
	Coefficient	Prob.	Remark	Coefficient	Prob.	Remark	
M2	-0.807814	0.0147	Negative, Significant	-3.789570	0.2455	Negative, Insignificant	Different
TBR	0.582522	0.0000	Positive, Significant	0.920690	0.4098	Positive, Insignificant	Different
MPR	-1.488463	0.0000	Negative, Significant	-4.023008	0.0110	Negative, Significant	Not Different
EXCH	-0.041062	0.0110	Negative, Significant	-0.162981	0.3062	Negative, Insignificant	Different
CRR	0.009351	0.9351	Positive, Insignificant	-1.775198	0.1138	Negative, Insignificant	Different
LDR	0.039391	0.7049	Positive, Insignificant	-0.001662	0.9987	Negative, Insignificant	Different
SDR	-1.222058	0.0003	Negative, Significant	-3.642340	0.2813	Negative, Insignificant	Different
Adjusted R-squared	87%			75%			

Source: Author's Compilation (2022)

Results in Table 4.1 reveal that only one of the MP variables, that is, MPR has the same effect (negative and significant) on stock prices of both banking and manufacturing firms studied. Effects of other six out of the seven MP variables examined (M2, TBR, EXCH, CRR, LDR and SDR) differ between banking and manufacturing firms. It is worth noticing that 5 of the 7 MP variables (about 71%) have statistically significant effect (positive and negative) on stock prices of banking firms while only 1 (about 14%) of the 7 variables has a statistically significant effect on stock prices of manufacturing firms selected.

Furthermore, based on number of MP variables that have significant effect on stock prices of banking vis-à-vis that of manufacturing firms, it is safe to infer that MP exerts greater influence on stock price of banking firms than of the manufacturing firms. The foregoing conclusion notwithstanding, only one out of five MP variables has a positive and significant effect on stock prices of banking firms, and this means that the banking sub-sector did not benefit maximally from Nigerian monetary policies during period of study even when it is the main channel where such policies are executed. Instead, MP during this period had exerted more adverse effects than good on stock prices of the banks. This is against the general belief that the banking industry, as chief implementers of MP, would strategically position itself in anticipation of policy changes and possibly reap the advantages associated with some levels of foreknowledge. That MPR affects stock prices of the two sectors in question (negative and significant) clearly shows that it is a major tool that drives other MP tools and a key determinant in the availability of funds to all economic sectors. Adjustment in MPR directly affects loanable funds which also determines what is available for investment purposes.

In the light of the comparative analysis carried out, it is evident there exists marked and clear difference between results for banks and manufacturing firms. The null hypothesis of no significant difference between effect of MP on stock prices of banking and manufacturing firms cannot be accepted. This conclusion has sufficiently addressed the third objective of the present study. Also, the differences in how MP affects stock

prices in these two firm groups bring to the fore the need for monetary authorities to pay attention to sector differentials in monetary policy formulation and execution.

4.3. Analysis of Causality

4.3.1 Banks

The second objective of this study is to ascertain whether any causal relationship exists between MP and stock prices of banking firms in Nigeria. The tests of causality among these variables are done based on data of each bank considered. The decision rule on whether two variables have causal link is to compare the probability of F-Statistic with the LOS (5% here). If the Prob (F-Stat) is greater than 5% LOS for two variables considered, our null hypothesis stating no causal relation cannot be rejected and vice-versa. A uni-directional causality arises when the probability of only one variable considered is less than 5% LOS. Furthermore, where the probabilities of F-Stat of two variables considered is short of 5%, it implies that the variables have bi-directional causality. Table 4.2 contains the summary of the panel causality test for banking firms' data.

Table 4.2: Panel Causality Test Results – Banks

Null Hypothesis	F-Statistics	Prob.	Answer	Comment/Conclusion
"M2 causes STP"	0.88346	0.4139	No	"No causality "
"STP causes M2"	1.15280	0.3165	No	
"TBR causes STP"	0.74376	0.4758	No	"Uni-directional causality from" STP to TBR
"STP causes TBR"	6.64620	0.0014	Yes	
"MPR causes STP"	16.0467	2.E-07	Yes	"Uni-directional causality from" MPR to STP
"STP causes MPR"	1.91681	0.1480	No	
"EXCH causes STP"	1.25933	0.2846	No	"Uni-directional causality from" STP to EXCH
"STP causes EXCH"	4.63291	0.0101	Yes	
"CRR causes STP"	5.94562	0.0028	Yes	"Uni-directional causality from" CRR to STP
"STP causes CRR"	1.45694	0.2338	No	
"LDR causes STP"	8.78977	0.0002	Yes	"Bi-directional causality between" LDR and STP
"STP causes LDR"	16.0985	2.E-07	Yes	
"SDR causes STP"	39.5060	8.E-17	Yes	"Bi-directional causality between" SDR and STP
"STP causes SDR"	8.35366	0.0003	Yes	

Source: Authors' Computation (2022)

Table 4.2 reveals that six (6) out of seven MP variables examined have causal association with stock prices of banking firms selected with probabilities of F-Statistics less than 5% LOS. As shown by their respective probabilities (<5% significance level), changes in TBR is caused by changes in STP; MPR Granger causes STP; EXCH and STP Granger cause each other; CRR Granger causes STP; LDR and STP Granger cause each other and SDR and STP Granger cause each other. However, there exists no causal connection of M2 and STP (probabilities > 5% significance level). The implication of these results is that changes in selected banks stock prices are caused by changes in some MP variables examined (namely, MPR, CRR, LDR and SDR more than previous changes in stock price itself. Furthermore, stock prices cause greater changes in TBR, EXCH, LDR and SDR more than the previous changes in these MP variables themselves. These findings agree with Nwakoby and Alajekwu (2016) and Adeyeye and Migiro (2017). Changes in M2 does not cause an important change in stock prices, neither does the latter cause any significant change in former.

4.3.2 Manufacturing Firms

Table 4.3 contains the abridged results of causality test carried out on manufacturing firms' data.

Table 4.3: Panel Causality Test Results – Manufacturing Firms

Null Hypothesis	F-Statistics	Prob.	Answer	Comment/Conclusion
"M2 causes STP"	0.85054	0.4277	No	"No causal relationship"
"STP causes M2"	0.01418	0.9859	No	
"TBR causes STP"	0.22292	0.8002	No	"No causal relationship"
"STP causes TBR"	0.52329	0.5928	No	
"MPR causes STP"	0.04209	0.9588	No	"No causal relationship"
"STP causes MPR"	0.88448	0.4134	No	
"EXCH causes STP"	0.22550	0.7982	No	"Uni-directional causality from" STP to EXCH
"STP causes EXCH"	7.81991	0.0004	Yes	
"CRR causes STP"	2.11108	0.1219	No	"No causal relationship"
"STP causes CRR"	2.44502	0.0875	No	
"LDR causes STP"	1.62488	0.1977	No	"No causal relationship"
"STP causes LDR"	0.70171	0.4961	No	
"SDR causes STP"	1.98573	0.1381	No	"No causal relationship"
"STP causes SDR"	0.79470	0.4522	No	

Source: Authors' Computation (2022)

Results in Table 4.3 show that among all the MP variables selected, only exchange rate (EXCH) has a uni-directional causality with stock price (STP) and it runs from STP to EXCH. This is revealed in p-value of F-Statistic for that particular relationship (0.0004) and it implies STP causes changes in EXCH more than previous changes in EXCH itself. In all, it is clear that there exists causal effect between MP variables and stock prices and that the causality is predominant in banking sub-sector than in manufacturing. Therefore, the hypothesis stating no causal linkage between MP and stock prices of Nigerian banks and manufacturing firms cannot be accepted. This conclusion also addresses the fourth study objective sufficiently.

4.4 Implication of Findings

Broadly, this research was undertaken to ascertain effect of MP on stock prices of selected quoted banks and manufacturing firms in Nigeria between 2006 and 2019. Specifically, the study addressed five objectives: to study effect of MP tools on stock prices of selected banks; ascertain effect of MP on stock prices of selected manufacturing firms; compare effect of MP on stock prices of banks and manufacturing firms; investigate existence and direction of causality between MP variables and stock prices of the banks and investigate the existence of causality among MP variables and stock prices of selected manufacturing firms in Nigeria from 2006 to 2019.

Panel Dynamic Least Squares (P-DLS) was employed to analyze panel data of thirty (30) listed firms divided into two equal groups (banking and manufacturing firms) of fifteen firms each. The PDLs results revealed that in banking sector, MP affect stock prices of studied banks for period under study. Precisely, M2, MP rate, exchange rate and savings rate exert negative and significant effect on stock prices of banking firms. Contrariwise, TBR exerts a positive and statistically significant effect on stock prices while cash reserve ratio and lending rate exert positive but weak effect on stock prices of banks. In manufacturing sector, broad money supply, exchange rate, cash reserve ratio, lending rate and savings rate all have statistically weak negative effect on stock prices while TBR has positive but statistically weak effect on stock prices of the selected manufacturing firms. However, MP rate exerts a negative and statistically significant effect on the firms' stock prices.

The outcomes of the analysis carried with Panel Dynamic Least Squares on data of selected firms imply that MP impacts stock prices of banks and manufacturing firms for the period under study. Furthermore, the comparative analysis carried out on results for the two group of firms show that clear differences on how MP affects stock prices of banking

and manufacturing firms. It is evident that, based on significance or otherwise of effects of individual variables, that effect of MP on stock price is more prominent in banking than in manufacturing sector firms. Moreover, results of panel causality conducted for the two firm groups revealed causal relationship between MP variables and stock prices of both firm groups. However, greater MP/stock price causality exists in banking industry than in the manufacturing sector for period under study. Findings here support the position of the quantity theory propounded by Friedman (1956, 1988) that increase in M2 or other money market variables may not necessarily lead to hike in equity price because excess demand for stocks may be neutralized by increase in quest for other assets like household goods. This reflects in negative effect of M2 on stock price. The findings also support the position of Tobin (1969) who states that financial policies changes can play vital role in influencing market value of a company's assets. With his effect ratio, called the Tobin's q , the author posits that restrictive/tight MP may lead to reduction in cash inflow present value which will translate into reduction in demand for stock and decreasing stock prices.

5. Conclusion and Recommendations

Arising from analyses and findings in this work, which was undertaken to examine and compare the effect of MP on banks and manufacturing firms stock prices in Nigeria, this researcher arrived at five major conclusions: One, MP variables significantly affect stock prices of banking firms quoted on the NSE between 2006 and 2019. MP variables, namely M2, MP rate, exchange rate and savings deposit rate positively and significantly affect stock prices of the listed banking firms. Two, this study also concludes that in manufacturing firms' group, MP rate negatively and significantly impacts stock prices of quoted firms. Three, it is concluded that there are significant differences when effect of MP on stock prices is compared between banking and manufacturing firms and that the effect is prevalent in banking firms' group than in manufacturing firms' group from 2006 to 2019. Four, there is causal connection between MP and stock prices of banking firms in Nigeria. Finally, it also concludes that there exists causal relationship between MP and stock prices of manufacturing firms. However, causality is more predominant in banking firms' group with six (6) of seven (7) MP variables examined having causal link with stock prices in banks group whereas only one (1) has causal link with stock prices in the manufacturing firms' group implying that past changes in these variables except one did not cause more changes in stock prices than past changes in the later caused in itself.

On the whole, more MP tools employed by CBN during the years of study did not contribute positively to stock price increases. Apart from OMO (Treasury bill purchase and sale) which has positive and strong impact on stock price of banking firms, others with significant effect adversely affect it. Equally, the only variable with strong effect on prices of stock of manufacturing firms exerts negative effect. It is safe to conclude, based on these outcomes that over these years, one major goal of MP, which is financial market stability and development of manufacturing sector, have not been achieved. Monetary policy authorities need to critically examine their policies to date vis-à-vis the targeted goals. We recommend a disaggregated, sector sensitive monetary policy strategies. Since MP tools affect stock prices of both the banks and manufacturing firms and are sector sensitive, there is need for monetary authorities to disaggregate monetary policies into different economic sectors. For example, the CBN can introduce monetary policies that make stock investment in firms of targeted sectors attractive through prescription of low interest on share loans. This will increase potential investors' access to cheap funds for investment in stocks of the targeted sectors. In essence, the CBN, as much as possible, should avoid prescribing the same monetary policies for all economic sector concurrently. This is apart from the need for monetary authorities to constantly appraise monetary policy tools vis-à-vis stock market expansion goal.

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Appendices

Appendix 1: Descriptive Statistics – Banks

	STP	M2	TBR	MPR	EXCH	CRR	LDR	SDR
Mean	10.16653	13.60282	9.446034	11.17982	179.6677	11.29441	16.77441	2.642570
Median	6.260000	13.30000	9.500000	12.00000	157.2888	8.000000	14.00000	3.210000
Maximum	53.24300	24.14000	19.97000	14.00000	306.7127	31.00000	31.18000	4.220000
Minimum	0.500000	2.910000	1.710000	6.000000	117.7449	1.000000	8.000000	0.000000
Std. Dev.	10.94568	6.369231	3.763067	2.571991	63.91013	8.705996	7.605314	1.361747
Skewness	1.696434	0.017240	0.034275	-0.742976	1.240926	0.387085	0.765738	-0.684886
Kurtosis	5.549696	1.870344	2.791498	2.373971	2.992037	1.714504	2.306885	2.221810
Jarque-Bera	537.3729	38.10644	11.437135	77.56572	183.7631	67.17989	84.30377	74.04197
Probability	0.064405	0.000000	0.487450	0.070032	0.000000	0.000000	0.000000	0.8325000
Sum	7279.232	9739.620	6763.360	8004.750	128642.1	8086.800	12010.48	1892.080
Sum Sq. Dev.	85662.64	29005.48	10124.88	4729.824	2920421.	54192.98	41356.17	1325.864
Observations	840	840	840	840	840	840	840	840

Source: Author's Computation (2022)

Appendix 2: Correlations – Banks

	STP	M2	TBR	MPR	EXCH	CRR	LDR	SDR
STP	1.000000	-0.195124	-0.075658	-0.061495	-0.118496	-0.141545	-0.012466	-0.089095
M2	-0.195124	1.000000	0.563630	0.518106	0.857598	0.890468	0.607908	0.452906
TBR	-0.075658	0.563630	1.000000	0.758351	0.597999	0.631084	0.597232	0.380247
MPR	-0.061495	0.518106	0.758351	1.000000	0.569292	0.735859	0.713809	0.442575
EXCH	-0.118496	0.857598	0.597999	0.569292	1.000000	0.794711	0.835976	0.591256
CRR	-0.141545	0.890468	0.631084	0.735859	0.794711	1.000000	0.713070	0.601558
LDR	-0.012466	0.607908	0.597232	0.713809	0.835976	0.713070	1.000000	0.696037
SDR	-0.089095	0.452906	0.380247	0.442575	0.591256	0.601558	0.696037	1.000000

Source: Author's Computation (2022)

Appendix 3: Abridged Results of Stationarity Tests for Banks

Variable	Level 5%		First Difference 5%		Order of Stationarity
	Fisher-ADF Statistic	Probability	Fisher-ADF Statistic	Probability	
STP	103.812	0.6481	261.112	0.0000	I(I)
M2	113.099	0.6595	266.841	0.0000	I(I)
TBR	117.931	0.5363	213.080	0.0000	I(I)
MPR	67.1104	1.0000	203.711	0.0000	I(I)
EXCH	30.3238	1.0000	234.006	0.0000	I(I)
CRR	75.5351	0.9995	391.237	0.0000	I(I)
LDR	50.8400	1.0000	415.778	0.0000	I(I)
SDR	106.970	0.7968	671.684	0.0000	I(I)

Source: Author's Computation (2022)

Appendix 4: Co-Integration Test – Banks

Johansen Fisher Panel Cointegration Test
Series: STP M2 TBR MPR EXCH CRR LDR SDR
Date: 28/09/21 Time: 20:28
Sample: 2006 2019
Included observations: 840
Trend assumption: Linear deterministic trend
Lags interval (in first differences): 1 1

Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue)

Hypothesized No. of CE(s)	Fisher Stat.* (from trace test)	Prob.	Fisher Stat.* (from max-eigen test)	Prob.
None*	379.9	0.0000	360.8	0.0000
At most 1*	163.6	0.0007	163.6	0.0007
At most 2*	156.5	0.0025	156.3	0.0025
At most 3*	217.7	0.0000	217.7	0.0000
At most 4*	211.1	0.0000	211.1	0.0000
At most 5*	181.5	0.0000	181.5	0.0000
At most 6*	194.9	0.0000	194.9	0.0000
At most 7	101.0	0.7185	101.0	0.7185

Trace and Max-eigenvalue test indicate 6 cointegrating eqn(s) at the

* denotes rejection of the hypothesis at the 0.05 level

* Probabilities are computed using asymptotic Chi-square distribution.

Source: Author's Computation (2022)

Appendix 5: Descriptive Statistics – Manufacturing Firms

	STP	M2	TBR	MPR	EXCH	CRR	LDR	SDR
Mean	94.50028	13.60282	9.446034	11.17982	179.6677	11.29441	16.77441	2.642570
Median	31.47333	13.30000	9.500000	12.00000	157.2888	8.000000	14.00000	3.210000
Maximum	1522.500	24.14000	19.97000	14.00000	306.7127	31.00000	31.18000	4.220000
Minimum	0.270000	2.910000	1.710000	6.000000	117.7449	1.000000	8.000000	0.000000
Std. Dev.	191.4599	6.369231	3.763067	2.571991	63.91013	8.705996	7.605314	1.361747
Skewness	4.504533	0.017240	0.034275	-0.742976	1.240926	0.387085	0.765738	-0.684886
Kurtosis	26.47332	1.870344	2.791498	2.373971	2.992037	1.714504	2.306885	2.221810
Jarque-Bera	20545.19	38.10644	1.437135	77.56572	183.7631	67.17989	84.30377	74.04197
Probability	0.000000	0.000000	0.487450	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	73710.22	9739.620	6763.360	8004.750	128642.1	8086.800	12010.48	1892.080
Sum Sq. Dev.	28555727	29005.48	10124.88	4729.824	2920421.	54192.98	41356.17	1325.864
Observations	840	840	840	840	840	840	840	840

Source: Author's Computation (2022)

Appendix 6: Correlations – Manufacturing Firms

	STP	M2	TBR	MPR	EXCH	CRR	LDR	SDR
STP	1.000000	0.115442	0.083644	0.084771	0.088489	0.116190	0.077869	0.068945
M2	0.115442	1.000000	0.563429	0.535004	0.855189	0.891565	0.621457	0.472235
TBR	0.083644	0.563429	1.000000	0.759048	0.595702	0.621985	0.593206	0.382011
MPR	0.084771	0.535004	0.759048	1.000000	0.576003	0.742214	0.713059	0.450319
EXCH	0.088489	0.855189	0.595702	0.576003	1.000000	0.787892	0.843332	0.600615
CRR	0.116190	0.891565	0.621985	0.742214	0.787892	1.000000	0.713020	0.612867
LDR	0.077869	0.621457	0.593206	0.713059	0.843332	0.713020	1.000000	0.695172
SDR	0.068945	0.472235	0.382011	0.450319	0.600615	0.612867	0.695172	1.000000

Source: Author's Computation (2022)

Appendix 7: Abridged Results of Stationarity Tests for Manufacturing Firms' Data

Variable	Level 5%		First Difference 5%		Order of Stationarity
	Fisher-ADF Statistic	Probability	Fisher-ADF Statistic	Probability	
STP	121.825	0.3860	180.353	0.0002	I(1)
M2	113.099	0.6595	266.841	0.0000	I(1)
TBR	117.931	0.5363	213.080	0.0000	I(1)
MPR	67.1104	1.0000	203.711	0.0000	I(1)
EXCH	30.3238	1.0000	234.006	0.0000	I(1)
CRR	75.5351	0.9995	391.237	0.0000	I(1)
LDR	50.8400	1.0000	415.778	0.0000	I(1)
SDR	106.970	0.7968	671.684	0.0000	I(1)

Source: Author's Computation (2022)

Appendix 8: Co-Integration Test – Manufacturing Firms

Johansen Fisher Panel Cointegration Test

Series: STP M2 TBR MPR EXCH CRR LDR SDR

Date: 28/09/21 Time: 20:25

Sample: 2006 2019

Included observations: 840

Trend assumption: Linear deterministic trend

Lags interval (in first differences): 1 1

Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue)

Hypothesized No. of CE(s)	Fisher Stat.* (from trace test)	Prob.	Fisher Stat.* (from max-eigen test)	Prob.
None*	410.0	0.0000	387.7	0.0000
At most 1*	184.3	0.0000	184.3	0.0000
At most 2*	220.0	0.0001	220.0	0.0001
At most 3*	218.1	0.0000	218.1	0.0000
At most 4*	247.5	0.0000	247.5	0.0000
At most 5*	225.1	0.0000	225.1	0.0000
At most 6*	194.0	0.0000	194.0	0.0000
At most 7	101.9	0.8538	101.9	0.8538

Trace and Max-eigenvalue test indicate 6 cointegrating eqn(s) at the

* denotes rejection of the hypothesis at the 0.05 level

* Probabilities are computed using asymptotic Chi-square distribution.

Source: Author's Computation (2022)