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## ASSESSING THE PROFITABILITY OF SMALL AND MEDIUM-SIZED WOOD FURNITURE BUSINESSES IN ETHIOPIA

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**Abstract.** This study focuses on the issue of profitability within the small and medium wood industries in Ethiopia. Profitability stands as a cornerstone for the advancement of contemporary industries and is a pressing concern for policymakers. The primary aim of this study is to determine the level of profitability and the factors influencing it in small and medium-scale wood enterprises. To conduct the study, four key cities - Addis Ababa, Bahir Dar, Hawassa, and Jima - were purposively selected. Data were gathered from 170 industries across these cities and subjected to analysis, yielding pertinent results. As expected, the wood industries in Ethiopia lacking profitability and among the 170 surveyed, 59.4% industries were not profitable. This is because majority of workers in Ethiopia's wood industry lack formal or on-the-job training both prior to and during employment. Moreover, the machinery and equipment they operate are outdated, and they lack the necessary skills for their proper utilization. Additionally, challenges such as insufficient raw materials, limited capital, and poor market connections were identified as significant obstacles to profitability. To tackle these challenges and bolster profitability, continuous technical and managerial training for workers, financial assistance for acquiring modern machinery, enhancements in production processes, sales strategies, and market linkage facilitation are recommended.

**Keywords:** *profitability, furniture, Ethiopia, small and medium scale, wood industries.*

**Rezumat.** Acest studiu se concentrează pe problema rentabilității în industriile mici și mijlocii ale lemnului din Etiopia. Rentabilitatea reprezintă o piatră de temelie pentru progresul industriilor contemporane și este o preocupare presantă pentru factorii de decizie. Scopul principal al acestui studiu este de a determina nivelul de profitabilitate și factorii care îl influențează în întreprinderile mici și mijlocii. Pentru a efectua studiul, patru orașe cheie - Addis Abeba, Bahir Dar, Hawassa și Jima - au fost selectate în mod intenționat. Datele au fost colectate de la 170 de industrii din aceste orașe și supuse analizei, obținând rezultate pertinente. După cum era de așteptat, industriile lemnului din Etiopia nu au fost profitabile. Dintre 170 IMM chestionate, 59,4% nu au fost profitabile. Acest lucru se datorează faptului că majoritatea lucrătorilor din industria lemnului din Etiopia nu au pregătire formală sau la locul de muncă atât înainte, cât și în timpul angajării. În plus, utilajele și echipamentele pe care le operează sunt depășite și le lipsesc abilitățile necesare

pentru utilizarea lor corectă. În plus, provocări precum materiile prime insuficiente, capitalul limitat și conexiunile slabe cu piața au fost identificate ca obstacole semnificative în calea profitabilității. Pentru a face față acestor provocări și a spori profitabilitatea, se recomandă pregătirea tehnică și managerială continuă pentru lucrători, asistență financiară pentru achiziționarea de mașini moderne, îmbunătățiri ale proceselor de producție, strategii de vânzare și facilitarea legăturilor cu piața.

**Cuvinte cheie:** *rentabilitate, mobilier, Etiopia, scară mică și medie, industria lemnului.*

## 1. Introduction

Small and medium-sized enterprises (SMEs) are acknowledged globally as crucial drivers of economic advancement [1]. Particularly in developing countries like Ethiopia, SMEs play a pivotal role in propelling national development by contributing to economic expansion and alleviating poverty [2]. Among these enterprises, furniture production stands out as a thriving sector within the wood industry [3]. In Ethiopia, small-scale furniture workshops predominantly dominate the wood industry [4]. SMEs are characterized as autonomous businesses with limited market share, typically managed by their owners or co-owners [3]. There is no universally accepted definition of SMEs since each country has its own classification based on industry regulations within its own economic system [5]. Criteria for classification typically include factors such as employee count, business size, job creation capability, and capital investment [6]. In Ethiopia, SMEs are categorized into three main groups: micro-enterprises with up to 5 enterprises with capital between Ethiopian Birr (ETB) 500,000 and 250 employees [3, 7, 8]

Ethiopia has had more than a hundred years of experience in production of wood and wood products. On the other hand, this industry sector is not as developed as it should be, and it will eventually die as a result of both internal and external problems [9]. The furniture industry is currently confronting its biggest challenge in history as a result of the quickly evolving business environment in terms of global competition, market performance, and evolving technologies [10]. Although the production of wood furniture has relatively vast potential to boost the Ethiopia's Gross domestic product (GDP) by utilizing a large quantity of local resources, it is now less profitable and competitive [11].

Profitability is important for the improvement and development of modern industries and contributing to the country's economy and are the focus of policy issue in many countries [12]. It indicates an enterprise's ability to generate earnings using its own funds or capital, showcasing its operational performance over a specific timeframe and the efficacy of its management [13,14]. profitability has a major influence on the growth of SMEs, and that the absence of enterprise profit appears to be a barrier to their expansion [15]. The three primary factors that contribute to low profitability of Micro, Small, and Medium-Sized Enterprises' (MSMEs): insufficient use of resources, insufficient cash management practices, and difficulties in producing equity returns [16]. It was claimed that MSEs' incapacity to use financial statement analysis, funding shortfall, unplanned withdrawals of money for personal use, and poor working capital management are all contributing factors to their decreasing profitability [17].

The profitability of Ethiopia's furniture industry has not been sufficiently studied, lacking empirical evidence and documented information. The absence of this information hinders the ability of small and medium-sized furniture workshops to measure their performance within the industry, which is crucial for assessing financial stability [3].

Industries in Ethiopia, including wood-based sectors, do not exhibit a steady trend of profitability, and some industries particularly the wood-based industries are not even profitable due to various factors [18]. Thus, the aim of this investigation was to evaluate the level of profitability, identify factors influencing profitability, and reveal the challenges encountered by small and medium-scale wood industries.

## 2. Materials and Methods

The study was conducted in four (4) major cities of Ethiopia: Addis Ababa, Hawassa, Jima and Bahir Dar. These cities were purposively selected for this study because of their higher level of business activities, level of wood demand and large number of furniture manufacturers which makes them a good focal point for this study. A cross-sectional survey design was employed to meet the study's objectives, documenting monthly and yearly expenditures, annual revenues, and challenges encountered by furniture workshops in these cities. Fifty small and medium-sized furniture workshops were purposively selected from each city, totaling 200 workshops for the entire study. Among these the data collected from 30 workshops were incomplete and then rejected. Accordingly, from Addis Ababa 47, Jima 43, Bahir Dar 39, and Hawassa 41 a total of 170 furniture industries are determined and included in the study, Table 1.

Table 1

**Number furniture workshops in four major cities**

| <b>Name of town or city</b> | <b>Frequency</b> | <b>Percent</b> | <b>Cumulative Percent</b> |
|-----------------------------|------------------|----------------|---------------------------|
| Addis Ababa                 | 47               | 27.65          | 27.65                     |
| Bahir Dar                   | 39               | 22.94          | 50.59                     |
| Hawassa                     | 41               | 24.11          | 74.70                     |
| Jimma                       | 43               | 25.30          | 100                       |
| <b>Total</b>                | <b>170</b>       | <b>100.0</b>   |                           |

*Source: developed by the authors based on the survey data, 2023.*

Quantitative and qualitative data were gathered from various primary and secondary sources. Primary data were acquired directly from enterprises through a combination of questionnaires and interviews. Face-to-face interviews were conducted with owners or managers of selected furniture workshops, covering topics such as monthly and annual costs, revenue from product sales, types of machinery used, resource procurement sources, market connections, and production challenges. Secondary data was collected from Central Statics Agency (CSA), Custom and Revenue Authority and different wood enterprises in Addis Ababa. In addition, different related literatures such as textbooks, manuals, journals and reports were reviewed.

In this research, both descriptive and inferential, or econometric, techniques were employed for data analysis. The quantitative and qualitative data gathered were encoded and input into a computer for analysis utilizing Statistical Packages for Social Sciences (SPSS) software. Subsequently, the data underwent editing and cleansing processes. Descriptive statistics were applied to analyze the data using Excel software. The expenses of resources and the revenues generated from products were aggregated and depicted in frequency distributions, then illustrated through graphs. The primary variables of interest in the study encompass the output produced by firms, labor costs (in terms of wages and salaries), capital investments (reflected in the value of fixed assets), as well as consumption of wood and other materials.



The profitability of the firms was assessed using various ratios as follows:

$$\text{Gross profit margin ratio} = (\text{Gross profit}/\text{Sales}) \times 100\%, \quad (1)$$

$$\text{Operating profit margin ratio} = (\text{Operating profit}/\text{Sales}) \times 100\%, \quad (2)$$

$$\text{Net profit margin ratio} = (\text{Net profit}/\text{Sales}) \times 100\%, \quad (3)$$

where:

Gross profit = Sales – Cost of goods.

Operating profit = Gross profit – Selling and Administrative expenses.

Net profit = Operating profit – Income tax.

Cost of goods encompasses expenses directly associated with the manufacturing of products, such as timber costs, electricity, equipment, and labor. Administrative expenses include salaries, wages, rent, utilities (e.g. electrical payments), office supplies, insurance, and transportation costs.

### 3. Results of the study

The main aim of this study is to examine the financial viability of furniture workshops located in specific cities across Ethiopia. As expected, the profitability of Ethiopia's wood industries is lower than expected. Most of respondents stated that as their industry is not profitable well and the analyzed data indicated the profitability of major industries are low 101 (59.4%), Table 2.

Table 2

| Profitability of furniture industries |            |              |                    |
|---------------------------------------|------------|--------------|--------------------|
| Description                           | Frequency  | Percent      | Cumulative Percent |
| Low                                   | 101        | 59.4         | 59.4               |
| Medium                                | 60         | 35.3         | 94.7               |
| High                                  | 6          | 3.5          | 98.2               |
| Total                                 | 167        | 98.2         |                    |
| System                                | 3          | 1.8          |                    |
| <b>Total</b>                          | <b>170</b> | <b>100.0</b> |                    |

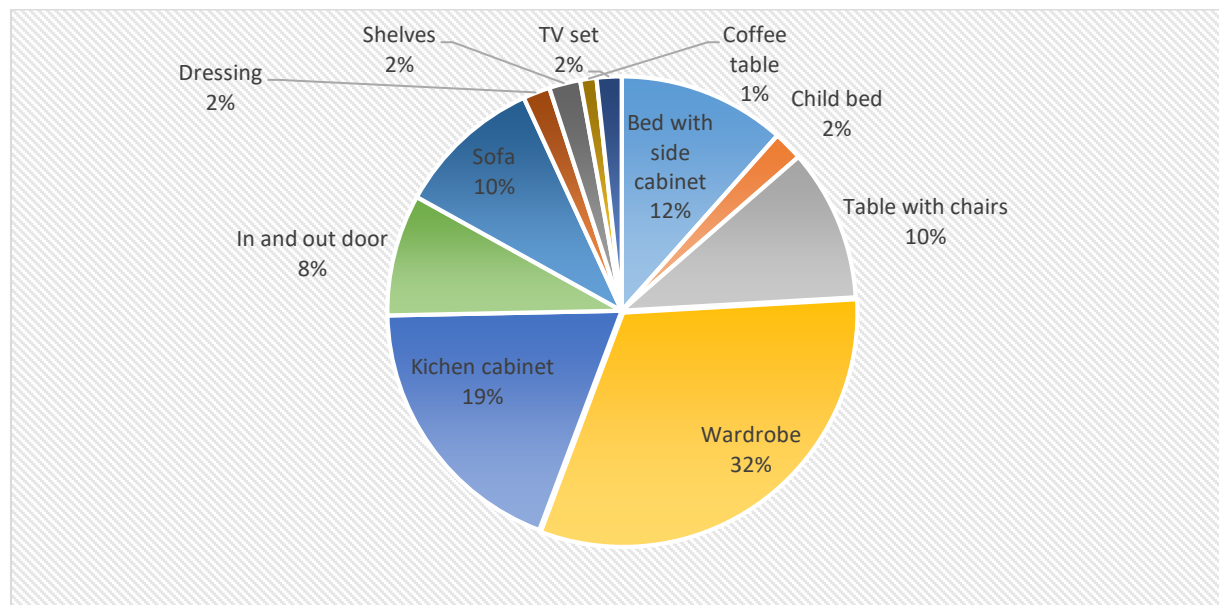
Source: Developed by the authors on the bases of [3,12].

Majority of respondents in wood industries agreed that their profitability is low because they are not qualified and efficient to use the resources, they get to produce the products they want at the required level and quantity for various reasons. As mentioned from respondents the workers engaged in the work are not professionally trained, the machines and equipment they work on are not modern, the production and sales area are not convenient, the lack and quality of raw materials, insufficient capital and credit, limited market connections, and overarching inflationary pressures are the main reasons.

#### 3.1 Yearly Incomes Generated by Small to Medium-Sized Furniture Workshops

The yearly earnings from small and medium furniture workshops in Ethiopia showed fluctuations, as shown in Figure 1. Wardrobes generated the most revenue, accounting for 32% of the total annual income, followed by kitchen cabinets at 19%, and then beds with side cabinets at 12%, Figure 1. Dining table with chairs (10%) and sofa (10%) and indoor (8%) were the other product in generating revenue in furniture workshops, Figure 1. Child beds, dressing table shelves TV sets and coffee table furniture were the products

contributing to generate revenue particularly in small scale furniture workshops, Figure 1. Small-sized furniture workshops achieve their highest revenue from the sale of items such as beds and smaller furniture sets like cup sets. On the other hand, medium-sized furniture workshops generate their highest revenue through the sale of larger furniture pieces like wardrobes and kitchen cabinets. Additionally, medium-sized furniture workshops exhibit greater profitability in comparison to their smaller counterparts.

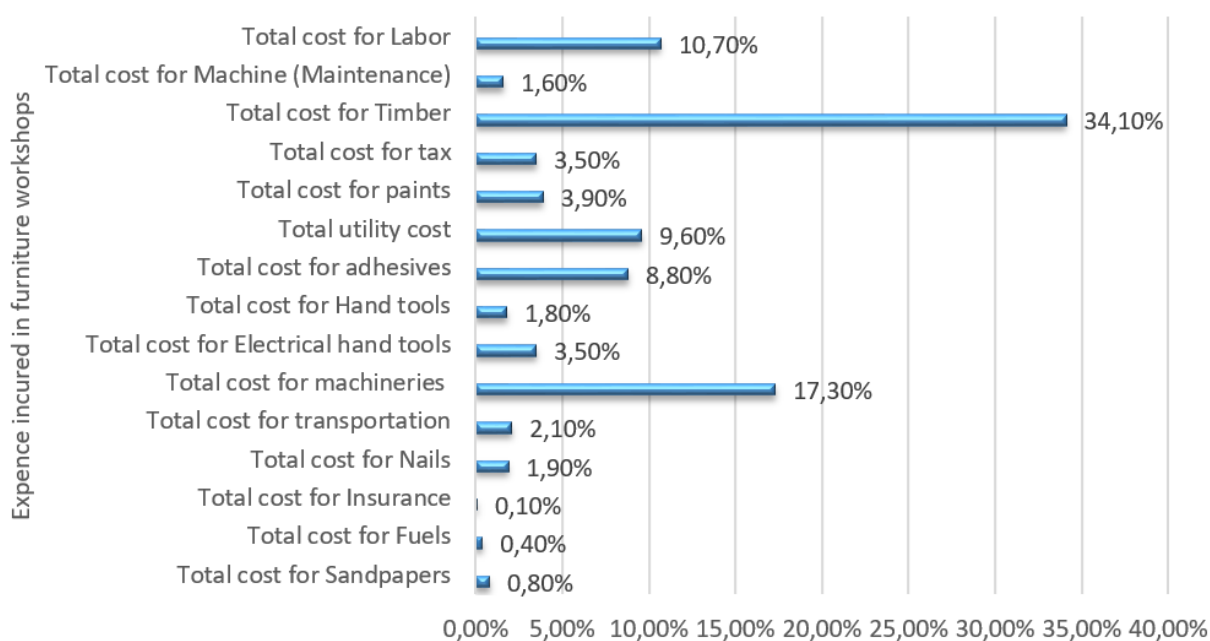


**Figure 1.** The mean income generated from various items produced by furniture workshops.

Source: Developed by the authors based on the survey data, 2023.

### 3.2. Expenses incurred for the resources utilized in furniture workshops

The yearly expenses for the materials utilized in small and medium-sized furniture workshops fluctuated, as illustrated in Figure 2.



**Figure 2.** The proportional expenses associated with materials utilized in a small and medium size furniture workshop.

Source: Developed by the authors based on the survey data, 2023.

Timber expenses stood out as the highest at 34.1%, trailed by machinery at 17.3%, and labor at 10.7%, Figure 2. Others significant costs in furniture workshops of Ethiopia are, utility cost, adhesives, paints including varnish costs, electrical hand tools (such as hand drills, jig saws, routers and nail shooters), tax payments and transportation cost; 9.6%, 8.8%, 3.9%, 3.5%, 3.5%, 2.1% respectively, Figure 2.

### 3.3. The Profitability of Furniture Workshops in different cities

The results indicated that, overall, the most profitable furniture workshops were located in Addis Ababa, with the exception of Jimma town where the gross profit margin ratio was the highest. Specifically, when considering profitability ratios, the operating profit margin ratio and net profit margin ratio were notably higher in Bahir Dar at 12% and 7.9% respectively, compared to Hawassa where they stood at 11.5% and 7.8%. In summary, Addis Ababa boasted the highest profitability at 8.5%, followed by Jimma town at 8.2%, and Bahir Dar slightly surpassing Hawassa at 7.9% and 7.8% respectively, since the net profit margin ratio offers a comprehensive assessment of profitability, Table 3.

Table 3

| Profitability ratios (%) in different cities |                           |                               |                         |
|----------------------------------------------|---------------------------|-------------------------------|-------------------------|
| City                                         | Profitability ratios in % |                               |                         |
|                                              | Gross profit margin ratio | Operating profitability ratio | Net profit margin ratio |
| Addis Ababa                                  | 20.1                      | 13.4                          | 8.5                     |
| Hawassa                                      | 19.3                      | 11.5                          | 7.8                     |
| Bahir Dar                                    | 17.8                      | 12.0                          | 7.9                     |
| Jimma                                        | 22.3                      | 12.9                          | 8.2                     |

Source: Developed by the authors based on [3].

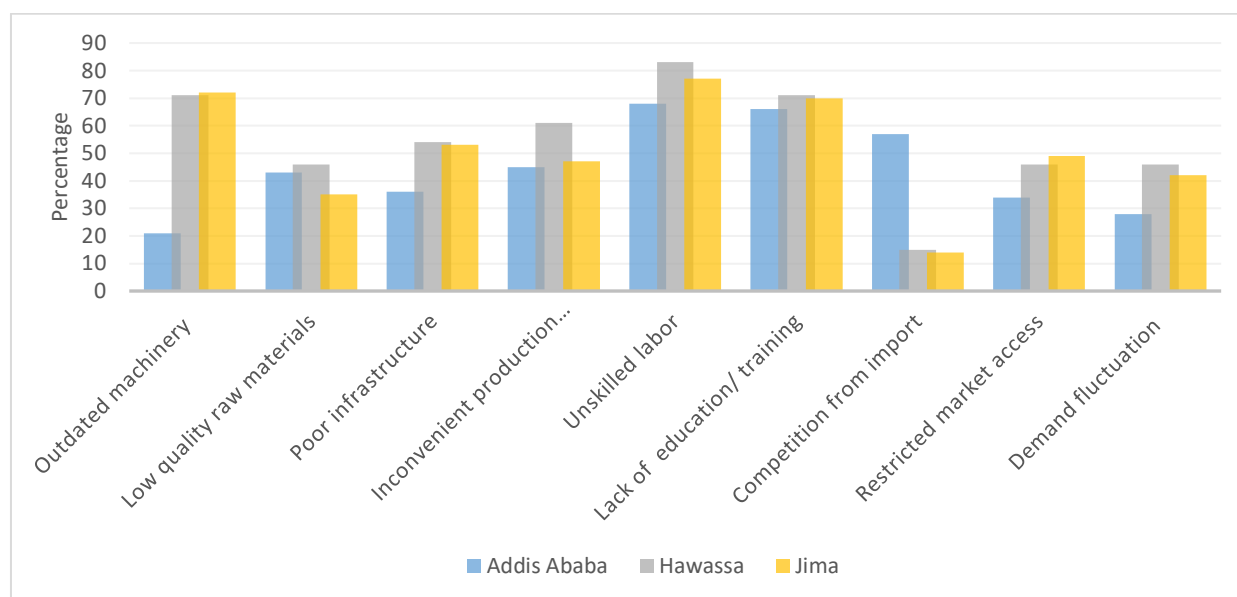
Based on insights gathered from various industries in selected Ethiopian cities, small and medium-sized wood furniture enterprises encounter numerous obstacles, ranging from operational issues to market-related limitations. These challenges significantly impact profitability and impede the potential for expansion and growth within the wood furniture sector. Many SMEs in these cities face struggles in securing sufficient funding for their operations, which hampers their ability to invest in modern machinery and equipment. The rising costs, scarcity, and quality issues of raw materials, such as lumber and other essential inputs like glue, paints, and nails, are notably affecting the profitability of wood furniture businesses.

Inadequate infrastructure, including unreliable power supply, poor transportation networks, inconvenient production and sales areas, and limited access to utilities like water, disrupt production schedules and escalate costs for wood furniture manufacturers. Owners of furniture firms highlight the impact of inefficient, unreliable, unsafe, and costly infrastructure on their business performance. This is in line with findings of different scholars. For instance, scholars have highlighted the critical role of location in determining the sales and revenue of small-scale enterprises, indicating that entrepreneurs benefit from operating in well-established residential areas [19]. Additionally, it has been emphasized by other researchers that robust infrastructure facilities have a positive impact on reducing operational costs [20].

Furthermore, skilled labor, especially in specialized fields such as furniture making and design, is often scarce across all selected cities. Many workers have not received formal

training either before or after being employed in these industries. The lack in formal education and the absence of on-the-job training are prominently evident across all cities, with approximately 78% and 72% respectively (as indicated in Figures 4). 60%, 55%, and 54% of respondents from industries in four cities indicated the lack of modern machinery, inconvenient production and sales areas, and inadequate infrastructure as their primary challenges (as shown in Figure 4). Survey results from all selected cities highlight the prevalence of outdated machinery and equipment in the industry. This issue is most pronounced in Bahir Dar, followed by Jima city, while it is least in Addis Ababa. The absence of automation and reliance on obsolete machinery led to inefficiencies and decreased productivity as well as profitability within Ethiopia's furniture firms. Despite having experienced personnel in certain sectors, many lack the requisite skills to operate outdated machinery proficiently. Consequently, employers face difficulties in attracting and retaining skilled workers, potentially affecting product quality and innovation.

Ethiopian wood furniture industries face stiff competition from imported products, often cheaper due to economies of scale and lower production costs in other countries. According to the survey result stiff competition was the highest in Addis Ababa and the least in Jima town, Figure 4. Limited market access and distribution channels further challenge SMEs in reaching domestic and international customers effectively. Failure to adhere to international quality standards restricts market access and limits export opportunities. Additionally, Furniture industries in all cities were indicated that they experience seasonal fluctuations in demand, leading to production surpluses or shortages. Managing production schedules to meet fluctuating demand levels were a significant challenge for SMEs.



**Figure 4.** Key challenges in different wood industries.

*Source: Developed by the authors on the bases of [13,14,16].*

#### 4. Conclusion

The survey findings revealed that Ethiopia's wood industry's profitability falls short of expectations. This disparity can be attributed to several factors, including the lack of professional training among workers, outdated equipment, inadequate production and sales facilities, a shortage of high-quality raw materials, limited access to capital and credit,

a lack of market connections, and the overarching issue of inflation. Interestingly, medium-sized [19] furniture workshops showed higher profitability compared to smaller ones. Medium-sized workshops generated more revenue primarily through the sale of larger furniture items like wardrobes and kitchen cabinets, whereas small-scale workshops earned the most from smaller items such as cup sets. Notably, Addis Ababa exhibited the highest profitability among furniture workshops, followed by Jimma town.

Small and medium-sized furniture workshops experience considerable fluctuations in their yearly spending. The majority of their budget is dedicated to purchasing raw materials, primarily timber. Insights gleaned from industry sources across selected cities indicate that Ethiopian small and medium-scale wood furniture enterprises encounter several challenges, ranging from operational issues to market-related constraints. Mitigating these obstacles necessitates a concerted effort involving policymakers, industry stakeholders, and SMEs themselves to enhance access to financing, develop infrastructure, provide skills training, facilitate market entry, and promote the adoption of sustainable practices.

**Conflicts of Interest:** The authors declare no conflict of interest.

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## AUDIT DOCUMENTATION – AN IMPORTANT FACTOR IN FINANCIAL AUDIT MISSION

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**Abstract.** According to the latest updates of the International Standards on Auditing, the audit documentation represents the record of applied audit procedures, of the sufficient and appropriate obtained audit evidence and of the conclusions reached by the auditor. There is currently an increased interest in studying the documentation approach of the entire audit universe. In this context, the importance of the given paper lies in the need for continuous examination of the documentation related to the audit process as a whole. The research is based on the qualitative research method, which allowed the review of a series of important research on audit documentation and the study of related national and international regulations. The study reveals some of the determining factors of the quality of financial audit missions, which reside in the deep knowledge and correct operation of the regulations applicable to the audit documentation, including all the amendments made and the correctness of its preparation. Also, when preparing the audit documentation, the particularities of the performed audit stage, the specifics of the audited client, the nature and context of the applied procedures must be taken into account.

**Key words:** *audit, working papers, international standards on auditing.*

**Rezumat.** În conformitate cu ultimele actualizări ale Standardelor Internaționale de Audit documentația de audit reprezintă evidența procedurilor de audit aplicate, a probelor de audit suficiente și adecvate obținute și a concluziilor la care a ajuns auditorul. Actualmente se atestă o sporire a interesului cu privire la studierea tratării documentării întregului univers de audit. În acest context, importanța cercetării de față constă în necesitatea examinării continuă a documentației aferente procesului de audit privit în ansamblu. Cercetarea are la bază metoda de cercetare calitativă, care a permis revizuirea un șir de cercetări importante cu privire la documentația de audit și studierea reglementărilor naționale și internaționale aferente. Studiul relevă unii dintre factorii determinanți ai calității misiunilor de audit financiar, ce rezidă în cunoașterea profundă și aplicarea corectă a reglementărilor aplicabile documentației de audit, inclusiv a tuturor modificărilor operate și corectitudinea întocmirii acesteia. De asemenea, la elaborarea documentației de audit trebuie să se țină cont de

particularitățile etapei de audit exercitate, specificul clientului auditat, natura și contextul procedurilor aplicate.

**Cuvinte-cheie:** *audit, documente de lucru, standarde internaționale de audit.*

## 1. Introduction

To successfully implement a financial audit mission, it is necessary to carry out its appropriate documentation. According to the Glossary of Terms related to the Handbook of International Quality Control, Auditing, Review, Other Assurance and Related Services [1] the mission's documentation is represented by the evidence of the performed activities, the results obtained and the conclusions reached by the auditor.

In the context of exercising the commitment concluded with the client, we identify the notion of "audit documentation", which, in accordance with the same Glossary, means the record of the applied audit procedures, of the necessary and appropriate obtained audit evidence and of the conclusions realized by the auditor. At the same time, in auditing practice, instead of the terms "mission documentation" and "audit documentation", the expression "working documents" or "worksheets" is also used.

In order to confirm the above mentioned, we note that the working documents are a part of any audit, which is essential for its effective planning, keeping track of the accumulated evidence and the results of the carried-out tests in order to subsequently choose the right type of report and ensuring the possibility of verifying the work of the audit team [2-4].

At the same time, in the current conditions, there are a series of challenges that auditors have to face. Among them are listed the following: the multiple regulations, frequent changes in financial and non-financial reporting, the development of technologies, etc. [5]. In this context, certain factors are identified that contribute to the development of information technologies. It is about the significant volumes of information and documents that must be examined during the audit mission, as well as the standardization of all stages of the audit exercise and the requirement for compliance with the International Standards on Auditing (ISA) of the audit documentation [6]. In turn, the development of technologies in audit involves the development, improvement and implementation of certain working documents that influence the quality of the missions performed.

In this vein, the changes made in the international quality assurance system, namely the International Standard on Quality Management 1 (ISQM 1) "Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements" and of the International Standard on Quality Management 2 (ISQM 2) "Engagement Quality Reviews" specify certain requirements for audit documentation. Therefore, audit companies must adequately document their quality management system [7, 8].

The main conclusions based on the undertaken bibliographic study reveal the growing interest in the approach of the documentation of the entire audit universe. In these circumstances, the importance of the given paper is founded by the need for continuous examination of the documentation related to the audit process as a whole.

The aim of the research consists in the complex investigation of the way of documenting the basic aspects related to all stages of the exercise of the financial audit, the determination of the content of the working documents related to them and the influence of the correct and timely perfection of both, the audit procedures and samples, as well as the results obtained on the quality of the performed audit.



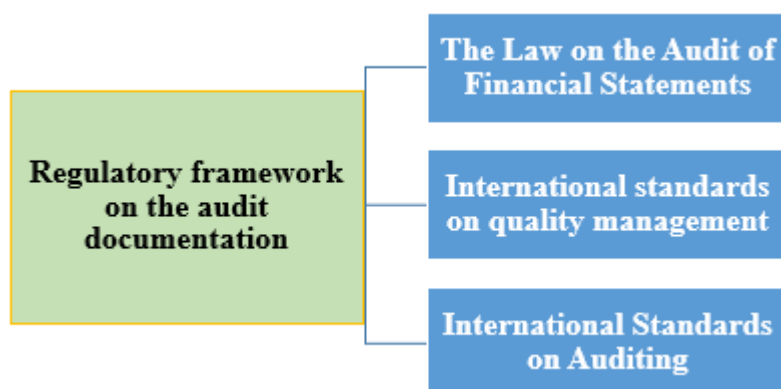
## 2. Materials and Methods

The present research has a theoretical-applied nature, being based on the qualitative research method, which allowed the explanation of some relevant aspects addressed. In the context of the application of the given method, a series of important researches were reviewed regarding the audit documentation, which refers to the period of 2014-2023. The results of research in the field carried out by both domestic and foreign authors were analyzed, which reveal the importance of audit documentation in ensuring the quality of the financial audit mission. At the same time, the related national and international regulations were studied, a fact that contributed to the identification and argumentation of the basic provisions of the preparation of working documents according to the basic stages of the exercise of the audit commitment.

## 3. Results and Discussions

During the exercise of financial audit missions, the auditors must have the appropriate skills to perfect the activities performed in certain working documents, which allow to make appropriate conclusions on the audit process. In these circumstances, a determining factor of the quality of the financial audit missions is the adequate preparation of the audit documentation, which is based on the deep knowledge and correct application of the provisions of the applicable regulatory framework, including all the made changes.

In our scientific approach, we consider it appropriate to present and explain the basic elements of the regulation regarding audit documentation in the Republic of Moldova (Figure 1).



**Figure 1.** The basic elements of the audit documentation regulation in the Republic of Moldova.

*Source: Developed by author.*

As can be noticed from Figure 1, the current regulation in the Republic of Moldova is organized in two levels, being represented by the national regulation through the Law on the audit of financial statements no. 271 of 15.12.2017 and the international one, based on ISQM 1 "Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements", ISQM 2 "Engagement Quality Reviews" and ISA.

Thus, the Law on the audit of financial statements [9] stipulates the fundamental aspects of the regulation of audit documentation, which make up:

- provisions related to the preparation of the audit file;
- the content of the audit contract;
- responsibility in the case of the audit of the consolidated financial statements of a group of entities;

- rights of the auditor and the audit entity regarding the choice of the audit method;
- obligations of the audited entity regarding the request for the necessary information;
- the supplementary report addressed to the audit committee.

In turn, ISQM 1 "Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements" [10] and ISQM 2 "Engagement Quality Reviews" [11] regulate:

- documentation of the quality management system;
- policies and procedures regarding the engagement quality review documentation;
- the basic elements of the engagement quality review documentation.

We take into account to mention that the ISAs have been applied in auditing practice in our country since 2012, in accordance with the Decision of the Government of the Republic of Moldova no. 180 of 23.03.2012 regarding the application of Audit Standards and the Code of Ethics on the territory of the Republic of Moldova [12].

The basic standard that regulates the audit documentation is ISA 230 "Audit documentation", while at the same time, provisions on the way of organizing and drawing up working documents are also found in other standards. In this context, the content of the ISAs was subjected by us to a detailed research, the results of the undertaken study being presented in Table 1.

Table 1

**Important aspects of the ISA regarding audit documentation**

| <b>Regulatory documents</b>                                                                     | <b>Basic contents of audit documentation</b>                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. ISA 210 "Agreement on the terms of the audit engagement"                                     | Documenting the terms of the audit engagement in an engagement letter                                                                                                                                                         |
| 2. ISA 220 "Quality Control for an Audit of Financial Statements"                               | Documentation: <ul style="list-style-type: none"> <li>- compliance with the relevant ethical requirements;</li> <li>- obedience with the independence obligation;</li> <li>- accepting and continuing the mission.</li> </ul> |
| 3. ISA 230 "Audit Documentation"                                                                | Preparing working documents on time.<br>Documentation of performed audit procedures and obtained audit evidence.<br>Compilation of the final audit file.                                                                      |
| 4. ISA 240 "The Auditor's Responsibilities Regarding Fraud in an Audit of Financial Statements" | Documentation of fraud communications.                                                                                                                                                                                        |
| 5. ISA 250 "Considering Laws and Regulations in an Audit of Financial Statements"               | Documenting recognized or supposed cases of non-compliance with laws and regulations.                                                                                                                                         |
| 6. ISA 260 "Communication with persons responsible for governance"                              | Documentation of communications with the persons responsible for governance.                                                                                                                                                  |
| 7. ISA 300 "Planning an audit of financial statements"                                          | General audit strategy.<br>The audit plan.<br>Changes in the overall audit strategy and audit plan.                                                                                                                           |

Continuation Table 1

|                                                                                                                              |                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8. ISA 315 "Identifying and assessing the risks of significant misstatement by understanding the entity and its environment" | Documenting the understanding obtained on the entity and its setting.<br>Documentation of risk identification and assessment.                                                          |
| 9. ISA 320 "The Threshold of Materiality in Planning and Conducting an Audit"                                                | Documenting the materiality threshold for the financial statements as a whole.<br>Documentation of the functional materiality threshold.<br>Revising the materiality threshold.        |
| 10. ISA 330 "Auditor's Response to Assessed Risks"                                                                           | Documenting the general answers for dealing with the assessed risks of distortion at the level of the financial statements.                                                            |
| 11. ISA 450 "Assessment of misstatements identified during the audit"                                                        | Documenting the amount of distortions that are not significant.<br>Documentation of accumulated distortions during the audit.                                                          |
| 12. ISA 540 "Audits of Accounting Estimates and Related Disclosures"                                                         | Documentation of accounting estimations.<br>Documenting presentations on related information.                                                                                          |
| 13. ISA 550 "Related parties"                                                                                                | Documenting the name of the affiliated parties and the nature of the relations with them.                                                                                              |
| 14. ISA 600 "Special considerations - audits of group financial statements"                                                  | Documentation of the important components and the type of performed activities.<br>Documentation of communications between the audit team and the group of auditors.                   |
| 15. ISA 610 "Using the work of internal auditors"                                                                            | Documenting the level of aptitude of the internal auditors.<br>Documenting the audit procedures of the external auditors for assessing the suitability of the internal audit activity. |
| 16. ISA 720 "The Auditor's Responsibilities Regarding Other Information"                                                     | Documentation of the performed procedures on other information.                                                                                                                        |

Source: Developed by author based on: [13].

From the data in the table, it follows that the regulation related to the audit documentation refers to the basic stages of the exercise of the audit mission, such as: the planning stage, the field work stage and the stage of achievement and reporting of the audit results. At the same time, carefully analyzing the content of the international auditing standards, we notice that they do not provide for the form and concrete descriptions of the auditor's working documents. The given aspect remains at the discretion of the auditing companies, which have the task of developing and implementing certain documents in auditing practice. In our opinion, when drafting them, the particularities of the audit stage carried out, the specifics of the audited client, the nature and context of the procedures applied, etc. must be taken into account. In this context, it is appropriate to explain some basic aspects of the audit documentation in accordance with the phases of the financial audit mission.

**Mission planning stage.** We note that the objective of the auditor for the given stage is to plan the audit in such a way, as to allow it to be carried out effectively. At the same time, ISA 230 "Audit documentation" [14] stipulates the requirement for the audit documentation to provide evidence confirming that the audit has been planned and is performed in accordance with the applicable legal framework.

At the engagement planning stage, as it follows from the information presented in Table 1, the auditor must prepare two important documents, such as: the overall audit strategy and the audit plan. If, during the audit mission, significant changes have occurred, these are also to be documented with the reasons for these changes.

In the contents of the ISAs we do not find defined forms of the general audit strategy and the audit plan, but in the Appendix to ISA 300 "Planning an audit of financial statements" [15] we find relevant considerations, which can be taken as a basis for perfecting these working documents. At the same time, we note that depending on the audit client and the complexity of the audit, the auditor may include certain aspects that he considers significant.

It is important to specify that, in the situation where the audit mission is performed for the first time at the audit client, the following aspects must be documented:

1. Communication with the predecessor auditor. That communication may be made for the purpose of reviewing his working papers.
2. Procedures regarding the acceptance of the audit mission. Here we consider the documentation of: identified issues regarding compliance with ethical requirements; conclusions related to compliance with the requirement of independence and consultations with other professionals on some difficult subjects (for example, documenting the aspect subject to the consultation, the results of the consultations, the decisions taken and the way in which they were implemented).

In this context, working documents can be used, such as:

- summaries of communication with the predecessor auditor;
- statements and descriptions regarding compliance with ethical requirements;
- declaration of independence;
- descriptions of the nature of the consulted subjects;
- various correspondence.

We take into account to mention that the quality of the work realized further by the auditor, depends on the correctness and completeness of the documents related to the planning stage, as it appears from the basic objective of planning the audit mission, presented by us previously.

**The stage of the actual exercise of the audit mission (the stage of work in the field).** The given stage is characterized by the technical aspect of applying audit procedures and tests, corresponding to obtaining audit evidence. Auditors have to deal with a large volume of information and data, which must be tested and analyzed in order to reach appropriate conclusions. In the conditions of conducting audit missions within contemporary commercial companies, which have complex IT systems for processing information, as well as a varied range of economic activities, auditors must have skills in advanced technologies to be able to cope with the increasing requirements with respect to the quality of the carried-out missions.

We note that technology has penetrated all sectors of the economy, and auditing is no exception. Auditors are affected by the latest technological developments, just like other

fields of activity [16]. All the more so that the activity of auditors, lately, has been affected by challenges in conducting remote audits under the conditions of the Covid-19 pandemic [17].

Currently, audit companies have access to various systems regarding the automation of audit activities, which differ according to:

- type of application (Typical systems, Modernized Typical systems, Specialized Typical systems);
- functional capacities (Standard systems and Multifunctional systems) [6].

Each of these automated systems has distinctive features, and their use by auditors is dictated by personal preferences and skills in their use, as well as by the possibilities of audit companies to implement them. At the same time, we believe that their application also depends on the auditors' need for complete automation of the audit process. For example, the appropriate unit, such as audit procedures and documentation, is appropriate for the audit exercise stage.

In accordance with the aspects described above, it is important to ensure adequate security on the part of the auditors, because there is still a risk that the information obtained and processed with the help of IT systems will be destroyed or lost [18]. We also consider of vital importance to ensure the confidentiality of information, which can be guaranteed by access and data modification passwords. The mentioned aspects influence the quality of the activities at the stage of the exercise of audit procedures and, accordingly, contribute as a whole to increasing the quality of the audit mission.

**The stage of completing and reporting the results of the audit mission.** Audit work at this stage is important despite the fact that it generates the final results and conclusions reached by the auditor. The work performed by the auditor during the mission is embodied in his report, which is the final document issued by the audit team. The information presented in the auditor's report is made available to a wide spectrum of users interested in the veracity of the financial statements. We mention that financial auditors, compared to other people who perform verifications of economic entities, have the opportunity to operate with an important range of information within them, having direct access to financial statements and other data related to the activities carried out. From this point of view, the auditor's report as the basic document of the audit mission constitutes a truthful source of information and further decision-making by users.

We note that interest in the form and content of the report has always been high, despite the onset of crises and major financial scandals. Investors, as users interested in the authenticity of information from financial statements, have become more cautious, at the same time the need for a quality auditor's report is attested [19]. This fact confirms the increased responsibility of the auditor regarding the reporting of the results of the audit mission [20]. This has led to substantial improvements in the content of the auditor's report, which provide the possibility of communicating new information and increase its transparency. Thus, the latest changes aim at adding new elements, such as: business continuity, other information and key audit aspects. Consequently, this document has been expanded, a fact that the auditor must take into account at the stage of finalizing and reporting the results of the audit mission.

At the end of the audit mission, the auditor must gather all the audit documentation in the final audit file, which in accordance with ISA 230 "Audit documentation", must be prepared no later than 60 days after the date of the auditor's report [14]. The information presented in the file must be structured in such a way as to ensure the monitoring of the

activities carried out by persons who do not participate in the mission, at the same time to facilitate the review process of the quality of the mission, including the audit documentation. In this context, working documents must necessarily contain both information of a financial and accounting nature, as well as specific information, such as: title, name and date, purpose, presented conclusion, source and owner, index, cross-references and references to other working documents [21].

#### 4. Conclusions

The purpose of the presented study was the complex examination of the way of documenting the basic aspects related to all stages of financial audit exercise. Audit documentation means the record of the applied audit procedures, the sufficient and appropriate obtained audit evidence and the conclusions reached by the auditor. The analysis of notions related to the research topic reveals the connection between the expressions "audit documentation", "mission documentation", "working documents", "worksheets".

The study on the basic elements of the regulation regarding the audit documentation in the Republic of Moldova shows the fact that, at the moment, it is organized in two levels, such as: the national regulation through the Law on the audit of financial statements no. 271 of 15.12.2017 and the international one, based on ISQM 1 "Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements", ISQM 2 "Engagement Quality Reviews" and ISA.

The examination of the legal framework reveals that the Law on the audit of financial statements stipulates the fundamental aspects of the regulation of audit documentation, and the analyzed standards regulate aspects related to the documentation of the quality management system and the documentation of the quality review of the mission.

The detailed research of the content of the ISAs, presented in Table 1, showed that the regulation related to the audit documentation refers to the basic stages of an audit mission, such as: the planning stage, the field work stage and the stage of completing and reporting the audit results.

Thus, the study denotes the important aspects for these stages:

1. For the planning stage, it is essential to document the aspects related to the communication with the predecessor auditor and the procedures regarding the acceptance of the audit mission.

2. The field work stage is characterized by the technical aspect of applying audit procedures and tests, corresponding to obtaining audit evidence. Despite the fact that auditors have to deal with a large volume of information and data, they may choose to use certain automated systems, depending on personal preferences and skills in using them. At the same time, for the given stage, it is appropriate that the chosen system has the unit - audit procedures and documentation, which ensure the confidentiality of the information.

3. Audit work at the last stage is important despite the fact that it generates the final results and conclusions reached by the auditor, which are reflected in the auditor's report. The study reveals the increase in the need for a quality in auditor's report, an aspect that contributed to its essential improvements, which offers the possibility of communicating new information and increases its transparency. In this context, we mention the addition of new elements such as: business continuity, other information and key audit matters. The auditor must generalize all audit documentation in the final audit file, which ensures the monitoring of the performed activities and facilitates the review process of the quality of the mission.

**Conflicts of Interest:** The authors declare no conflict of interest.

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## WAYS OF IMPROVING THE METHODOLOGICAL FRAMEWORK OF MASSIVE EVALUATION OF REAL ESTATE IN THE REPUBLIC OF MOLDOVA

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**Abstract.** This article focuses on researching the methodological development of real estate assessment in the Republic of Moldova, addressing the significant financial losses incurred by local public administrations due to the absence of an updated, appropriate, and transparent assessment system for taxation purposes. The fundamental hypothesis posits that enhancing the methodological and institutional framework of mass appraisal will lead to a progressive evolution of the real estate market relations and the stable development of efficient and equitable tax systems in Moldova. The study aims to identify and propose solutions to current issues in the national mass appraisal system, primarily related to the unavailability of market data and the use of outdated methodologies. Employing scientific techniques such as analysis, deduction, induction, grouping, comparison, analogy, scientific abstraction, synthesis, and statistical methods, the author assess the effectiveness of proposed methodological developments by comparing quality indicators of old assessment models with those developed based on the proposed methodologies. The results obtained support the idea of creating, implementing, and sustaining a mass appraisal system as a foundational element for a fair real estate taxation system, fostering regional development, and supporting economic activities related to the real estate market in the Republic of Moldova.

**Keywords:** *property valuation, property taxation, real estate economics, value modeling, regression.*

**Rezumat.** Acest articol se concentrează pe cercetarea dezvoltării metodologice a evaluării masive a proprietăților imobiliare în Republica Moldova, abordând pierderile financiare semnificative suferite de administrațiile publice locale din cauza absenței unui sistem de evaluare actualizat, adecvat și transparent în scopuri de impozitare. Ipoteza fundamentală presupune că îmbunătățirea cadrului metodologic și instituțional al evaluării în masă va conduce la o evoluție progresivă a pieței imobiliare și la stabilirea unor sisteme de impozitare eficiente și echitabile în Moldova. Studiul identifică și propune soluții la problemele curente din sistemul național de evaluare în masă, legate în primul rând de indisponibilitatea datelor de pe piață și de utilizarea metodologiilor învechite. Folosind tehnici științifice precum analiza, sinteza, inducția, deducția, gruparea, comparația, analogia, abstractizarea științifică, autorul evaluează eficacitatea dezvoltărilor metodologice propuse prin compararea indicatorilor de calitate ai vechilor modele de evaluare cu cele dezvoltate pe baza

metodologiei propuse. Rezultatele obținute susțin ideea creării, implementării și menținerii unui sistem de evaluare în masă ca element de bază pentru un sistem echitabil de impozitare a proprietăților imobiliare, promovând dezvoltarea regională și susținând activitățile economice legate de piața imobiliară în Republica Moldova.

**Cuvinte cheie:** *evaluare imobiliară, impozitare imobiliară, economie imobiliară, modelare valorică, regresie.*

### Abbreviations

PIEF - Project of Land Registration and Evaluation.

Me - Median rate.

COD - Coefficient of dispersion.

PRD - Price Related Difference.

Rate (R) – report of indicators from different models.

### 1. Introduction

Currently, the market of real estate in the Republic of Moldova is in average stagnation, characterized by a lack of transparency, inconsistencies in the data from the real property cadastre, poorly developed institutional infrastructure. These problems are also reflected in a particular part of the assessment activity – the massive real estate valuation for taxation purposes. Having a special purpose, the activity of massive real estate evaluation is in the acute attention of the stakeholders in the results of the evaluation. On the one hand, the state, represented by territorial bodies, which monitor the dynamics of the real estate market, obtaining indicators to ensure the local budgets necessary for the management of the regions, on the other hand, civil society, having the role of taxpayers, respond to the reforms related to the changes made to the real estate tax and an additional wealth tax calculated on the basis of the value assessed by the real estate cadastre. A series of discussions and disputes arising in connection with the fulfillment of civil obligations to pay real estate taxes concern the calculation methodology and the principles used to assess the value of real property. All this is concentrated in the amount of taxes calculated on the basis of the estimated value in the mass assessment.

Having an experience of massive evaluation of some categories of immovable property for the purpose of taxation since the first decade of the current century, the tax authorities extend the calculation of the real estate tax on the base of the non-updated values from the primary massive evaluation. Another part of real estate is taxed based on the normative values established according to the indices combined from the 70s of the last century with some updating indexation. All this generates enormous losses in the budgets of local authorities, which in turn is reflected in the dynamics of development, the stagnant social and economic situation in the regions.

According to the relations in the real estate market, the level of awareness of citizens - subjects of the payment of real estate taxes - has also increased. This aspect is reflected in the emergence of new factors that affect the value of the property and its evaluation conditions. The old models used for the previous evaluation cause a number of problems that arise in their application, and the results obtained with the help of these models do not correspond to the current level and fluctuations of the real estate market. These problems have created tough conditions for the generation and implementation of new methodologies using modern mathematical and cybernetic modeling methods.

The establishment of an ad valorem property taxation system stands out as a prominent aspect of tax reform across numerous countries. The shift towards this new system is particularly pertinent in developing economies, that perceive the notions of "private property", "market relations" and "market value" as relatively new. In the present, a comprehensive tax reform is undergoing in Moldova, encompassing the adoption of a novel approach to real property taxation grounded in market value estimates for tax assessments. The ongoing implementation of a versatile real property cadastre system in the country assumes a crucial role, providing a robust foundation for tax assessment.

The real property tax stands as a crucial revenue stream for local budgets, particularly in countries with emerging economies. For example, in Moldova, property taxes contributed 8% to local government revenues, while central government subsidies provided 44%. In Lithuania, property taxes account for 10% of local revenues, but 60% comes from central government funds [1, p. 13]. Establishing an effective real property taxation system becomes pivotal for laying the groundwork for decentralized public governance. This tax allows local governments to capture a portion of the property value increments influenced by public expenditures. As highlighted by McCluskey, real property, being "visible, immobile, and a clear indicator of one form of wealth," becomes a tangible asset in this regard [2, p. 5]. Compared to other potential sources of local tax revenue, the real property tax proves especially attractive if administered adeptly, acting as an equitable and exceptionally effective fiscal instrument [3, p. 4].

Upon declaring independence and embarking on the journey to establish or reconstruct market economies, states in Central and Eastern Europe initiated comprehensive tax system reforms, encompassing the taxation of real property. This transformative process has been observed by scientists in various countries, including Slovenia, the Russian Federation, Belarus and Lithuania [4, p. 166].

The global landscape presents a diverse array of approaches to real property taxation. As it was classified by US appraisals, in several countries, the tax computation relies on the size of parcels and buildings, whereas in others, the assessment for taxation is grounded in the market value of both land and constructions [5, p. 30].

Systems based on property area offer the benefit of being administratively straightforward. Determining property tax according to area solely necessitates measuring the property's dimensions, eliminating the necessity for expensive data collection and market analysis, as well as revaluation processes. Moreover, measuring area is more objective compared to estimating the market value of the property, as assessors rely on comparable properties to form their estimations [6, p. 143]. Valuation methods centered on property area are thus less prone to dispute compared to those based on market values [7, p. 81].

The author draws upon property tax laws in the Republic of Moldova and various other countries, as well as economic literature pertaining to the topic, and data from the State Agency for Geodesy Cadastre and Cartography, as well as the State Tax Service of the Republic of Moldova. The issues under examination are partially addressed in the research conducted by scholars from the Republic of Moldova. Crucial elements of the evaluation process are investigated by T. Bajura and S. Popescu [8]. The efficient administration of real estate by local government bodies for the development of local budgets is explored in the studies of I. Paladi. Mechanisms and tools aimed at solving the problems of the agro-food sector as a whole, including taxation, infrastructure development, export promotion, government regulation of the market are researched by A. Muravschi [9]. The theory and

practice of real estate valuation are described in the works of O. Buzu, A. Matcov [10]. The practice of expressing the hypotheses of economic science through econometric models was developed by scholars S. Gorobievschi and L. Dorofteeva [11]. S. Albu and I. Albu delve into modern evaluation theory, heritage management, and the utilization of databases in the real estate appraisal process within the context of Moldova's developing economy [12]. The factor analysis of the market value as a basic indicator of the national economy, as well as of social equity in the context of its use as the taxable base, is presented in the works of S. Albu, I. Albu and N. Țurcanu [13]. The sensitivity of land value depending on the economic and political situation is researched in the works of I. Botnarenco and I. Bratco [14], the methodology for calculating land with perennial plantations is proposed by T. Sanduța [15], as well as the value of land related to construction [16]. The problems faced by the countries that have explored the potential of introducing recurring property taxes based on value (Moldova, Poland, Serbia and Turkey) are researched by O. Buzu [17].

## 2. Materials and methods

At present, the Republic of Moldova is undergoing a transition from the previous method of property taxation, which relied on inventory value, to the new ad valorem system. This new system was introduced in Moldova in 2007, initially applying solely to residential properties in urban areas between 2007 and 2009. In 2010, the ad valorem tax was extended to include commercial and industrial properties, seasonal properties, and garages. By 2014, the assessment encompassed the primary categories of real estate with the greatest market worth.

The mass real property registration and assessment, which rely on property cadastre data, are closely intertwined with the implementation of the new property taxation system. As the mass registration of real estate properties progresses incrementally, the introduction of the new property taxation system also occurs gradually as part of this ongoing process (refer to Table 1).

*Table 1*

### **The bulk registration and evaluation of real estate alongside the implementation of the new taxation system**

| Type of Property                     | Quantity  | Registration Period     | Assessment Year | New Taxation System (year of implementation) |
|--------------------------------------|-----------|-------------------------|-----------------|----------------------------------------------|
| Apartments                           | 335,000   | 2000-2002               | 2004            | 2007                                         |
| Private houses in urban areas        | 180,000   | 2001-2003               | 2005            | 2007                                         |
| Land plots and Sites with structures | 80,000    | 2006-2007               | 2006-2007       | 2010                                         |
| Garages                              | 50,000    | 2006-2007               | 2006-2007       | 2010                                         |
| Commercial and industrial property   | 90,000    | Registration in process | 2006-2009       | 2010                                         |
| Agricultural plots                   | 4,095,000 | 2000-2005               | In progress     | Not applied                                  |

In accordance with the Financing Agreement between the Republic of Moldova and the International Development Association of 17 September 2018, ratified in 2018 [18], for the period 30.08.2018-30.07.2024 in the Republic of Moldova, the Project of Land Registration and Evaluation (PIEF), the main objective being to improve the quality of the land administration and real estate evaluation systems and to strengthen the transparency of the real estate taxation system. Component B of the project covers Assessment and Taxation. This element will facilitate the extension of the mass appraisal system to incorporate properties currently not accounted for and to carry out a reassessment of properties that are already in the mass assessment system but have not been reassessed since 2008. In order to scientific research by the author used the market data, collected within this project. Systematized information about the market data used is placed in Table 2.

Table 2

| Market data collected |                |                                    |                 |                 |                  |       |                             |                          |        |
|-----------------------|----------------|------------------------------------|-----------------|-----------------|------------------|-------|-----------------------------|--------------------------|--------|
| Period                | Apartm<br>ents | Apartm<br>ents on<br>the<br>ground | Urban<br>houses | Rural<br>houses | Summer<br>houses | Garaj | Commere<br>cial<br>property | Agricu<br>ltural<br>land | Total  |
| 2016-<br>2023         | 42540          | 1792                               | 14054           | 8549            | 5549             | 7431  | 11278                       | 19292                    | 118658 |

**Note.** Data are valid for 01.08.2023.

The methodological foundation of this study rests on examining and organizing the works of domestic and international scholars concerning various aspects such as real estate valuation, the current status of the local real estate market, investment analysis focusing on real estate efficiency, fiscal policy, mathematical modeling, and real estate management. Throughout the research, references are drawn from legislative and regulatory documents in the fiscal domain, real estate cadastre, real estate management and appraisal practices, methodological guidelines, online informational resources, and educational frameworks. The study employs general scientific techniques and methodologies, including analysis and synthesis, induction and deduction, grouping, comparison, analogy, scientific abstraction, and statistical methods.

### 2.1 Mass Appraisal Practice of Real Estate in the Republic of Moldova

Methodological framework for mass appraisal of real estate for taxation purposes in the Republic of Moldova was developed by specialists from the First Cadastre Project after testing the methodology from 2002 to 2004. Experts such as Joseph K. Eckert, one of the founders of the automated mass appraisal system in the United States, as well as specialists from the Netherlands, Sweden, and Canada, had a considerable impact on the advancement of the Moldovan assessment system. According to the established legal framework, each stage of the process consists of a series of technological procedures and specific activities [19, p. 285]. As per specialists in the domain, developing nations utilizing a property taxation system reliant on value encounter two primary hurdles: the absence of an exhaustive list of taxable properties and insufficient transaction price data. Although these challenges could be addressed with ample resources, governments display reluctance to do so, despite the potential benefits stemming from these alterations [4, p. 178]. A complete list of real estate in the Republic of Moldova is guaranteed by the introduction of the Real Estate Register and related legislative acts. The introduction of mass registration programs, as well as ongoing

monitoring of the circulation of real estate objects, provides the state with a good data bank about real estate objects and the rights to them. Regarding transaction data, at the moment government agencies do not have complete information on reflex prices due to the effect of price dumping on the part of transaction participants. There are also a number of other problems that are relevant for the system of mass real estate valuation and have related points to other economic systems of Moldova. For example, illegal buildings and unregistered buildings. The acceptability of property taxes is likely to be undermined if taxpayers perceive that others are avoiding payment because their properties are not registered in the government's accounting system. Informal occupation of land and buildings complicates the maintenance of tax lists and undermines the universality of property taxes [20, p. 24].

## 2.2 Existing Models of Real Estate Value in Moldova

In accordance with the legal framework of the Republic of Moldova (Government Decision No. 670/2003), in national practice, the primary mass appraisal of real estate for taxation purposes was conducted based on the hedonic model of multiplicative regression established through expert-analytical methods. The models were developed and implemented between 2003 and 2010 [21, p. 114].

Currently, in Moldova, models for the assessment of real estate for taxation purposes are developed, the form of which depends on the assessment methods used. For standard real estate objects (apartments, residential buildings, land), provided there is sufficient sales data, the sales comparison analysis method is utilized.

In general cases, when the assessed object has different components (e.g., land related to the main construction and accessory structures located on it), the assessment model has the structure presented in the Eq. (1).

$$VE=VT+VC, \quad (1)$$

where: VT is the land parcel value; VC is the improvements value (buildings, structures, perennial plantations, etc.).

This model has been transformed into various types to best account for factors affecting the value of properties belonging to different types. Among the variety of assessment models (additive, multiplicative, and hybrid), multiplicative models are most preferred for the assessment of simple objects - apartments, isolated spaces, undeveloped land [19, p. 289]. Such models are based on the sales comparison method.

The assessment model is expressed by Eq. (2):

$$V = VOE \times \prod_{i=1}^n F_i K_i \times S, \quad (2)$$

where: V is the estimated value of a real estate property or a component of the assessed object for multi-component objects, Lei.

VOE is the value per square meter of the standard object, Lei/m<sup>2</sup>.

F<sub>i</sub> are variables describing the influence of value factors, typically binary factors, 1/0.

K<sub>i</sub> presents a coefficient reflecting the impact on the price of an object of its quality attribute (value factor) F<sub>i</sub>.

n is the number of value factors used in the model,

S is the area of the assessed real estate property, m<sup>2</sup>.

The VOE value is considered a base, from which the price of any other object was calculated. In other words, the value of a real estate property (V) was determined by adjusting the value of VOE using the corresponding coefficients (K<sub>i</sub>), multiplied by the area (S), describing the

influence of factors intrinsic to this object and distinguishing it from a basic object. Consequently, the VOE parameter contributed significantly to the calculated value of V, while the F factors were mere adjustments, not as significant compared to VOE.

Thus, the used model reflected the general principles of forming the hedonic market price, on which the classical methodology of residential real estate value expertise was based within a comparative approach. The F factors determined the market component in the object's price, and the fundamental component (construction cost, etc.), which was logically an integral part of any object, was included in the VOE parameter. In general, the model allowed, firstly, determining the direction of influence of value factors, and secondly, presenting this influence in numerical terms. The main characteristics of the object that can affect its market price were considered as value factors and are determined through analysis based on expert opinions - analysts/evaluators.

### 3. Results

Current issues specific to the mass appraisal system in the Republic of Moldova, as well as non-compliant aspects faced to some extent by all countries implementing a property taxation system based on market value, continuously pose challenges in the stages of system development:

- Identification of taxable objects and subjects.
- Quality and transparency of market data.
- Methodological issues in determining the tax base.
- Organizational issues in the infrastructure of the mass appraisal system.

*Identifying Taxable Objects and Subjects.* Questions related to the identification of the assessment object pertain to unregistered and unauthorized real estate properties, as well as the different classification of taxable real estate objects.

*Unregistered and Unauthorized Real Estate Properties.* A significant impact on the entire national real estate taxation system in Moldova is represented by real estate properties at the construction level belonging to three groups: unfinished constructions, unregistered real estate properties in the Real Estate Registry, and unauthorized real estate properties. Despite the stipulations outlined in Article 279 of the Tax Code, the taxable entities encompass real estate assets, comprising land along with all structures erected upon it (such as standalone residential buildings, apartments, and other enclosed spaces). This includes real estate properties that have reached a construction completion stage of 50% or more, yet remain unfinished for a period exceeding three years from the commencement of construction activities [22], cadastral authorities do not have information about these objects and cannot ensure their assessment for presentation to tax authorities for taxation purposes [23].

The data collected from various sources undergo statistical analysis and serve as the basis for building mathematical models to estimate the taxable value of real estate. In this context, the quality of data and the level of accuracy of the information sources used become decisive factors in achieving performance indicators for the obtained models.

The quality of evaluation results is determined by the degree of accuracy, logic, and research ability to guide the preliminary stages of data collection and analysis, as well as to manage information efficiently. Aligning the initial "raw" data with the specified quality standards is one of the most important tasks in mass appraisal and constitutes an entire area called pre-processing. The main problems causing the decline in data quality are the lack of a permanent data collection and analysis system and low data transparency. While the lack

of a permanent data collection and analysis system is related to the institutional structure of the real estate cadastre, low data transparency refers more to the fiscal policy of the state.

*Methodological issues in Mass Appraisal in the Republic of Moldova.* Due to the increased development dynamics in contemporary methodologies, the mass appraisal models currently used to calculate the taxable base in Moldova are oversimplified. This is due to a small number of factors used in determining the property value and the simplistic techniques applied to reflect the complex dependencies in forming the market value. These established models do not adequately reflect the full range of value factors affecting the market value of the property, and as a result, they are often modified. Therefore, property valuation methodologies need to be modified by following the principles of the contribution of various factors and considering the specificity of the real estate market, including the fact that the market value of the assessment object does not represent an arithmetic sum of the component values, such as land and all improvements on it.

*Use of Expert-Analytical Method.* The expert-analytical method focuses on formalizing expert opinions on the dependence of the market value of land on a combination of influencing factors. This method has gained wide recognition in Moldova at both the national and local levels for individual assessment to determine adjustment coefficients for value factors. However, its application in large cities and small to medium-sized towns with non-standard urban planning characteristics can lead to a significant distortion of results compared to the real cost of certain sections of the urban area. To address this, these cities, as assessment objects, should be divided in advance into territorial zones that are more aligned in terms of cost characteristics, with appropriate subzone allocations based on their functional purpose.

*Lack of Regression Elasticity.* The value factors are exposed in linear models and lack the elasticity to maneuver for operating factors in nonlinear functions. For example, the surface factor, which is interpreted linearly with value, is damaged by the diminishing returns phenomenon, also, within the interplay of two or more factors, it is notable that their combined effect is substantially less than the mere sum of their individual impacts.

*Grouping of Factors into Segments.* Another drawback is observed in the use of multipliers for adjusting value, which found a solution through the grouping and clustering of quantitative variables into segments. This has resulted in the formation of a value scale, which misses the fair value between two adjacent quantities.

*Effect of diminishing returns.* The diminishing returns phenomenon reflects the distortion of mass appraisal results after summing the values of component elements of the assessment object through arithmetic addition without adjustments for the specificity of the complex object. Real estate market value is not equal the sum of the values of its components, evaluated autonomously. This effect is present in the formation of the real estate value, both at the level of the value factors and at the level of the elements - components of the object of evaluation. For instance, the added value of constructions combined with the average value of vacant land does not equal the market value of this property in conditions of a free market.

*Neglecting Differentiation in Development Dynamics.* Existing evaluation models for categories of complex real estate, which include land and buildings as common value elements, are based on a principle of evenly distributing the loads between these elements for all territorial regions of the country. This approach leads to erroneous effects caused by



the different levels of development in the real estate markets for different regions of the country for land plots and buildings.

#### 4. Discussion

*Improving Data Market Quality.* Certain issues highlighted earlier are critical in that they impede the functionality of analytical models and algorithms (e.g., missing values and structural breaches). Meanwhile, others (e.g., duplicates, inconsistencies, noise) may not disrupt algorithms but can yield inaccurate analysis outcomes [24, p. 3].

Regardless of the degradation factors present in data, they need to be solved. This is done in two steps: Profiling - studying data to identify problems and developing a problem-solving strategy. Cleaning - involves employing diverse techniques to address identified issues, such as restoring missing data, rectifying anomalies, handling duplicates, inconsistencies, and more.

*Optimizing the Methodological Framework for Mass Appraisal of Real Estate.* The combination of statistical and expert-analytical methods in the development of a mass appraisal model for real estate is an efficient approach because both methods have their advantages and can complement each other. In the same vein, combined methods rectify mutual shortcomings caused by external and internal factors. Thus, errors resulting from the application of the expert-analytical method in the development of primary models are addressed by applying complex regressions derived from the statistical processing of market data. Simultaneously, errors caused by the lack of data, low data transparency, and the invalidity of existing statistics are effectively rectified by applying a methodology based on empirical practice through expert-analytical approaches.

*Implementation of the Log-Linear Model.* Following research and examination of market data for residential real estate properties (apartments in apartment buildings, individual houses in urban and rural areas of Chişinău, Bălţi, individual garages, and orchard plots with/without constructions, and ground-floor apartments), the following type of log-linear model was proposed:

$$\ln(V) = Int + \sum_{i=0}^n K_i a_i^x, \quad (3)$$

where:  $\ln(V)$  – natural logarithm of the estimated value of the real estate property, Lei.

$Int$  – intercept of the mathematical function. Represents the constant term of the model.

$i$  – indicator of the value factor.

$n$  – number of value factors in the model.

$K_i$  – constant coefficient of the value factor.

$a_i^x$  – value factor (independent variable) to the power of  $x$  (for non-linear regression).

The advantages of the optimized model lie in the increased elasticity of non-linear regression between the dependent variable ( $V$ ) and the value factors. Employing logarithmic transformation of variables in a regression model is a prevalent method to tackle scenarios with a nonlinear association between independent and dependent variables. By substituting the unlogged form with the logarithm of one or more variables, the relationship becomes nonlinear while preserving the linearity of the model.

Logarithmic transformations serve as a practical approach to converting a heavily skewed variable into one that approximates normality. Interestingly, there exists a distribution known as the log-normal distribution, characterized by a logarithm that follows a normal distribution, whereas its original scale is distorted [25, p. 2]. Mostly, real estate prices have a logarithmic (non-linear) relationship with various factors, such as square

footage, number of parking lots/outbuildings, distance from downtown, etc. Logarithmization allows this dependence to be taken into account in an equation, making the model more accurate.

Using logarithms of data makes them less sensitive to outliers and skewed distributions. This reduces the influence of unusual observations and can improve the stability of estimates. Log-linear equation makes the interpretation of model coefficients more intuitive. For example, in the case of a linear model, a one-unit increase in one of the factors can be interpreted as an increase in the percentage or proportion of change in the dependent variable. Many statistical methods, including regression, assume normal distributions of errors. Using logarithms makes the distribution closer to normal, improving the model's fit to established assumptions. Model based on log-linear regression reduces multicollinearity between factors, making the estimation more stable.

*Deducing the Effect Diminishing Returns for Value Factors and Components of the Appraisal Object.* The introduction of elastic log-linear regressions into the model equation reduces the effect of returns diminishing at the level of measurement units. In order to approach this problem at the level of the components of the complex object, author proposes to separate the function for the value of the developed land related to the constructions on it with the function of the value of the constructions. An example of the application of this equation is provided in the research on the methodological aspects of the mass valuation of real estate, referring specifically to the mass valuation model of residential houses. This innovation will help reduce errors in mass appraisal caused by the diminishing returns effect of component elements of the appraisal object.

*Introduction of the Adjustment Coefficient for the Development of the Local Market for Individual Residential Houses in Relation to the Development of the Land Market Segment for Construction.* The application of an integrated model of mass assessment of real estate in different regions of the country poses some difficulties in perceiving and adopting the results for market segments local real estate. The proposal to introduce the construction market development coefficient into the model will serve as a catalyst for creating a distortion of the estimated values for areas with differently developed real property markets. Elasticity of the model to variation of land and construction prices in different locations will increase the quality of the results obtained.

*Hypothesis Confirmation.* In order to confirm the main hypothesis of the given study, such as: The development of the methodological and institutional framework of the massive evaluation process of real estate, as well as the provision of the evaluation system with transparent and truthful market data, will aid in the gradual advancement of the real estate market, as well as to creation of efficient and fair fiscal systems in the Republic of Moldova, the author of the thesis compared the quality indicators of the study of rates for old and new models, elaborated according to the new methodology, proposed in the given paper. The results of the comparison and their analysis are set out in Table 3.

Explanation of the data from the indicator comparison from Table 3:

- Median rate (Me). Compared to the old models, new median is improved (↑) for the examples studied by 56% in the category of apartments and by 73% for urban houses.
- Coefficient of desertion (COD). The dispersion indicator improved (↑) by 70.98% for apartments and by 85.87% for townhouses.

Table 3

**Comparison of quality indicators of old and new models (e.g. apartment blocks and townhouses)**

| Indicator                         | Recomm<br>ended | Apartments |       |               | Urban Dwelling houses |            |               |
|-----------------------------------|-----------------|------------|-------|---------------|-----------------------|------------|---------------|
|                                   |                 | old        | new   | Rate          | old                   | new        | Rate          |
| Number of observations            |                 | 1710       |       |               | 7693                  |            |               |
| Median, RM                        | 0.9-1.10        | 0.41       | 1.03  | <b>↑56.0%</b> | 0.24                  | 1.03       | <b>↑73.0%</b> |
| Coefficient of dispersion,<br>COD | 5-20%           | 108.3%     | 37.3% | <b>↑70.9%</b> | 128.32<br>%           | 42.45<br>% | <b>↑85.8%</b> |
| Price rate derivation, PRD        | 1.0             | 1.78       | 1.19  | <b>↑59.0%</b> | 1.69                  | 1.28       | <b>↑41.0%</b> |

• Price Related Difference (PRD) is centered on 1.0, with values above 1.0 suggesting regressive vertical inequity (higher priced properties benefit from lower rates) and values below 1.0 indicating progressive vertical inequity (lower priced properties get lower rates). Although the indicator of price differentiation remains with regressive inequity, optimization (↑) qualifies with 59% for apartments and 41% for townhouses.

### 5. Conclusion and Recommendations

Currently, the system of massive valuation of immovable property for tax purposes within the Republic of Moldova is not a stable and rigid one. This conclusion is supported by a series of indicators highlighted in various work compartments.

Many current problems in the massive evaluation system facing the Republic of Moldova can be solved in the short term and with accessible resources.

The shortcomings identified in the system of mass valuation of real estate for taxation purposes in Moldova should be urgently addressed by improving the methodological framework used to calculate the cadastral values of properties.

In addition to purely legislative decisions in this area, the optimization of mass evaluation procedures requires the establishment of real estate market indicators. These indicators should serve as a guide for revising cadastral values in the event of significant changes in the real estate market.

Implementing the proposals resulting from the research of this paper will enhance the quality of market data, the methodology used in massive evaluation activities, and the accuracy of the results. The improvement in quality indicators for the models developed according to the proposed methodology demonstrates a potential objective for advancing the field of massive real estate evaluation.

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## THE IMPACT OF ACCOUNTING INFORMATION REGARDING FINANCIAL LIABILITIES ON DECISION-MAKING OF DIFFERENT TYPES

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**Abstract.** The most relevant research topics are guided by the overall study of the relationships between obtaining accounting information related to financial liabilities and their impact on users' decision-making process. The selective and unequivocal interpretation of the normative provisions as well as the institutional limitations regarding the volume and structure of accounting information regarding financial liabilities were the motivational basis of the research. The set of methods, techniques and research procedures of the field focuses on the targeted application of theoretical model cases of specific situations related to the generation and use of accounting information regarding financial liabilities, as well as their impact. Among the most relevant proposals there can be identified the qualitative development of normative framework in the part of the structure and volume of accounting information related to financial liabilities with relevance to users and the activity of the entity, as well as the development of non-regulated notes as a component part of the set of financial statements in which there is a reasoned description from all points of view of the situation regarding the entity's financial liabilities. All these improvement proposals can be beneficial to users at every stage of preparation and use of accounting information about financial liabilities with the perspective of taking future decisions.

**Keywords:** *accounting information, decisions, financial liabilities, financial statements, users.*

**Rezumat.** Subiectele cel mai relevante ale cercetării se ghidează de studierea în ansamblu a relațiilor dintre obținerea informațiilor contabile aferente datoriilor financiare și impactul acestora asupra luării deciziilor de către utilizatori. Interpretarea selectivă și neunivocă a prevederilor normative cât și limitările instituționale privind volumul și structura informațiilor contabile privind datoriile financiare au stat la baza motivațională a cercetării. Ansamblul metodelor, tehnicilor și procedeele de cercetare a domeniului se focusează asupra aplicării direcționate a cazurilor de model teoretic a situațiilor specifice aferente generării și utilizării informațiilor contabile privind datoriile financiare, precum și impactul acestora. Printre cele mai relevante propuneri se numără dezvoltarea calitativă a cadrului normativ în partea ce ține structura și volumul informațiilor contabile aferente datoriilor financiare cu relevanță utilizatorilor și activității entității, precum și dezvoltarea notelor explicative nereglementate

ca parte componentă a setului de situații financiare în care să existe o descriere argumentată din toate punctele de vedere a situației privind datoriile financiare ale entității. Toate aceste propuneri de perfecționare pot fi benefice utilizatorilor la fiecare etapă de pregătire și utilizare a informațiilor contabile despre datoriile financiare cu perspectiva luării unor decizii pe viitor.

**Cuvinte cheie:** *informații contabile, decizii, datorii financiare, situații financiare, utilizatori.*

## 1. Introduction

The importance of the structural and qualitative character and the impact of accounting information of financial liabilities for users is a challenge in general and an environment of research, improvement and development in particular aspect.

The factors that generate uncertainties and that limit in any way the ability of users to understand correctly the information about financial liabilities have multiple roots and can grow from different areas. Thus, the regulated or objective factors and the subjective ones or in other words that do not depend on an institutional regulation are a current problem that is the cause of multiple situations of multilateral treatment and non-univocal perception of accounting information related to financial liabilities.

The purpose of the work is to examine, under a methodological research aspect, the categories of accounting information relevant to financial liabilities, their interaction with other accounting elements that generate the appearance of results in the entity's financial statements, as well as the impact of the appropriate treatment of accounting information about financial liabilities in decision making process at different levels. More than that, the methodological development in the part related to the improvement of financial liabilities accounting with reference to the preparation, structuring and presentation of information about financial liabilities represents a major goal of the research.

Research on the decisions made on the basis of accounting information, in particular regarding financial liabilities, are not numerous, but the existence of studies on the role of accounting in the generation of accounting information represents a hope for achieving the objectives [1, p.188].

The premises for investigating the issue of presenting information on financial liabilities are also discussed at the international level by the experts and members of the International Accounting Standards Board, who through the Financial Instruments with Characteristics of Equity (FICE) project have developed a research on the needs to present information on financial liabilities at the level of financial statements through the application of International Financial Reporting Standards (IFRS). Through this document, it is mentioned that a multitude of respondents to the research welcomed the development of the concept of broadening the mandatory information to be reported in part related to financial liabilities, but also a significant number of respondents argued that the current requirements provided by IFRS are sufficient with reference to financial liabilities [2].

More than that, in the legislation of the United States of America (USA), where the Generally Accepted Accounting Principles (GAAP) are applied for the accounting and reporting of liabilities, there is the problem of presenting information on financial liabilities, because entities avoid recording liabilities due to the negative impact on the reported information. Thus, the USA GAAP has established rules to help ensure the correct inclusion of liabilities [3], but these rules are not on far from absolute giving the possibility of multiple

interpretation and differentiated application, which leads to distortions regarding the correct presentation of information on financial liabilities.

The importance and actuality of the topic of financial liabilities, in particular the information related to them in different financial documents and at different stages of the execution of the accounting cycle, starts from the problematic and interpretable situation of the visions of applying the normative framework in relation to the informational requirements of the entity. Therefore, the difference between the structure and quality of accounting information about financial liabilities can take on different levels depending on the requirements of users. Considering that the users of information on financial debts can be internal and external, the last ones can represent the control bodies that perceive the information provided from an institutional point of view, while internal users develop informational requirements depending on the degree of development of financial management at the entity level. Thus, financial debt information represents public interaction relations and cannot be the subject of unilateral treatment by an entity [4, p.48].

The most important objectives set by the author in the work are identified through the detailed examination of the legal and accounting aspects of the information generated regarding financial liabilities with the perspective of establishing the differences and similarities that can qualitatively contribute to obtaining some similarities and divergences of approach, as well as the development methodological and practical recommendations in order to improve the organizational and procedural aspects of accounting information regarding financial liabilities.

The problem of the convergence of financial-accounting information related to financial liabilities has become increasingly important, as globalization has changed its status from theory to mass phenomenon [5, p.148].

This paper incorporates actual issues and issues of significant importance as follows:

- 1) Appreciation of the different structural and qualitative nature of the accounting information regarding financial liabilities in relation to the requirements of the users and their impact on the decision-making process of different types.
- 2) Researching informational sources that incorporate elements of financial liabilities with importance for decision-making process of various types.
- 3) Analysis of the impact of accounting information related to financial liabilities on financial, fiscal and other decision-making.
- 4) Identifying and developing ways to improve and consolidate accounting information on financial liabilities.

## **2. Materials and Methods**

The set of methods, techniques and research procedures of the field is focused on application of theoretical model cases of specific situations related to the generation and use of accounting information regarding financial liabilities, as well as their impact on decisions of different types.

The general study methods are defined by the application of analysis and synthesis of information from specialized normative acts, scientific works and agreed practices. The targeted use of the processes of aggregation and disaggregation, observation, comparison and systemic analysis at a specific level bring an additional qualitative value to the work through its functions to achieve the mentioned objectives.

The application of dialectical methods with reference to the study of information on financial debts and the tracking of their effect on the behavior of users in making decisions of various types is an integral part of the research methods. The focused and/or combined use of the described methods has the scope of capitalizing on the potential of financial liabilities accounting and adjusting accounting information to real practices with relevant effects for users

The work, having a combined structure of research methods, reveals an interdisciplinary type of research with obvious applicative elements that refer to a pronounced dynamic of the economic facts that are the basis of the exploration and affect the initial research sources of financial liabilities.

The author focused on the examination of the economic-financial aspects of the provisions of the mentioned normative acts regarding accounting and the presentation of information on mandatory and optional financial liabilities in the financial statements.

In the research process, the author positions as the most relevant sources of information the documents that constitute the theoretical-practical basis and are identified by the works of international and local scholars, researches and comments of international economic groups and the normative acts in force, mentioned in references.

### **3. Results**

In the discussion of the problems and the identification of the viable results related to the accounting information about the financial liabilities and their impact on the decision-making process of different types, the author considers it appropriate to appreciate the structure and the amount of relevant information of different nature in order to form an adequate picture for the execution of more detailed research.

Thus, the provisions of the national legislation regarding the reporting and generation of accounting information regarding financial liabilities are incorporated into the Law on Accounting and Financial Reporting no. 287 of 15.12.2017 and the Accounting Standards, which expressly state what kind of reports are to be presented and their content, as well as the way to draw it up.

The author examined the provisions of the specified normative acts and identified the fact that the information on financial liabilities is not categorized as specific or individual in the Law on Accounting and Financial Reporting. This fact leads to the conclusion that the current content of the mentioned law establishes general rules regarding the information to be presented by an entity in the process of economic activity. By studying the provisions of art. 22 paragraph (3) letter d), g) and i) of the specified law, the author believes that the legal norms exposed do not provide a room for maneuver for the application in particular situations of the mechanism for presenting accounting information regarding financial liabilities and by this it can be assumed, that the information regarding financial liabilities cannot be extended according to the needs of the users. At the same time, art.22 paragraph (2) of the mentioned law expressly establishes that "the volume, structure and form of presentation of the explanatory note are established independently by the entity, depending on its category, size, legal form of organization, its field/activity profile, its own informational needs and the requirements of the specified law" [6]. Therefore, the provisions regarding the requirements and mandatory elements of reporting and presentation of information are overturned with the provision of real possibilities and non-regulation on the content and manner of presentation of accounting information regarding financial liabilities.



At the same time, the particular aspects regarding the way to generate accounting information, including financial liabilities, are provided by the National Accounting Standard (NAS) "Presentation of financial statements" and the International Accounting Standard "Presentation of financial statements". In these normative documents that are applicable to entities from the Republic of Moldova, regulations are designed regarding the classification of liabilities, including financial ones, according to different criteria. Thus, classification of liabilities according to the term of maturity, their character and nature or the currency in which they are expressed is an important element for providing a qualitative aspect to the accounting information regarding financial liabilities. More than that, providing the basic principles that represent the foundation of the accounting information from the entity's financial statements increase the credibility of the information regarding the financial liabilities. Among these principles can be listed: the separation of assets and liabilities which stipulates that in the financial statements only information about the entity's assets and liabilities should be presented, which must be accounted for separately from the assets and liabilities of the owners and other entities [7]. This principle is very relevant in the context of financial liabilities, because the said separation can cause the overlap of accounting information, the over-indebtedness of one of the participating parties and, as a result, making incorrect decisions in unclear circumstances.

Another principle that gives a true picture to the financial statements and advanced confidence to the users is non-compensation which consists in the distinct presentation in the financial statements of assets and liabilities, income and expenses. Mutual offsetting of assets and liabilities or income and expenses is not allowed, except in cases where the offsetting is allowed by the NASs. The principle in question argues the author's position under the aspect of maximum individualization and separation of financial liabilities information in regulated statements.

The examination of the regulated structure of the balance sheet in the part related to financial liabilities led to the identification of some important gaps, however, that some information regarding financial liabilities is mandatory to be presented. Thus, points 61-80 of the NAS "Presentation of financial statements" provide for some mandatory information to be presented, including in relation to financial liabilities, but in the author's opinion these are not sufficient. Thus, the cataloging of information by economic fields that generate financial liabilities would present a viable solution for users to make appropriate decisions.

According to point 41-43 of the NAS "Equity and liabilities", financial liabilities include liabilities related to credits and loans received for a fixed term and for a certain payment (interest) or free of charge.

Within long-term and short-term loans, loans from the issue of bonds are highlighted, including loans from the issue of convertible bonds and other loans. Liabilities related to the principal are recognized as credits and loans are received. Liabilities related to interest are recognized to the extent of their calculation according to the contractual conditions. In the author's view, this information must be presented in financial statements in order to provide users with an adequate degree of confidence.

At the same time, the requirements regarding the reporting of financial liabilities provided by the mentioned standard do not incorporate all the necessary and regulated information according to their nature and particularities, which significantly reduces the qualitative level of the accounting information presented and has a negative impact on the position of users in making decisions of various types.

In order to present more clearly the principles mentioned by the author above, it is proposed to group the provisions regarding the mandatory information regarding financial liabilities to be presented in financial statements and the regulated information but which is not identified in the list of mandatory ones, as follows:

Table 1

**Comparison table of economic facts that generate financial liabilities and mandatory disclosures in financial statements**

| The composition of financial liabilities                                                                                                                                                                                                                                                                                                                                                                                                                                         | Presentation of mandatory information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Financial liabilities include liabilities related to credits and loans received on a fixed term and for a specific payment (interest) or free of charge.</p> <p>Within the long-term and short-term loans, the loans from the issue of bonds are highlighted, including the loans from the issue of convertible bonds and other loans [8].</p>                                                                                                                                | <p><i>Long term:</i></p> <p>the total amount of bank credits received over a period longer than 12 months from the reporting date.</p> <p>the total amount of loans received, including the value of bonds issued and placed, bills of exchange granted for a period longer than 12 months from the reporting date.</p> <p>The amount of long-term debt related to the principal (reimbursable values) regarding financial leasing operations, which is determined in accordance with the NAS "Leasing contracts".</p> <p><i>Short term:</i></p> <p>the amount of bank loans received, including related interest, with a repayment term of no more than 12 months from the reporting date.</p> <p>The amount of loans received, including related interest, with a repayment term of no more than 12 months from the reporting date [9].</p>                                                                            |
| <b>Uncovered aspects and uncertainties:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p>- The term of a credit or loan contract, including the financial and operational lease, may be different from one situation to another. Under these conditions, the calculation and payment of the related interest may have a different term depending on the terms of the contract. Thus, in the situation where the interest related to financial liabilities is calculated and liable to be paid with a periodicity of more than 12 months, this information is to be</p> | <p>- The phrases "from the reporting date" create uncertainties in establishing the period and classifying financial liabilities according to terms. Thus, as the current normative content of the standard is presented, the term for identifying liabilities and classifying them is calculated from the date of reporting regardless of the date of establishment of legal relationships, which makes some financial liabilities with a term of 23 months, to be categorized as</p> <p>- Other payments assimilated to financial liabilities and which can be identified as similar to interest such as: administration of the credit account and/or loan, commissions of various types, penalties for non-payment of rates on time, fines of all types, etc. they do not have normative coverage in terms of financial liabilities and the presentation of information about them. This demonstrated by the fact</p> |

Continuation Table 1

|                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| presented in the category of long-term financial debts, which is missing in the current normative content of the standards, being provided only the situation when interest is calculated and paid in a period of up to 12 months. | being on short term. This argumentation is supported in point 4.18 of the General conceptual framework for financial reporting, which stipulates that liabilities result from transactions or other previous events [10] and their term runs from the date of recognition and not the date of reporting. This idea is also supported by the fact that some financial liabilities classified as short-term can be included in the long-term category after the presentation of the financial statements, and the complexity of the treatment of these liabilities increases in the case of lock-box arrangements or contracts of revolving [11]. | that the regulatory requirements for reporting financial liabilities information are strictly limited to principal and interest, without providing the possibility to present a full set of required information. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The author establishes as critical the situations described in the table and puts forward his firm and well-argued position for their solution through some of the accepted methods, such as: modifying the legal framework in order to cover the mentioned divergences and/or developing and completing the legal framework to provide practical possibilities for entities to present in regulated financial statements, all necessary and possible information.

The presentation of extensive information in regulated financial statements would provide a credible and correct picture in the part related to the particularities of the accounting of financial liabilities, and users would be more protected against decision-making situations in uncertain circumstances. Even if entities are tempted to make public only certain information about financial liabilities, the decision in this regard is conditioned by the expectations of users of accounting information [12, p.154].

The next stage of research focuses on the aspect of generating financial liabilities information and presenting it to users through unregulated sources and content requirements through tables. In other words, the sources and content requirements do not represent a strict tabular requirement, but to be presented through notes to the financial statements. What's more, the author positions these sources as a normative requirement with an individual character of presentation. This situation can generate both risks and opportunities for users.

In this sense, the requirements for the information related to financial liabilities in the notes are limited to those described by the Law on Accounting and Financial Reporting, without providing the possibility to develop additional information. The author considers this approach to be one that limits users and creates major risks for future decision-making. A

viable solution for increasing the quality of information on financial liabilities would be to provide the freedom to present all the information necessary according to the entity's perception to the users of the financial statements, in particular the notes. This solution is important in the case of the comparability of the information on the financial liabilities between the debtor and the creditor in order to increase the level of integration and understanding of the financial position of the debtor [13].

The biggest risks that disadvantage users of accounting information related to financial liabilities are exposed by the strict and exhaustive nature of the provisions of art. 22 of the Law on Accounting and Financial Reporting, namely by the fact that it establishes some categories of very specific information but which cannot have an effect expected if economic circumstances dictate an additional need for other information relevant to the entity's activity and users.

In order to more clearly expose the views of content on the issues addressed, the author proposes the following table of divergences to establish the situations in which the information requested in notes on financial liabilities is insufficient for users, as follows:

*Table 2*

**Analysis of limitations of information on financial liabilities in notes to financial statements**

| <b>Mandatory information provided by the regulatory framework [6]</b>                                                                                                                                                                                                                                       | <b>Arguing the insufficiency of limited information</b>                                                                                                                                                                                                                                                                                                                                                                                                | <b>Impact on decisions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The total value of financial commitments, guarantees or contingent assets and liabilities not included in the balance sheet, indicating the nature and form of any guarantee that has been granted; commitments regarding pensions and those to affiliated or associated entities are presented separately; | The existence of the factor regarding the limitation of the information only to the total monetary value, represents a factor that contributes to diminishing the value of this information. Examining only the monetary value of the information, limits users in making appropriate decisions. Developing a presentation system according to the needs and circumstances relevant to the information entity can be a sustainable solution for users. | Decisions made based on existing limitations pose a risk to information users of all types. These risks can acquire major values in the situation where the contingent liabilities, which can be categorized as financial liabilities, will be liable for payment in the following periods. In these conditions, users should reduce this risk in order to make correct and reasoned decisions, by obtaining more necessary information, not limited only to the monetary value of the debts. |
| Amounts of liabilities with a payment term of more than 5 years and the total amount of liabilities covered by guarantees, indicating the nature and form of the guarantees;                                                                                                                                | The indication of the term of 5 years and the limitation of the entities to this criterion is considered to be irrelevant. This is argued by the fact that civil legislation offers entities a multitude of                                                                                                                                                                                                                                            | The limited situation provided by the current legislation represents a risk for users of accounting information related to financial liabilities, whereby there is uncertainty related                                                                                                                                                                                                                                                                                                        |

Continuation Table 2

|                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                       | possibilities to conclude contracts and to establish particular terms for each component of these contracts. Thus, financial debts can have a grace period related to the principal, just as interest can be calculated and paid in totally different periods. These aspects are not provided by the legislation, additionally a limitation is imposed only on the monetary value of the financial debts.                                                      | to financial liabilities and their value. Thus, some liabilities with a payment term of less than 5 years can have a much greater impact on the entity's financial position compared to financial liabilities with a payment term of more than 5 years. This information is to be presented to users in a qualitative manner, without being limited to payment terms.                                                                                              |
| The individual elements of assets or liabilities that are related to more than one element of the balance sheet structure, if they are not presented separately in the balance sheet;                                                                 | The limitation imposed by the phrase "if they are not presented separately in the balance sheet" substantially reduces the effort and the noble intention of those who draw up the notes, due to the fact that in particular situations the distinct presentation in the balance sheet is also an institutional limitation.                                                                                                                                    | In the circumstances described, users may be deprived of important information about financial liabilities for decision-making, as a result of unreasonably imposed limitations.                                                                                                                                                                                                                                                                                   |
| The nature and commercial purpose of the entity's commitments that are not included in the balance sheet, as well as the financial impact of the respective commitments on the entity, provided that the resulting risks or benefits are significant; | The condition regarding significant risks and benefits is subjective, and the commitments that are not included in the balance sheet, but which may acquire the status of financial liabilities in the future, are to be evaluated on the date of the appearance of the legal relationships and included in the balance sheet. This procedure would provide greater confidence in the entity's financial position and protect users from making bad decisions. | Establishing the degree of significance of risks and benefits by the executive bodies represents a risk for users of financial liabilities information, and the correct application and relevance of the normative provisions tends to zero. Thus, the users of the information should be fully aware of any commitment that generates or may generate an appearance of financial liabilities, regardless of whether the benefits and risks may be large or small. |

#### **4. Discussions**

The analysis carried out by the author on the informational limitations of the requirements imposed by the legislation in the notes, leads to the necessary conclusion of requested and reasoned development of additional notes to financial statements with recognized status and character, which would provide a clear, exhaustive and necessary picture to the users of the information for taking decisions of different types. The arguments presented in the table can have a significant impact on particular situations where the economic events that generate or may generate financial liabilities in the future will be limited to the requirements of the legislation and as a result there will be risks, ambiguous and subjective treatments that can be a platform for developing the spirit of corruption and tax evasion. In addition, the author brings as support for the mentioned and the approaches of other scholars by which it is specified that the limits of increasing the efficiency of the information provided by accounting are determined by the form and degree of transparency of accounting documents, by the ability and speed with which potential users evolve in the accounting field [14, p.61].

Generalizing the study on the structural character, information sources and the impact of the block of accounting information related to financial liabilities that are used by users to make decisions of various types, the author comes to the idea that the existing regulations are insufficient and do not cope with the current and relevant informational requirements according to the processes of progressive economies. In this vein, the further development of the normative framework is proposed in order to amplify the interaction between contemporary economic realities and regulated informational structures. Moreover, at the entity level, the author proposes the qualitative and sustainable development of information sources and their presentation through different methods relevant to users, taking into account the specifics of any entity's activity. This method is also treated by some scholars who state that a "new way of presenting information in financial reports is based on the presumption of dividing the entity's activity into two large groups: operational and financial" [15, p.139]. At the same time, the nature of information perception by each user can be different, which can significantly influence the decisions made. Under these conditions, developing methods for preparing and presenting information and simulating different potential decisions with an impact on the entity's activity by using artificial intelligence resources would be a progressive solution for users.

The combination of all proposals for the development and improvement of the informational process related to financial liabilities at the level of entity or economic branch can bring potential benefits to users, both those involved in business and the control bodies that supervise the entity's economic-financial activity. The efficiency of financial liability management is a "dilemma that is managed by entities and ignoring financial liabilities management or their ineffective management usually has a profoundly negative impact on the entire financial situation of the entity" [16, p.378].

#### **5. Conclusions**

In the process of carrying out research on the impact of information on financial liabilities on decision-making process of various types, the author established that the field is less treated and studied both at the institutional level and at the methodological level. This situation presents a challenge for users of financial statements. More than that, the legal provisions related to the presentation of information about financial liabilities limit users in

all dimensions in making appropriate decisions. The most critical limitations relate to the presentation of information only about the monetary value of financial liabilities, without making a broad and complex disclosure about the nature and structure, as well as the potential impact of these liabilities. Similarly, a multitude of limitations regarding the establishment of financial debt payment terms, imposed without argument by the legislation, the subjective determination of the significant nature of the impact of financial debts, as well as the consolidated or distinct presentation of certain information, can cause uncertainty for users in taking correct, appropriate decisions based on ample and exhaustive informational circumstances.

On the other hand, the non-covered aspects and uncertainties regarding the volume of information related to the recognition and evaluation of financial liabilities and the quality of the information that ends up being presented in the financial statements of the entity is also a complex challenge for the users of the financial statements. The most obvious shortcomings were detected in the treatment of financial liabilities administration terms, the calculation and payment of interest and principal, as well as the existence of other payments similar to interest but which do not have adequate treatment in the legislation. All these uncovered aspects and uncertainties have a severe impact on the structure and volume of accounting information related to financial liabilities and therefore on the decision-making process of users.

The complex of uneven, non-univocal aspects that may have different treatment as well and a situational interpretation in the part related to the informational content of financial liabilities represent risks for users in making decisions of various types. At the same time, the situations in question can represent combined risks for increasing the level of corruption and evasion from the calculation and payment of taxes and fees.

In this situation, the author comes up with numerous proposals for the development and improvement of the information process of financial liabilities with the aim of providing users with a real and adequate picture of the financial position of the entity and for making decisions of various types in safe and well-informed circumstances. Among the most relevant proposals are the qualitative development of the normative framework in the part that holds the structure and volume of accounting information related to financial liabilities with relevance to users and the activity of the entity, as well as the development of non-regulated notes as a component part of the set of financial statements in which there is a reasoned description from all points of view of the situation regarding the entity's financial liabilities.

All these improvement proposals can be beneficial to users at every stage of preparation and use of accounting information about financial liabilities with the perspective of taking future decisions.

The work in question can be the generator of normative changes and a reasoned information base for the development of methodological systems for accounting and reporting of financial liabilities, as well as for making decisions of various types with a sustainable and proactive character.

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## GENDERED PERSPECTIVES IN SELECTED ZIMDANCEHALL BILINGUAL SONGS: AFRICANA WOMANISM

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**Abstract.** There is no study which is based on lyrics of songs about a sextape. Hence, the purpose of the study was to understand the gendered perspectives of four Zimbabwe singers towards explicit recording as reflected in the lyrics of their songs. Africana Womanism was deployed as a theory on the relationship between black males and females. The methodology was Critical Discourse Analysis in which purposefully selected artistes' music lyrics were analysed. D Flexx's song, "Hombe Yalevels", "Ane hombe dzinotapira" (Ndunge Yut), "Tsamba kuna Levels" (Lorna Real Love) and Libronie's "Ane hombe" which were released after the sextape scandal were examined in this study. From the findings, we argue that singers of the four songs failed Shashl as a woman and fellow musician by focusing on DJ Level's perceived sexual prowess. Public figures ought to consult advisers, managers and veterans in their fields and government departments should partner stakeholders like businesses, brand experts and counsellors to explain the need for maintaining integrity.

**Keywords:** *codeswitching, gender, sextape, songs, recording, Zimdancehall.*

**Rezumat.** Actualmente nu se cunoaște niciun studiu care să se bazeze pe versurile cântecelor despre o relație de gen. Prin urmare, scopul studiului a fost de a înțelege perspectivele de gen ale patru cântăreți din Zimbabwe față de înregistrarea explicită, așa cum se reflectă în versurile melodiilor lor. Africana Womanism a fost implementat ca o teorie a relației dintre bărbații și femeile de culoare. Metodologia a fost analiza critică a discursului în care au fost analizate versurile muzicale ale artiștilor selectați intenționat. Au fost examinate cântecele lui D Flexx, „Hombe Yalevels”, „Ane hombe dzinotapira” (Ndunge Yut), „Tsamba kuna Levels” (Lorna Real Love) și „Ane hombe” a lui Libronie, lansate după scandalul sextapelor. Cântăreții celor patru melodii au discreditat-o pe Shashl ca femeie și colegă muzician, concentrându-se pe perceperea de gen a DJ. Level. Persoanele publice ar trebui să consulte consilieri, manageri și veterani din domeniile lor, iar departamentele guvernamentale ar trebui să asocieze părți interesate, cum ar fi întreprinderi, experți în mărci și consilieri, pentru a explica necesitatea menținerii integrității.

**Cuvinte cheie:** *comutare de coduri, gen, sextape, cântece, înregistrare, Zimdancehall.*

## 1. Introduction

Music is more than just arrangement of lyrics, vocals and chords. It is an aspect of identity and should contribute towards social transformation, such as gender equality. Zimdancehall has been the dominant genre in Zimbabwe in the last decade. Zimdancehall gained popularity around 2009, courtesy of increased access to cellphones which was facilitated by the government of national unity (GNU)'s liberalization of the telecommunications sector. Users could transfer files through infra-red and Bluetooth devices, memory cards, flash drives between phones and gadgets like laptops and tablets. The sudden upsurge in dancehall songs which were replete with 'antisocial' lyrics unsettled many elderly people in the predominantly Christian and traditional country who feared that it would lead to an erosion of moral values [1].

Though they differ on its implications, there is consensus among Zimbabwean scholars and citizens that use of explicit language is one of the easily noticeable influences that Zimdancehall adopted from "Jamaican dancehall as its progenitor" [2]. Vulgarity is "the hallmark of dancehall" [3], "Zimdancehall's trademark" [4] and "Zimdancehall is epitomised by the use of explicit vulgar lyrics". [5]. Fred Zindi, a Zimbabwean music expert, has been outspoken against vulgarity in Zimdancehall. He identified Killer T, Dhadza, Soul Jah love, Quonfused, Shinsoman, Level 2, Bounty Lisa "and many others" as culprits [6]. He concedes despite his artistic background, he does not understand Zimdancehall singers' preoccupation with vulgarity, adding that fellow Zimbabwean reggae/ dancehall aficionado, Terrence Mapurisa expressed dissatisfaction with excessive vulgarity in lyrics of Zimdancehall songs which he said negatively affects society especially young children.

Chillsport Recordz, the country's biggest dancehall stable was founded by "DJ Levels", henceforth referred to as Levels, Arnold 'DJ Fantan' Kamudyariwa and Tafadzwa 'DJ Ribhe' Mandaza in Mbare in 2012. Levels is arguably Zimbabwe's most successful producer and co-owns the country's largest Zimdancehall stable meaning that he is approached by many female artistes. Zimdancehall artistes have grappled with allegations of plagiarism, substance abuse and indiscipline mainly through explicit lyrics and promoting antisocial behaviour [7]. At a time, the genre seemed to gain traction, Zimdancehall was left reeling when Levels was arrested on charges of rape and contravention of the Data Protection Act on the 5<sup>th</sup> of December 2022. Prior to this incident, on the 27<sup>th</sup> of November 2022 a sexually explicit video recording of Zimdancehall singer Ashley 'Shashl' Moyo and "DJ Levels" went viral rekindling debate about the logic, morality and risks, of (especially public figures) recording such sensitive content. Though Levels was already popular when the sextape went viral, many Zimbabweans knew him from songs in which artistes chant his name. Barely after the explicit recording went public, memes, reels and conspiracy theories emerged and, in the process, Levels' fame soared.

The purpose of this paper was to understand the gendered perspectives of four popular singers in Zimbabwe towards the publicized explicit recording of one of their own and how their perspectives are reflected in the lyrics of their songs.

## 2. Theoretical Framework

Through Africana Womanism, we heeded Aldridge's [8] call for studying relationships between black males and females. Africana Womanism, which is inspired by Afrocentricity's valorization of culture and history, was propounded by Clenora Hudson-Weems during her

first year as a student at the University of Iowa in 1988 [9]. The theory emerged due to concerns with older female movements.

Black Feminism emerged in the 1970s fronted by the likes of Bell Hooks, Kimberlé Crenshaw, Angela Davis and Patricia Hill Collins following complaints that feminism only benefitted white women [10]. In 1983, Alice Walker coined the term womanism which she felt was more inclusive. However, with the premise, “naming something gives it essence”, Hudson-Weems [11, p.18] formulated Africana Womanism. Besides Africana Womanism’s seeming objection to Womanism’s accommodation of lesbians due to the former’s Afrocentric influence, the two are almost identical. According to Asante [12], prefixing ‘Africana’ to Womanism was necessitated by Europeans ‘contamination’ of Afrika by replacing “K” with “C” during their colonization of some African countries. Hudson-Weems clarifies that Africana Womanism is “neither an outgrowth nor an addendum to feminism... (it) is not black feminism, African feminism, or Walker’s womanism.... It is grounded in African culture” [13, p. 138].

The fundamental difference between feminism and Africana Womanism is that, unlike the former which cites gender as its main concern, the latter only places it after racism and classism [9]. Hudson-Weems [10, p.83] quips: “We are and have always been co-partners with our male counterparts” (Men and women are regarded as “the flip side of the (same) coin”) [13, p. 138] in African culture. Hudson-Weems [9, p.6] adds that “the battle of the sexes” is alien to non-western countries which are characterized by what Ani [15, p.75] calls “appositional complementarity” between men and women. Cooperation between men and women is the sine qua non for a progressive society according to Afrocentric rubrics.

Walker is scathing of Womanism, describing it as a fundamentalist ideology, “a mythology that is racist” [9]. However, Africana womanism enjoys cordial relations with other African feminisms as it “underscores a closer affinity among all African women globally” [16, p.25], dismissing allegations that it seeks to be the only women’s movement. Asante [12] observes that Umoja supports diversity among women’s groups and underlies the ‘mosaic’, diverse nature of formations which lobby for rights of African women. Similarly, Kaiwada womanism is open to adjustments provided that African values are upheld. However, every theory should be constantly aligned with changing times. Karenga and Tembo [17, p.42] declare that as “our experience and knowledge expand, we can and must change it without discarding its essential elements”. Hudson-Weems’ “Africana-Melanated Womanism” is “a terminological, rather than conceptual evolution of Africana Womanism” [9, p.2]. Africana Womanism is an inspiration for development of newer models [11]. As an antidote to African challenges, Africana Womanism must be constantly remodelled to tackle “coloniality”, a term which denotes colonialism’s tendency to renew itself [18, p.1]. Achebe [19, p.47], cites Abraham, who states rhetorically that since African scientists, historians and political scientists seek African solutions in their fields, “why should African literary creators be exempted from the services that they themselves recognize as genuine?”. African feminisms and Africana womanisms are, therefore, predicated on African knowledge systems [20].

### 3. Literature Review

Mulvey [21, p.17] coined the term “male gaze” in which she discusses Freud’s ‘scopophilia’, deriving pleasure from looking which is found in “the voyeuristic activities of children”. Mulvey splits this pleasure “between active/male and passive/female” [21, p.19] and applies Lacan’s “mirror phase” [21, p.18] which notes that before a child can talk or walk, it acquires a “self-awareness” from seeing its image in a mirror which leaves a narcissist

attitude in the child. Pornography, graphic display of sexual organs in a way in which actor(s) may arouse feelings of the audience, has grown in leaps and bounds. Broader sexualisation of culture in the “mainstreaming of pornography” [22, p.1] has culminated in an “attention-economy” [23, p. 138]. Sexually explicit issues were a rarity in African societies. However, innovations have increased the influence of western cultures resulting in cultural erosion; pornography is a “symbol of decaying culture” [24] and “sextapes are an indication of moral decay” [25].

Revenge porn is “a newly developed genre” which is “flourishing in new media” as seen by terms like “pornification” [22, p.1]. In popular discourse, revenge pornography “is called do-it-yourself pornography or “sex tapes” whilst in scholarly discourse it is referred to as “sexual media production” [26, p.1]. The term ‘revenge porn’ is problematic because some people capture explicit images for sharing with their intimate partners whilst others share them out of excitement to brag about their relationship with people who are in the images. Therefore, there is a “slippery terrain” between sharing of pornographic footage by a partner out of excitement or to spite their lover [27, p.13]. Nguyen [28] argues that revenge porn “implies victim-blaming” so the correct term should be “image-based sexual abuse, or non-consensual pornography”. Nabil’s study revealed that release of sextapes is not only inspired by liberatory and/or victimizing motivations [26, p.1].

Women are the main gender that usually suffer the most after the release of explicit images in which they feature [29, 30]. After the release of their sextape, former Studio 263 actress and ZiFm presenter Tinopona Katsande, popularly known as ‘Tin Tin’ spent “years in the wilderness” whilst her former boyfriend Brian Munjodzi “emerged unscathed from the fiasco” [30]. Commenting on her leaked sextape in August 2023, South African DJ and social media influencer, Cyan Boujee said, “I’ve never been this broken” [31]. She briefly withdrew from the media whilst Prince Kaybee, who recorded their sextape, continued with his work, releasing a single which was well received [32]. Nancy Masiyambiri uploaded an eight-minute video in which she laments that she has been ostracized by her neighbours because of a sextape in which she featured with her former boyfriend, actor, Denzel ‘Jabu’ Burutsa. Jabu was not bothered despite issuing what appears like a half-hearted apology on social media days later [32]. Kim Kardashian broke down after her son showed her an advertisement which referred to her 2003 sextape with singer, Ray J who retained copies of other explicit recordings which he has threatened to release [33].

Notwithstanding how they may try to move on, women will always be reminded for featuring in sexually explicit images. Any news about a woman who once featured in a sextape that is shared on social media attracts responses referring to the scandal. In African countries, the public often reacts to revenge porn by “slut-shaming, blaming the victim...for ... an act that occurred within the context of (what she/he most likely thought to be) a trusting relationship” [29, p.2]. Tin Tin’s sextape “overshadowed all her previous achievements” as an actor and radio presenter [34]. As if this is not enough, search engine algorithms are replete with images relating to their scandals [29]. In a “web that never forgets” [35, p.1], the images become permanent because even if the original post is deleted, some users would have already saved the images through third parties for resharing. Rosen [35] suggests that search engines should not be allowed to index such images.

Nonetheless, some women employ what Spivak calls “strategic essentialism” [36, p.3], simulating female stereotypes of them as vulnerable, ‘docile bodies’ [37, p.13] to achieve their ends. In the recording alluded to earlier, Nancy Masiyambiri narrates her ‘ordeal’,

alleging that Jabu connived with her former friend, Luciana, to release the sextape in the public domain. Masiyambiri, however, confesses that she knew that Jabu was married and cheated with him on her 'serious' boyfriend who provided for all her needs. Though she apologizes to Jabu's wife, Masiyambiri blames Jabu for being manipulative which makes her appear to be playing the victim card.

Boujee's remarks like "my only issue is my n\*\*\*\*s (boyfriends) are all gonna dump me today" and bragging that she continued to get bookings after her sextape suggest that she prioritizes money over dignity [38]. Similarly, despite claiming that Ray J had drugged her and leaked their sextape, Kim Kardashian later revealed that she provided graphic details of the sextape on her family reality show, "Keeping up with the Kardashians" because she knew that "producers would love that" [39]. Ray J claims he and Kim had planned with Kim's mother, Kris Jenner to sell the recording yet she was now shedding "crocodile tears" [40].

In a bid to fight chauvinism, the media can inadvertently widen rifts between men and women through overgeneralizing. The Herald [25] posits that women often allow "themselves to be captured whilst their partners remain behind the camera". This, however, seems far-fetched because in many sextapes; Ray J, Stunner, Zhetstar (Tererai Mugwadi's former partner), Levels and Jabu are all facially identifiable. Prince Kaybee and Joyce's former partner are the only males whose faces do not appear in their sextapes.

Men have also accused their former female partners of leaking their sextapes which shows that they are just as vulnerable. Nox and Qounfuzed accused girls who they interacted with on videocall, of recording them without their knowledge [41]. In 2016 alone, Nox had explicit images of himself leaked on social media on two occasions for which he blamed his former girlfriend, only identified as 'Mai Gamu' (Gamu's mother) [42]. The two musicians' accusations were enhanced by the fact that their private parts appear in the video recordings, but their partners' do not. Mai Tt is the only female musician to have suffered a similar fate.

#### **4. Materials and Methods**

Using keywords such "as songs with explicit/ vulgar language in dancehall/Zimdancehall", "Levels and Shashl Sextapes", "Zimbabwean celebrities recorded/featured in leaked sextapes", "Fred Zindi on Zimdancehall", we searched in the Google search bar. An avalanche of data emerged which we sifted to determine its relevance. We added "PDF" to our searches to enhance chances of getting downloadable information from reputable sources. We employed purposive sampling, a non-probability sampling method which guarantees collection of data which falls within the purview of the study. This sampling method "is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest" [43, p.2]. Just as we did with documents and information that we saw on different sites, we identified Zimdancehall songs which contain vulgar lyrics. Thereafter, we undertook the painstaking exercise of screening songs which were released after the 27th of November 2022 when Levels and Shashl's sextape was leaked.

Five songs which explicitly refer to the Levels- Shashl sextape were initially identified. However, we dropped Ane hombe by Ndunge Yut and left his other track, "Hombe dzaLevels" because it makes more reference to the sextape. For ease of illustration, we coded the four tracks according to the order in which they were released meaning that "Hombe Yalevels", by D Flexx (1 December 2022) became 'Song 1', hereafter, 'S1' "Hombe dzaLevels" (Ndunge Yut, 11 December 2022, S2), Libronie's "Ane hombe" 18 December 2022 ('S3') and "Tsamba kuna

Levels” (Lorna Real Love, 23 December 2022, ‘S4’). We listened to lyrics of each song to identify similarities, contradictions and significance thereof.

Though the four songs are not the first Zimdancehall songs to be inspired by real life events, we reckon, that, the fact that in the period under study, from the 1st of December 2022 to the 23rd of December 2022, four songs about a single event (five including the one that we excluded), were produced, is unprecedented. Our interest in studying lyrics in songs referring to the Levels-Shashl sextape was motivated by the fact that there is no study known to us which is based on lyrics of songs about a sextape. Levels and Shashl’s entanglement defied class stereotypes if one considers that the former attended schools such as George Stark High School in Mbare whilst the latter, daughter of former health minister Obadiah Moyo went to Dominican Convent, one of the country’s most prestigious girl’s high schools.

## 5. Results

With an average length of just three minutes, the four songs are underlined by intensive repetition, sound devices, codeswitching mainly between English and Shona. Figurative language ensures that their messages are conveyed in a few words. The following aspects were noted in analyzing the songs under study: Defying stereotypes, Survival of the fittest’, Consensual transaction, and Levels’ sexual ‘prowess’.

### 5.1 Defying stereotypes

In African culture, it is taboo for a girl to ask a boy out as Lorna Real Love does in S3. As if that is not enough, she breaks another female stereotype, ordering Levels to “leave light skinned” (tumayellowbone). African society generally treats light-skinned women as more beautiful than dark-skinned ones and the term yellow-bone comes from the assumption that such women’s light complexion runs deep into their bones. Interestingly, Lorna Real Love does not seem fazed by Levels’ playboy antics and only wants to spend time with him, not to keep him as suggested by the prefix “chimbo” which loosely translates to ‘do for a moment’ as in “chimbomira zvetumayellowbone” which is juxtaposed with “chimbouya kuzvimadhafudhunda zvimablack bone”. Ordinarily, a dark-skinned person would feel insulted if they are referred to as a black, let alone black-bone, yet Lorna Real Love embraces it. She also fights stereotypes against stocky women, advising Levels to take a break from lean girls, tumaslender tumayellowbone and come to the chubby ones; the diminutive prefix ‘-tu’ is very fluid in terms of attitude towards something small and here it is contemptuously used. She also deconstructs society’s pejorative use of the prefix ‘zvi’ to use it in an affectionate way. Though she says it in a hilarious way, Lorna Real Love offers a vision of beauty that recognizes different forms of beauty. This contrasts with Lebrone who, in S4 admires Levels who by having a light-skinned girlfriend who Mbare residents mistake for a coloured, has earned a prestigious status.

In addition, Lorna Real Love debunks the myth that women are ‘soft’, “ini ndiri simbi hombe, une mota hombe”, literally, ‘I am a strong metal and you have a big car’. In this case, Lorna Real Love implies that she is as tenacious as Levels. In another demonstration of lyrical creativity, she employs alliteration to ask Levels to allow her to take charge because she can fix all his problems: “ndiri mekanika usapanika ndipe ndimboirevha ndimboidriver” (I am a mechanic, don’t panic, just let me drive it a bit”. Such a feisty women is reminiscent to characters in the film *Waiting to Exhale* who go against the ‘norm’ by describing themselves as laying men and not vice versa.

## 5.2 'Survival of the fittest'

S3 acknowledges competition for Levels so she asks for an opportunity, "ndipoo mukana". In the survival-of-the-fittest world of relationships, if one does not have required specifications, they lose out, women only ask for photographs of the big manhoods, "hombe ndoinonzi isa picture timboiona" (S1). Apparently, one needs a big car, big house to achieve greatness. The reduplicated verb, 'hombe' in 'muhombehombe' demonstrates such greatness. In S3, Lorna Real Love laments the fact that she has been sleeping with men who have small manhoods which leaves her sexually deprived, "ndanzwa nekukwira tumahonda fit two minutes katofa tumishikashikashika... tunogumira munzira" (literally, 'I am tired of boarding small cars which do not last the distance'). S1 adds that "hombe ndedzemunda murefu munda muhombe" (big ones are for large fields). The metaphor of a female body in songs as a field has been cited in the discussion on Jamaican dancehall. In a Zimbabwean context, Zimdancehall chanter, Qunofuzed's "9ine" has a verse in which he likens a woman to an unused field which he wants to till. Similarly, here, D-Flexx suggests that satisfying heavily built women sexually requires great stamina. He ends by advising people not to put themselves under pressure by comparing themselves with others, "usazviye pressure".

Women are portrayed as preferring big things in S1, S3 and S4. D-Flexx boldly claims that women always think of big things, "mupfungwa dzemadzimai munongofunga hombe". To make matters worse, he insinuates that they do not work to get what they want but depend on someone, apparently a man: "(mu)buritsire mari anotora figure hombe" (give her cash and she will take a huge sum). This appears to be corroborated by a lady's request to drive Levels' big car in S3. D-Flexx implies that tall men have big manhoods which women call "good size". S4 modifies the chorus of Baba Harare's song "Haubvire" in, "Ane hombe, mukoma Levels vane hombe" (she loved him because he has a huge manhood). The woman in S3 complains that she is sleeping with a man whose manhood is tiny "kana kumba uku tiri kurarira madora", madora are mopani worms. This is juxtaposed with her disclosure that she heard that Levels carries a 'big fish' which she wants to taste, "chimbondipa ndimboraira muramba".

## 5.3 Consensual transaction

Unlike the three other tracks, S4 is the only one which explicitly refers to the Shashl-Levels sextape though, like them, it does not spell her name. From the onset, Levels is absolved of any wrongdoing because he had consensual sex with his lover, "mukoma Levels havana mhaka guys... pavaiita wani zvainaka chii chaita kuti vagoumba daka" (my elder brother Levels is innocent, they had consensual sex so what's the problem?) What Librone seems to overlook is that Shashl's allegations involved previous incidents, not necessarily the incident projected in the leaked sextape.

## 5.4 Levels' sexual 'prowess'

Levels' sexual prowess is highlighted in A4 where several ideophones are used to graphically re-enact action on the leaked recording to suggest that Shashl initiated the sexual activity, "paati shadabu, mukoma Levels kwadabu" (when she opened, my brother Levels hit her) leaving her lying on her back, "nemanhede kupedza masports ese kuti rundubvu"; "shadabu" literally means 'opened widely', "pidigu" is 'fall', "kwadabu" denotes forcible removal of a layer and "rundubvu" means 'completed' which suggests that Shashl was left vanquished. The most brutal imagery is found in the words, "kudhanda kwacho kutori too bad", he hit her badly. The phrase "kupedza masports" (literally, to end the match) is used when one party defeats another. Probably to demonstrate that Shashl's charges were

insincere, A4 modifies the chorus of Baba Harare's track "Haubvire... mota yacho ihombe" ('you are such a character and your car is big') to "hakubvike kuMbare kwacho hakubvike" ('she no longer wants to leave Mbare', where Levels resides'). Ndunge Yut uses a technique found in African orature to praise Levels' sexual exploits, calling him with his clan-name, Mazvimbakupa whose totem is zebra. As stated earlier, it appears as though Levels' praises come at Shashl's expense. A1 says Levels' popularity has skyrocketed, "Aenda mbiri Levels" whilst A2 and A4 concur that he deserves an award for his sexual performances. In A2 Ndunge insinuates that Levels aroused Shashl's orgasms, something which he says, can only be achieved by a man who has a big manhood, "ukanzwa mabby oscreamer paita hombe apa (Ladies only scream when they have encountered a big one). Ndunge modifies the chorus "Paita Rudo", a yesteryear song by Enoch Munhenga, who is popularly known as X-Q and Oliver Mtukudzi, which means 'there is love' which he modifies into "ane hombe inotapira", 'he has big, a sweet one'.

## 6. Discussion

The four songs under scrutiny were found to be disempowering to women because three of them insinuate, and S4 clearly states, that Levels is innocent merely based on the viral sextape. The four songs also celebrate the producer's exploits whilst suppressing Shashl who S3 and S4 apparently insult through body shaming and colourism. All this, whilst the matter has been referred to the courts and the jury is still out, literally. This places them at risk of getting contracts in exchange for sex so we believe that this study will help in probing chances of him and other producers exploiting female singers especially teenagers. To its credit S3 provides images of an archetypical woman who refuses to be confined, she is strong-willed but dedicated to her man and all the four songs demonstrate that sex should be consensual. Levels' influence as a revered producer clearly influenced the bias in the four songs. Ndunge Yut has a contract with Chillsport Recordz and he and Lorna Real Love recorded their songs with the stable. Musicians are in this study urged to strive to provide fair social commentary because they have a huge influence on social behaviour. More discussions between managers, promoters, artistes, corporates and government representatives should be held.

## 7. Conclusions

The utilization of Africana Womanism has demonstrated its worth in analyzing the dynamics between black males and black females. The theory offered valuable insights into the dehumanization of African professional women within the music industry. Through the lyrics of the singers, the analysis of the four songs revealed a pattern of gender bashing, with the insinuation that the victim was at fault for the public release of the sextape. The songs prominently incorporate offensive language, with a significant focus on women, thereby contradicting the ideals of gender equality and African cultural values.

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## VISUAL ARTS EDUCATION FOR DESIGN STUDENTS FROM THE PERSPECTIVE OF MUSEUM EDUCATION IN A SOCIAL CONTEXT

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**Abstract.** The article is a theoretical-practical study, focused on valorization of the visual arts education for design students in the context of museum education. The paper reveals fundamental concepts, identifies certain perspectives to researches in the targeted field. Additionally, it specifies and describes several essential educational aspects, such as the objectives of visual arts education; the value axes centered on visual arts education; cognitive processes developed by design students during activities carried out in museums; educational actions regarding the optimization of visual arts education for design students; strategies and methods (scientific documentation, analysis and synthesis, conversation, product study, etc.) of enhancing visual arts education for design students. The study specifies, analyzes, and validates the positive impact of activities conducted in museum spaces on the visual arts education of design students, focused on achieving these aspects in the context of university-museum collaboration. In conclusion, an approach to visual arts education of design students from the perspective of national and universal artistic heritage can ensure both the optimization of initial training for design students and lifelong education.

**Keywords:** *visual arts education, museum, museum education, museum pedagogy, art collection, artwork, values.*

**Rezumat.** Articolul reprezintă un studiu teoretico-practic, axat pe valorificarea instruirii artistico-plastice a studenților-designeri în contextul educației muzeale. În lucrare sunt dezvoltate conceptele de bază, sunt analizate esențializate unele viziuni ale cercetătorilor din domeniul vizat. La fel, sunt precizate și descrise câteva aspecte importante educaționale, precum: *obiectivele educației artistico-plastice; axele valorice centrate pe instruirea artistico-plastică; procesele psihice dezvoltate la studenții-designeri în cadrul activităților desfășurate în muzee; acțiunile educaționale cu privire la optimizarea instruirii artistico-plastice a studenților-designeri; strategiile și metodele (documentarea științifică, analiza și sinteza, conversația, studiul produselor etc.) de eficientizare a instruirii artistico-plastice a studenților-designeri.* Studiul dat precizează, analizează și validează impactul pozitiv al activităților desfășurate în spațiul muzeal, asupra instruirii artistico-plastice a studenților-designeri, accentul plasându-se pe realizarea acestor aspecte în contextul colaborării universitate-muzeu. Concluzionând, o abordare a instruirii artistico-plastice a studenților-designeri din perspectiva patrimoniului

artistic national și universal poate asigura atât optimizarea formării inițiale a studenților-designeri, cât și educația pe tot parcursul vieții.

**Concepte cheie:** *instruire artistico-plastică, muzeu, educație estetică, educație muzeală, pedagogie muzeală, colecții muzeale, operă de artă, valori.*

## 1. Introduction

Building upon the study of established literature [1-5], it is revealed that museum institutions have undergone significant changes throughout the entire evolutionary-historical trajectory of humanity, continuously adjusting their mechanisms and strategies to new social, cultural, and technological challenges. Consequently, transitioning from elitist models, museums have gradually transformed into institutions that are open and accessible to all social strata, highly valued in the process of providing education to the entire society through and for shared values.

During the transitional period between the 19<sup>th</sup> and 20<sup>th</sup> centuries, the museum was recognized and affirmed as a social and cultural entity, significantly influencing the configuration and development of museum pedagogy on a scientific level [6]. Museum pedagogy, with the ultimate goal of achieving museum education [7], focuses on creating relevant and interactive educational experiences within the museum space, targeting various fields such as arts, science, and culture. These experiences aim to encourage a profound understanding of the national and universal cultural heritage.

Contemporary museums have evolved beyond mere repositories of artifacts, becoming open platforms for cultural dialogue, reflection, and addressing various socio-educational challenges. They promote history, inclusion, tolerance, intercultural relationships, including the realization of visual arts education, stimulating the development of creativity, an interest in culture, beauty, etc., fostering the understanding and the appreciation of the art.

According to Romanian researcher C. Cucoș, museum pedagogy encompasses plastic education, defining the acquisition of plastic language elements for communication with artworks, becoming one of the crucial avenues for the reception, appreciation, and integration of artistic values into the lives of the younger generation [8, p. 116]. Along the same lines, S. Cristea notes that museums also impact the aesthetic cultivation of individuals through artistic education, a fundamental component of aesthetic education for students by conveying the values of artistic beauty [9, p. 53].

In conclusion, the overarching goal of visual arts education in the presented context is to shape and develop a personality capable of creating, appreciating, assimilating, and promoting the values of artistic beauty. The museum space, in turn, provides the necessary means to manage this complex process. Furthermore, it is noteworthy that postmodern museums are expanding and strengthening their areas of interest, diversifying collections and exhibited content. They facilitate inter-, multi-, and transdisciplinary connections in the education process through the use of new communication media, powered by interactive digital technologies, to offer attractive and accessible experiences to a wide audience, especially design students. Thus, museums boast an extensive variety of curated collections and artworks that convey valuable messages from artistic, historical, aesthetic, and design perspectives, including interior, industrial, and fashion design.

Given that contemporary society places art and design in a prominent position in global culture and the economy, the role of museums in promoting art and design is undisputed. Visual arts education for design students, focused on the valorization of national

and universal artistic heritage preserved in museum collections, becomes a priority, involving a multitude of factors, contexts, and educational circumstances. Russian pedagogue B. A. Stolyarov asserts that the educational activity of an art museum allows students to broaden their cultural horizons and contributes to the development of erudition, skills in artistic analysis of artworks, providing extensive knowledge in the field of art history [10]. Therefore, this form of education aims at the personal efficiency and professional development of design students, fostering the progressive assimilation of knowledge, stimulating imagination, artistic creativity, aesthetic receptivity, etc., through their interaction with authentic artworks.

## **2. The museum as a pedagogical environment and source of artistic inspiration for design-students**

Visual arts education conducted within a museum space provides design students with opportunities to explore cultural and artistic diversities, experiment, and engage with notable personalities in the fields of painting, design, architecture, pedagogy, etc. The methodology of visual arts education is centered on achieving two objectives:

- a) *progressive acquisition of specific techniques;*
- b) *initiation into the reception of artworks, centered on discerning the difference between the natural object and its artistic representation* [9, p. 56].

In line with the aforementioned, educational-artistic actions in the field of visual arts initiated by museums stimulate the active participation of the target audience (students) in exhibitions, thematic conferences, and cultural events, thus fostering the development of an open, inclusive, and culturally informed society [11]. In this context, we confirm the museums' potential in terms of aesthetic and visual arts education for design students, as we have implemented an institutional project titled *Creating educational partnerships in promoting national and universal heritage from the perspective of museum education for school and university students*, which has resulted in great success.

As a result, the museum institution is recognized as a cultural institution of significant importance in the visual arts education of design students, providing a formal and non-formal framework for learning/investigating national and universal artistic heritage in a specific environment dedicated to art and culture. This can be achieved through the prism of two value axes:

- **The theoretical axis** provides students with knowledge of basic concepts and theoretical foundations, incorporating:
  - the evolutionary process of visual arts, artistic styles based on the studied museum heritage;
  - perspectives of researchers or visual artists regarding the understanding and interpretation of artworks;
  - theoretical concepts related to plastic language - elements of plastic language (point, line, shape, volume, plastic value, color, etc.);
  - means of plastic expression and principles of plastic composition (harmony, balance, proportion, rhythm, symmetry, etc.);
  - theoretical aspects concerning techniques, technologies, materials, and methods applied in creating artworks found in museum collections;
  - complex information about the structure and specificity of the addressed museum heritage, etc.

- **The praxiological axis** complements the theoretical aspects of visual arts education, focusing on a holistic learning experience involving practical and applied learning through:
  - direct contact with artworks to describe the evolutionary process of visual arts and artistic styles based on the studied museum heritage;
  - deciphering and narrating the elements of plastic language featured in selected works exhibited in the museum;
  - analysis and explanation of how artists use plastic expression to finalize the compositional space in the elaboration of works from the proposed collections;
  - practical activities centered on comparing materials and technical means used in traditional art with those used in contemporary art;
  - interaction with researchers, visual artists, educators in scientific-practical conferences, creative workshops, etc., encouraging the exchange of experience and leveraging the specific language of visual arts and museum education;
  - direct involvement in documentation and restoration activities of museum heritage pieces, etc.

At the same time, by investigating the recipes used by our predecessors for preparing colors, primers, supports, and materials associated with artistic techniques, we can take on responsibilities for creating or optimizing vital conditions for the recovery, conservation, presentation, and promotion of masterpieces constituting the museum treasure. This helps prevent the degradation or complete destruction of these artistic values [12, p. 6].

In this line of thought, it is necessary to specify that the issue of preservation, valorization, and ensuring the authenticity of cultural and artistic heritage remains a priority of state policies, with our country aligning the national regulatory framework with international conventions and protocols [13].

As we have observed from the above and based on our experience, the implementation of visual arts education for design students within museums involves the interconnection of the two previously described value axes. In this context, the aim is to optimize the harmonious development and professional formation of design students, which includes:

➤ *Development of critical and analytical thinking through:*  
*observation and detailed description* of the elements of plastic language that constitute the artwork; *objective analysis and interpretation* of artworks: their meanings, symbols, and conveyed messages; *analysis and comparison* of various techniques, technologies, approaches, and artistic periods in which the artworks were created; *subjective and reasoned interpretation* of specific works, historical periods, representatives, etc.; *critical evaluation of artworks* from the perspective of relevance and impact on contemporary art.

➤ *Stimulating creativity through:*  
*stimulating creativity and personal expression* by exploring, researching, and experimenting in the creation and realization of one's own artistic compositions or projects inspired by museum collections; *fostering divergent thinking* by launching creative challenges to discover multiple solutions or ideas in the application of unconventional materials and techniques or the nonconformist and personalized approach to artwork creation; *collaboration and exchange of ideas* among students as well as visual artists, extending one's own creative resources; *reflection and feedback* - essential aspects for self-assessment and creativity stimulation.

➤ *Understanding and appreciating cultural diversity and artistic context through:*

*studying works of art in the evolution of humanity*, which includes aspects such as: political, social, religious, and philosophical influences on artistic production; *examples and models* of important artworks for certain historical periods, created by renowned artists that serve as sources of inspiration in the development of one's own creations; *leveraging the plastic and museum language* through the use of specific terms and concepts in communication, such as composition, perspective, luminosity, symbolism, museum exhibitions, collections, treasure, etc.; *identifying and comparing contemporary artistic trends* by establishing connections between current artworks and those from the past in a contextualized perspective reflected in personal artistic practices.

➤ *Artistic and aesthetic development through:*

*exploring museum objects and collections*, interacting with genuine art and cultural artifacts; *appreciating and evaluating the technical quality, expressiveness, and artistic message* conveyed by a truly authentic work, *enhancing the reception, evaluation, experience, and creation of the values of beauty of nature, society, and art* [14].

➤ *Learning through experimentation:*

design students can learn from masters by integrating elements and techniques observed in original artworks displayed in museum exhibitions into their own artistic practice.

Therefore, harmonizing the content of artistic-plastic education for design students with museum education programs is essential for both their initial and ongoing development, serving as a catalyst for professional advancement through unique artistic skills, creativity, and aesthetic sensitivity focused on *beauty*.

### 3. Materials and Methods

As a result of conducting various formal and non-formal activities within museums, was determined that, to ensure high-quality learning experiences targeting the artistic and plastic education of student-designers, it is essential to develop and implement educational actions based on the following aspects:

- *Definition of educational objectives*: establishing clear and relevant objectives regarding the development of specific professional skills and transversal competencies of the target group.
- *Selection and preparation of exhibits in accordance with curricular requirements*: identifying artistic creations that would rise interest, allow exploration of technologies and working techniques, knowledge and understanding of artistic concepts, and meet the requirements of learning content.
- *Development and implementation of a coherent and structured program*: designing teaching activities based on well-established criteria targeting the progressive construction of knowledge, the development of creativity, and the practice and consolidation of practical skills through exploration, research, and cultural interference.
- *Collaboration with professionals and museum guides*: involving specialists from various fields (visual artists, designers, educators, etc.) and museum guides, to provide useful information and experiences to support the implementation of artistic and plastic education activities in an interesting and productive manner.
- *Monitoring and evaluating the educational program*: monitoring and assessing learning outcomes regulated by student feedback, provides opportunities to



optimize the program and adjust teaching tasks to both, professional training requirements and personal interests.

At the same time, we emphasize that the design of artistic and plastic education activities for student-designers, conducted within museums, must be correlated with the criteria for classifying learning as follows:

- *perceptual learning*;
- *motor learning*;
- *verbal learning*;
- *concept learning*;
- *social learning* [15, p.18].

Equally necessary is the establishment and pursuit of a well-defined trajectory from an inter-, intra-, and transdisciplinary perspective that would optimize the promotion of positive and authentic values, playing a decisive role in shaping the personalities of future designers and ensuring lifelong learning [16].

#### 4. Results and Discussions

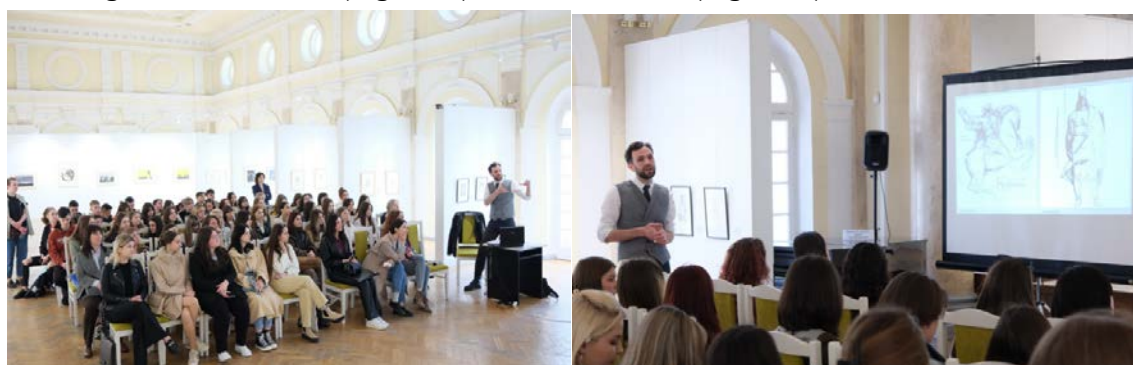
Our study on the artistic and plastic education of student-designers in the museum context [7, 17] allowed us to establish that the operational adjustment of museum resources to educational ones can enhance the performance outcomes achieved by students, especially within the framework of creating bilateral educational partnerships between higher education institutions and museums. Institutional-level collaboration involves a wide range of activities in both museum spaces and academic environments, such as organizing and conducting specialized courses, seminars, or thematic conferences with the active participation of students, researchers, designers, museum professionals, and more. Student-designers can collaborate with peers from various disciplines, such as architecture, interior design, graphic design, painting, etc., to create interdisciplinary projects within museums. They can participate in interactive exhibitions that blend visual arts with spatial design, information technologies, and more. Similarly, student-designers can engage in cooperative projects with museums to develop graphic and visual exhibition products, design and arrange museum spaces, and conceive and develop intriguing concepts for dynamic presentation of temporary or permanent exhibitions, thereby gaining valuable professional experience.



**Figure 1.** The teacher's explanations for students and pupils.



Following, will be provided examples of good artistic and plastic educational practices focused on a synergistic and productive collaboration conducted by us at the *National Museum of Art of Moldova* (NMAM). There, students from the *Technical University of Moldova, Faculty of Urbanism and Architecture, Interior Design Program*, together with students (potential TUM students) from the *Center of Excellence in Construction in Chisinau* (CECC), accompanied by professors Zestre Lilia and Manea Nicolae, were involved in artistic activities within the *Form Study* discipline, followed by constructive communication and the exchange of opinions among them, Figure 1. Thus, capitalizing on the curriculum content in the *Form Study* discipline within the museum context has had a positive impact on institutional, professional, and personal dimensions. About the fact that museums can offer students a highly productive learning environment and opportunities for internships or technological practice programs within research laboratories, restoration of museum artifacts, or creative workshops alongside notable figures, we have become convinced by frequently participating with design students in lectures, exhibitions, and meetings held by educators, art critics, and visual artists including Dmitri Shibaev (Figure 2), Florina Breazu (Figure 3), and others.



**Figure 2.** Dmitri Shibaev, assistant professor *Academy of Music, Theatre, and Fine Arts* with TUM student-designers and CECC pupils.

Familiarizing students and pupils with the artwork of visual artist Ilie Bogdesco–100 years since his birth, during the lecture delivered by visual artist Dmitri Shibaev, proved to be highly successful, as they discovered details about the life and creative activity of the master.



**Figure 3.** Florina Breazu, Ph.D., artist, *President of the Plastic Artists' Union of Moldova*, together with TUM student-designers.

The viewing of the personal exhibition *MultiVers* by artist Florina Breazu and the initiation of TUM students into various techniques of interpreting the messages conveyed in the painter's works inspired future designers, prompting them to develop their own works and projects.

Similarly, TUM student-designers, along with university faculty members Tatiana Filipski, Ph.D., senior lecturer, Elena Zagaevschi, assistant professor, and Stela Plămădeală,

assistant professor, demonstrated that they can act as moderators for workshops and practical activities for younger museum visitors. These may include sessions on drawing, painting, sculpture, collage, photography, etc., guiding participants and sharing their artistic knowledge and skills. An exemplary case can be seen in the *Creative Workshop* conducted for first-grade students from the *Gheorghe Asachi Theoretical High School in Chisinau*, accompanied by teacher Lidia Cherdevară, held at the *National Museum of Art of Moldova*, Figure 4.



**Figure 4.** Student-designers, together with students, crafting umbrellas during the Creative Workshop at NMAM.

This pedagogical experience and educational practices with students from the *Technical University of Moldova, Interior Design* specialty, conducted in a museum context, have led to an understanding of the pressing need to align curricular content with the national and universal values preserved by museums and to revitalize activities to meet educational goals. Museums can become an open exhibition platform for the general public, showcasing artworks and projects by student-designers, encouraging communication and intergenerational collaboration focused on promoting the museum's treasures in the context of art and design education.

In this context, should be mentioned several effective strategies in the artistic and plastic training of student designers:

- strategy for planning teaching and extracurricular activities from the perspective of leveraging museums in art and design education;
- strategy for selecting and applying educational methods in accordance with the specific curriculum content;
- strategy for verifying and evaluating artistic and plastic activities conducted in museums;
- strategy for stimulating students' creativity.

## 5. Conclusions

These strategies target the following teaching methods and procedures: storytelling, explanation, conversation, discussion, brainstorming, observation, discovery, demonstration, sketches, portfolios, presentations, PowerPoint slides, etc. Consequently, using these effective pedagogical methods, the artistic and plastic training of student-designers can be a captivating and valuable experience that prepares them for a successful career.

In confirmation of the above, can be concluded that through artistic and plastic education focused on both formal and non-formal activities in museums, the aim is to promote cultural, artistic, and intercultural values, foster creativity, facilitate dialogue, understanding, and tolerance. The primary goal is to shape the professional, self-efficient, and resilient personality of student-designers.

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## THE IMPACT OF THE INTERNET ON STUDENT COMMUNICATION DEVELOPMENT

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**Abstract.** In the context of the rapid development of information technologies, the internet and online communication exert a multifaceted influence on students. Starting with the hypothesis that students are more closely connected to technological progress than others. The study was conducted on the impact of the internet on the development of their communication skills and educational processes. The research aims to determine the positive and negative impacts of online resources on the quality of students' communication in both personal and educational spheres. Additionally, it seeks to assess the role of higher educational institutions in teaching students effective online resource usage skills. According to the research, only 6 % of the literature suggests positive impact of the internet on human health, while most indicates negative effects on mental and physical health, as well as on communication skills development. These results lead to the conclusion that it is necessary to educate students on rational use of technologies to avoid negative consequences for education and social interaction in the future. Educational institutions play an important role in this process by providing students with the necessary knowledge in this area, aiding their social adaptation and development in the modern digital world.

**Keywords:** *development, education, impact, information technologies.*

**Abstract.** În contextul dezvoltării rapide a tehnologiilor informaționale, internetul și comunicarea online exercită o influență multifacetică asupra studenților. Pornind de la ipoteza că studenții sunt mai strâns legați de progresul tehnologic decât alții, studiul a fost realizat asupra impactului internetului asupra dezvoltării abilităților lor de comunicare și a proceselor educaționale. Cercetarea își propune să determine impactul pozitiv și negativ al resurselor online asupra calității comunicării studenților, atât în sfera personală, cât și în cea educațională. În plus, se dorește evaluarea rolului instituțiilor de învățământ superior în predarea studenților a abilităților eficiente de utilizare a resurselor online. Conform cercetării, doar 6 % din literatură sugerează un impact pozitiv al internetului asupra sănătății umane, în timp ce majoritatea indică efecte negative asupra sănătății mentale și fizice, precum și asupra dezvoltării abilităților de comunicare. Aceste rezultate conduc la concluzia că este necesar să se educe studenții cu privire la utilizarea rațională a tehnologiilor pentru a evita consecințele negative pentru educație și interacțiunea socială în viitor.



**Cuvinte cheie:** dezvoltare, educație, impact, tehnologii informaționale.

## 1. Introduction

Under the influence of technological progress, students prefer virtual communication over face-to-face interaction, leading to issues in developing live communication skills among college and university students. The primary goal of this study is to delve into the multifaceted nature of technological advancement within the context of shaping communicative skills among students. The research aims to identify both the beneficial and potentially detrimental effects of technological development, as well as to explore effective strategies for minimizing negative impacts and maximizing the potential of new technologies to foster harmonious growth in communication abilities. To achieve this goal, the research sets a number of tasks to examine the types of interpersonal communication, the negative and positive impacts of technological development, the psychological challenges faced by students in the age of digitalization, the influence of higher education institutions on students' communication skills, and the effectiveness of online communication in the learning process.

In the age of digitalization, many countries, including the Republic of Moldova, allocate significant resources to the development of technologies. For instance, as early as in 2000, Moldova established the Regulation of the Supreme Council for Science and Technological Development [1]. In 2018, the foundations for various national and international research and development programs were laid by reorganizing the Agency for Innovation and Technological Transfer and merging it with the National Agency for Scientific Research and Development [2]. By 2024, 60 million lei will be allocated for the digitalization of SMEs to facilitate the transition to e-commerce, and another 60 million lei will be earmarked for supporting digital innovations and startups [3]. Thus, through these investments, Moldova aims to develop technologies for broader applications in various sectors, including education.

Technological development, as a combination of systems engineering and technological engineering activities, encompasses the application and transfer of research results to enterprises, the implementation and deployment of new technologies in the social sphere, and the improvement of existing ones [4], has become an integral part of our lives and infrastructure and includes both pre-competitive and competitive research.

Given the rapid and diverse development of technologies and their integration into everyday life [5,6], the hypothesis of the strong influence of the internet on the lives and communication skills of students is indisputable. However, there are many conflicting facts about the positive or negative impact of the internet on the development of interpersonal communications. These contradictions highlight the necessity of studying the impact of technological advancements on student communication and learning to use these technologies correctly to avoid serious consequences for the communication skills of future generations. Even now, students are facing issues such as information overload, difficulties with personal interaction, and deteriorating concentration and attention.

Higher education institutions help address these communication challenges by integrating technologies and new teaching methods into the educational process and training students to interact both in-person and in online spaces [7]. From this, it can be concluded that higher education institutions are creating a new educational environment that promotes flexibility in learning to meet the diverse needs of students. They are also emphasizing the

development of effective learning skills within the evolving world and the emergence of new demands for knowledge and communication skills.

## **2. Materials and Methods**

During the study of the influence of the Internet on the development of communication among students, methods such as data analysis and scientific literature review from online sources and research articles were used. Additionally, data development, observation, and synthesis were conducted, along with formulating conclusions based on the provided information.

## **3. Results and discussion**

### **3.1 The types of interpersonal communication among students**

Today, within the walls of higher education institutions, students from different countries and societies are trained in professional and communication skills, which plays an important role in interpersonal communication among students.

Interaction between people through communication arises from the need to establish connections and interact with each other. The process of communication can contribute to the creation of harmonious relationships and cooperation, but it can also lead to conflicts and disagreements when it is distorted or incomplete. Communication plays a key role in ensuring positive interpersonal relationships, which in turn contributes to the development of the psychosocial sphere for both individuals and society as a whole [8]. Various types of communication exist: frontal, dialogic, and mediated. In frontal communication, information is transmitted from one speaker to listeners without feedback. In dialogic communication, information exchange occurs in both directions between two participants. Mediated communication involves transmitting information through some means, such as text, video recording, or drawing [9]. Collectively, these types of communication make communication complete and harmonious, which promotes effective interaction.

An important aspect of developing communication among students is the establishment and development of the corporate culture of the educational institution. This process includes creating a sense of belonging to the university, developing horizontal connections, fostering cohesion within the collective, promoting social partnerships, exchanging knowledge and ideas, as well as fostering collective responsibility. Collaborative activities, such as working on joint projects and participating in excursions, contribute to strengthening friendly bonds among students.

The relationships between students and teachers, although shaped by the educational process, are also important for the development of students' professional communication skills and their preparation for future interactions with employers [9]. Thus, the educational environment created by higher education institutions provides the necessary conditions for the proper development of students' communication skills.

The modern progress of information technologies leads to significant changes in all areas of human activity, including communication and interactions, having both positive and negative impacts.

### **3.2 Advantages and disadvantages of technological development**

The rapid and comprehensive development of information technologies has a significant impact on each of us, as it occupies a large part of our lives. Therefore, both the

advantages and disadvantages have significant consequences in the life and development of individuals and humanity as a whole.

The main advantages of technological development:

*Convenience in communication.* The development of technology improves communication, making it more accessible, diverse, and closer to natural interaction in the real world, enriching it with expressive means. Emojis, stickers, audio and video messages allow for a more vivid and precise expression of emotions and mood during communication on social networks. This contributes to a deeper understanding and closeness in virtual communication. Technological advancement also contributes to the creation of new forms of communication, such as virtual and augmented reality, which enable users to interact in virtual spaces and situations, complementing and enriching their communication experience in the online environment [10].

*Access to information.* Thanks to search engines on the internet, you can find any original text written anywhere on Earth, expanding access to knowledge and information, making it available to users worldwide. Previously, the primary tool for retrieving data was a computer, but with the introduction of smartphones, access to articles available online became possible anytime and anywhere. Now, through mobile devices, users can instantly find and download information, significantly enhancing the convenience and speed of data access. The boundless diversity of information openly available opens vast opportunities for self-learning and personal development in virtually any field. People can learn new languages, take online courses, obtain diplomas and certificates, and participate in webinars and virtual conferences. This contributes to continuous education and professional growth, which is particularly important in a rapidly changing world of technological advancements. Furthermore, the internet and search engines foster global communication and knowledge sharing between diverse cultures and societies. People from all corners of the world can share their ideas, experiences, and scientific breakthroughs, fostering mutual understanding and international cooperation [11].

*Improving communication and interpersonal relationships.* Virtual communication tools, social media, the internet, and other technological innovations allow people to communicate and share information over distance without limitations, maintaining real-time connections. This is especially important in the context of globalization, where people work, learn, and interact with partners across the globe. The concept of “internet friends” is increasingly common, highlighting how people connect and build relationships with individuals worldwide. This contributes to the development of a global community where everyone can find like-minded individuals, regardless of cultural and national differences. Social media plays a vital role in creating and maintaining these connections, providing platforms for communication, exchange of ideas, and collaborative creativity. Technological advancements make it possible to communicate with people even in unfamiliar foreign languages using various translation applications, enhancing interpersonal communication. Furthermore, virtual communication tools become indispensable in situations where face-to-face meetings are impossible. During global crises, such as pandemics or natural disasters, virtual communication enables people to stay connected, work, and access education, despite limitations [10]. Technologies also promote inclusivity, allowing people with disabilities to participate in social and professional life.

*Improving the quality of life.* In the field of medicine, technological advancement has revolutionized the treatment of diseases that were considered incurable just a few decades

ago. The creation of new vaccines, the development of personalized therapy methods, and the use of artificial intelligence for disease diagnosis and prediction – all of this has become possible thanks to technological achievements. In industry and trade, technological tools such as production automation, robotics, and the implementation of data analysis systems enable increased efficiency, reduced costs, and the production of higher quality goods. Online commerce, e-commerce, and supply chain management – all of these modern technological solutions reshape business models and make the market more dynamic and competitive. It also contributes to economic growth, reduces costs, and expands business relationships [10].

*Improving the quality of education.* The widespread availability of information has transformed models of learning and teaching. Educators and researchers have developed new pedagogical approaches, leveraging the advantages offered by new devices found on various interactive educational platforms. The ability to utilize digital resources such as online courses, webinars, and distance learning enables students to acquire knowledge anytime and anywhere. Moreover, the opportunity for online communication and collaboration on educational platforms and in virtual classrooms facilitates more effective interaction between instructors and students, as well as among the learners themselves [10].

In the past few decades, technology has significantly improved the quality of our lives and interpersonal communications, making life and education more comfortable and diverse. However, rapid technological advancement also has its negative aspects.

The main disadvantages of technological development:

*Environmental pollution.* While many companies strive for sustainable development, industrial emissions, particularly in developing countries, continue to pollute the air and water, threatening human health and ecosystems. Electronic waste, which is growing in volume each year, contains toxic substances that can seep into the soil and water, causing pollution and threatening biodiversity. Exhaust fumes from vehicles, containing nitrogen and carbon oxides, lead to acid rain, air pollution, and deteriorating air quality, negatively impacting human and animal health. The lack of conscious consumption among individuals is another serious problem, as it leads to overproduction, excessive consumption, and the generation of large amounts of waste. The unsustainable use of natural resources, including water, forests, and oil, also amplifies the anthropogenic impact on the environment [10].

*Dependency and disorders.* Currently, sociologists and social psychologists are noting significant shifts in values and behavior across cultures, driven by dependence on computers, smartphones, and tablets. Individuals are spending an increasing amount of time in front of screens, leading to the formation of various dependencies and shifts in habits. This situation has given rise to disorders such as cyber-addiction, characterized by excessive internet and digital device use, and social media addiction, where individuals crave constant online interaction and validation through likes. Video game addiction, where players dedicate an excessive amount of time to gaming, neglecting other aspects of their lives, is also widespread. Beyond psychological dependencies, individuals have become more reliant on the opinions of others and seek social validation through online platforms. This amplifies their vulnerability to external influence and fosters unstable self-esteem. Physical conditions have also emerged as a result of this dependence: for instance, the term “Carpal tunnel syndrome” [12] describes pain and inflammation in the thumb due to frequent use of touch screens, while neck injuries arise from the constant head tilt associated with gadget use.

*Violation of personal and social security.* Experts point out that connecting to unknown open Wi-Fi networks means that anyone can access the data you entered while browsing.



This includes passwords, credit card numbers, and other confidential information. Similarly, posting photos on social media reveals information about where you are and who you are with. Even a simple photo can contain metadata, such as geolocation, that can be used by attackers to track your location. Research suggests that criminals study potential victims' social media posts to learn about their daily lives and make it easier to target them. Furthermore, excessive openness on social media jeopardizes not only physical safety but also personal data. Posts and photos can contain information that can be used for phishing attacks or identity theft. For example, information about your work, studies, hobbies, and social connections can help attackers gain access to your financial accounts or other important resources. It is also important to note that information once posted online can be difficult to remove. Therefore, excessive openness on social media endangers an individual's safety and personal data [13].

*Reduced levels of intellectual and social development.* The easy access to a boundless amount of information saves time and leads to more optimal results, however, it also encourages "mental laziness" as the constant use of technological advancements removes the need for the development of creativity and intellect. This can lead to a decline in the quality of education, the level of education, and a decrease in mental abilities. Students may begin to rely on ready-made answers and solutions, without bothering themselves with analysis and critical thinking. Such superficial understanding of knowledge makes it less resilient and strong, which further negatively affects their professional training. The lack of live communication, decline in activity in public life, and expansion of the digital divide [14] lead to a decrease in interpersonal skills and social development of students, which has negative consequences in the students' ability to interact and communicate with the world and people around them.

*Information overload.* Information overload has a number of negative consequences on students' mental well-being, such as fatigue, increased levels of stress and anxiety, difficulty in decision-making, decreased productivity, attention, and concentration, sleep disturbances, and social problems. In conditions of information overload, students may miss important information or lose the ability to filter and distinguish significant information from secondary, leading to weakened critical thinking and analytical skills.

Information overload, often referred to as "information fatigue," occurs when students are confronted with a massive amount of data they need to process and absorb in a short period. This creates a state of constant pressure and can lead to burnout. Students, constantly exposed to a large volume of information, begin to experience difficulties concentrating on a single task, which reduces their overall performance and efficiency in the learning process.

"Due to the influx of information, it has become increasingly difficult to assess the value of the information provided online, and we are faced with the transition from real life to a more abstract and virtual one" [15].

*Challenges in learning technological skills.* Technology changes rapidly, and what was relevant recently can quickly become outdated. This necessitates the constant updating of curricula and materials. The high pace of change and varying levels of preparedness can also hinder effective teaching of technological skills. It is important to consider that the speed of technological progress necessitates the implementation of innovative approaches to education and the adaptation of students to new conditions. The absence of a unified standard complicates the assessment of training quality and the creation of standardized programs, which collectively makes the process of teaching relevant skills more challenging [16].

It's essential to properly assess both the negative and undoubtedly positive aspects of technological progress to effectively address its adverse effects on students' lives and their abilities for development, learning, and communication. For these purposes, higher education institutions, including the Technical University of Moldova, incorporate disciplines such as communication and academic writing, ethics, and philosophy into the curriculum to develop students' communication skills, critical thinking, and create conditions for social interaction experience.

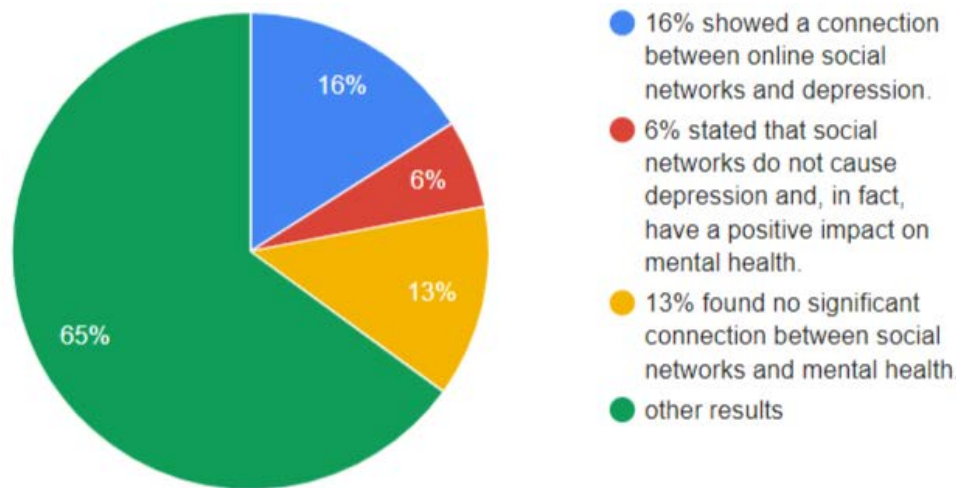
### **3.3 Psychological problems of the "digital generation" and ways to address them**

Today, students use the Internet as an external source of information, while their own abilities to memorize, think critically, and overall intellect significantly decrease. The so-called "digital" generation possesses advanced multitasking skills but suffers from issues with time management, task quality, and productivity, leading to profound negative consequences. Information overload, dependence on social media, and constant stress contribute to the development of attention and concentration crises, increased anxiety, and other problems characteristic of our generation [17]. This can have devastating consequences on the development of future life and communication skills. Minimizing such negative effects can be achieved by reducing students' screen time, controlling the content consumed on social media platforms and online platforms, and reducing stress factors.

The emergence of social networks has changed the nature of human interactions. According to some studies, social networks designed to promote friendliness and easy interaction among people, such as Facebook, can lead to the development of depression due to low self-esteem and social comparison [5,18]. Therefore, it is important to be aware of the potential negative consequences and use social networks in moderation, paying attention to one's mental health and self-esteem. Already, posting various photos and posts is accompanied by anxiety about whether this information will be accepted and approved by the online community, which places one's self-esteem entirely dependent on the opinions of others. The American Academy of Pediatrics (AAP) supports the existence of depression caused by Facebook, "depression that develops when students and young people spend a lot of time on social media sites like Facebook, and then begin to exhibit classic symptoms of depression" [18]. A new systematic review of the literature linking social networks to depression was conducted by Lancaster University. The results were published in the journal *Cyberpsychology, Behavior, and Social Networking*. Figure 1 illustrates the results of this analysis of 799 articles on the relationship between social networks and mental health.

This literature review shows that only 6% indicate that social media has a positive impact on mental health; however, they more often have a negative or neutral impact on physical and psychological health, including development of communication skills. These results underscore the need for a deeper study and understanding of the impact of social media and online platforms on students' mental health and the development of strategies for the safe use of online resources and platforms. As virtual communication develops, real-life communication degrades, leading to its own set of negative consequences.

Certain behaviors, such as comparing oneself negatively to others, feeling envy when observing others' lives, frequent posting and excessive interaction through social networks, forced interaction with people unpleasant to the individual, and the creation of a "virtual person" [20], increase the likelihood of developing depression, as the student's brain is in a vulnerable state during this developmental period.



**Figure 1.** The correlation between social media and mental health [19].

Moreover, in the modern world, the internet means everything for students: education, work, socializing with friends, searching for information, storing important data, memories, entertainment, and much more. In such circumstances, without access to the internet, a person loses access to all major spheres of life, leading to complete dependency. Additionally, the lack of access to the internet and online platforms results in complete social isolation for the student without the possibility of communication, which has a profoundly negative impact on mental health and the development of communicative skills for the student.

Personality type is also considered an important factor in terms of the risk of developing depression when using social networks [21]. Women and individuals with a neurotic personality have a higher risk. Moreover, while some people have negative experiences on Facebook, others have positive ones. For people with depression, researchers emphasize that online communication platforms can help if they are used to increase social support.

The lack of face-to-face communication is also a common problem. According to GWI research, "in 2022, users aged 16 to 64 spent 2.5 hours a day on social networks," with a significant portion of media consumption time attributed to students and young people. About 50 % of girls and 9% fewer boys aged 16 to 24 spend more than 4 hours a day browsing the internet [22]. In such conditions, the level of development of communication skills significantly decreases, which in turn can lead to a deterioration in the quality of interpersonal relationships and social adaptation.

The combination of these factors can significantly reduce the quality of life and communication skills of both students and humanity as a whole. That's why it's essential to use technology wisely for learning and communication.

Taking into account the developmental characteristics of students and their preference for using online resources, there are currently a number of scientifically validated online therapies available that can support people with various emotional issues. Within these programs, students receive psychological treatment online under the adequate guidance of a mental health specialist [21], which, in turn, can reduce the negative consequences of internet influence on the psychological and mental health of students.

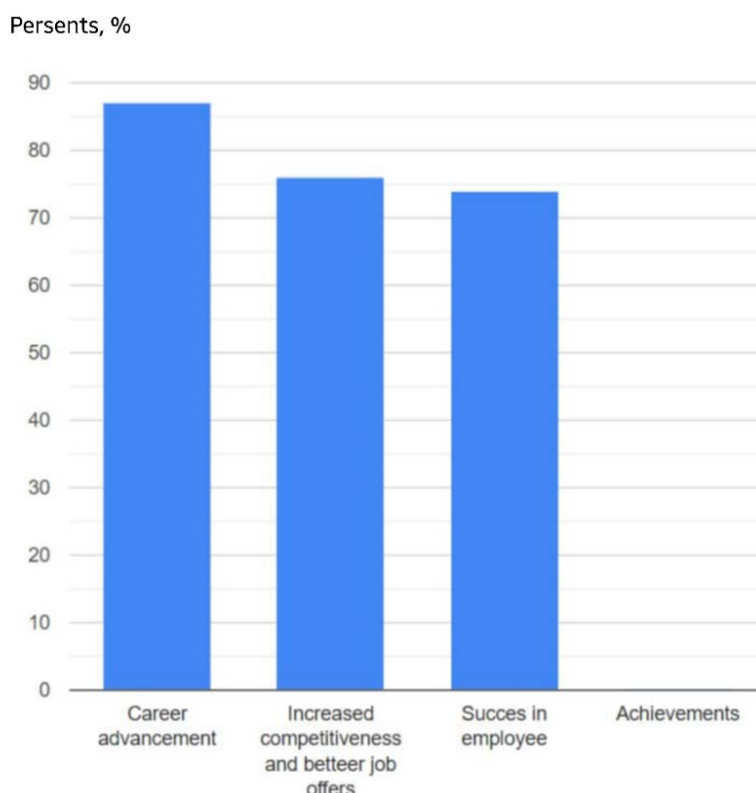
The possibility of personal information being hacked and insufficient protection of digital data pose challenges for the full and open communication of students on online platforms. This can lead to increased levels of anxiety among students as they become aware

of the possibility of hacking, personal data leaks, and other potential threats to their security in the online space. The inability to ensure reliable data protection may also restrict students in using online resources and platforms for studying and communication.

In the modern online world, serious questions arise about trust and confidentiality of personal information. Today, it is becoming increasingly difficult to determine whom to trust entirely in the digital environment to avoid potential blackmail or unauthorized use of provided data. Even communication on online platforms is subject to risk, as it cannot be guaranteed whether the conversation is with a real person, an artificial intelligence, or a malicious actor manipulating personal data such as voice or photos of close individuals. These nuances create an atmosphere of uncertainty and anxiety, prompting users to be more cautious and attentive when disclosing their personal information in the online space.

### **3.4 The development of student's communication skills in higher education institutions in the context of modern technological progress**

In the modern world, the higher education process is saturated with online platforms for more efficient learning in the context of technological progress, which provides students with opportunities to develop both professional and communication skills in the online space. At the State University of Moldova, one of the frequently used online platforms is the Cisco Networking Academy, designed for training and developing skills in the field of information technology, as well as for the exchange of ideas and experiences. The results of a global study conducted through a survey of former Cisco Academy students who have completed at least one full course [23] provide an answer to the question of what professional achievements respondents have attained due to their professional training and development of communication skills. As part of this research, a similar question was given to the students at Technical University of Moldova after the Communication and Academic Writing course, resulting in the creation of Figure 2:



**Figure 2.** Developing communication skills through information technology.

These results indicate an improvement in the level of students' professional preparation and their enhanced communicative interaction with employers thanks to the Communication and Academic Writing course, which is integrated into the educational program of the Technical University of Moldova to enhance the knowledge and communication skills of TUM students. Thus, the university's curriculum becomes more adaptive to market requirements and enhances the qualification of students.

For the development of communicative competence, it is necessary for students to be engaged in specific communicative situations. These skills will positively impact the recipient's knowledge in linguistic, sociocultural spheres, as well as in reflection and self-assessment [24]. To develop the necessary skills, the curricula of Moldovan universities include subjects such as ethics, philosophy, communication, and academic writing, which allow students to learn how to interact correctly with the surrounding world within the educational program. In addition to this, universities such as the Technical University of Moldova involve students in extracurricular activities, such as participating in various contests and conferences, and sometimes organize excursions to major companies in Moldova [25, 26], providing students with opportunities to socialize and develop their communication skills, as well as opportunities for professional development and finding future employers.

Online platforms create unique opportunities for students to collaborate on academic assignments and projects, even if they are located in different places. This allows students to exchange ideas, solve tasks as a team, and develop collaboration skills in a virtual environment. Through collaborative work on online platforms, students learn to interact effectively, share responsibilities, and coordinate their efforts to achieve common goals. Such experience not only contributes to improving academic performance but also prepares students for the modern work environment, where interaction and teamwork play an important role. With the development of technology, the study of foreign languages has become more accessible and effective. For example, in addition to the traditional language teaching process, it has become possible to watch various videos on specialized topics in a foreign language and even communicate with native speakers through online platforms. Some studies have confirmed that audio and video blogs can be more effective tools for language teaching and learning than traditional methods, especially regarding grammar correctness, language complexity, and fluency of students' speech. Moreover, with this method of learning, students typically have more freedom to express their ideas and arguments than students taught by traditional methods with teachers. Blogs help students to meet people from different social groups and life circumstances, undoubtedly broadening their horizons and developing their communication skills. Archiving blog posts encourages students to reflect on the content of the blog and develop metacognitive strategies to control the learning process in the blog, leading to a more multifaceted and profound development of students [27]. Thus, communication development is realized and expanded, providing new experiences and opportunities for personal interaction development for students within higher education.

### **3.5 The effectiveness of online communication for educational purposes and the development of communication skills**

Technologies have become an integral part of our lives, helping us deal with various communication difficulties and making interaction a more flexible and adaptive process. A

vivid example of solving the communication problem was the COVID-19 pandemic when face-to-face interaction became impossible, and the whole world shifted to online platforms. In the midst of universal panic and fear of personal interaction [28], technological progress and online communication made interpersonal communication possible.

The transition of educational institutions, including higher education establishments, to online learning format has been particularly significant, ensuring the safety of students and teachers during the pandemic. Thanks to this mode of learning, students not only interacted with instructors, receiving knowledge and feedback, but also collaborated with each other, working on joint projects in the online space, which contributed to the development of communication skills, cooperation, and teamwork in rapidly changing life conditions. By using online communication for educational purposes, students master various digital tools, acquire information and experience from different sources, leading to the development of skills in analyzing, interacting with, and evaluating information for its credibility. Participation in discussions, groups, and forums, as well as the debate on various topics, allows students to develop critical thinking and the ability to consider different perspectives on a given situation.

Thus, online platforms have become a key means of personal interaction and digital literacy development [29], both in educational settings and in everyday life and business, playing a crucial role in overcoming the limitations associated with physical and social isolation. Technological progress remains an essential part of our lives even after the lifting of all COVID-19-related restrictions, making daily life, education, and interpersonal interaction more convenient and efficient.

#### **4. Conclusions**

Concluding the study, the goal of thoroughly examining the multifaceted impact of the internet on the development of students' communication skills has been achieved. Positive and negative aspects of internet influence on both the world at large and social groups, individual individuals, and education have been identified. Technologies influence brain structure and behavioral patterns, determined by screen time, the number of tasks performed using technology, and individual characteristics of each person, which can lead to various psychological disorders. That's why it's so important to learn to use technologies wisely and effectively for the development and improvement of all aspects of life, including communication and education.

For example, avoiding certain behavioral patterns promoted on various social platforms, consciously increasing face-to-face interactions, taking measures to protect digital data security, and analyzing one's psychological state can help prevent the development of depression, increased anxiety and stress, social isolation, data breaches, and other negative behavioral manifestations associated with these factors.

It should be noted that actions such as setting priorities, imposing limits on technology use, engaging in physical activity, and increasing sleep time will help more effectively deal with the consequences of excessive technology use and establish a comfortable way of interacting with technology.

Technological progress has left its mark on the field of education, making it necessary to introduce changes into university curricula. Technical University of Moldova educates and produces engineers who shape the future; however, it also teaches students to interact with people, effectively market themselves and their services by incorporating subjects such as



communication and academic writing, ethics, and philosophy. This is aimed at enhancing the competitiveness of future professionals in the fast-paced world and job market, as ultimately, people buy from people.

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## RESILIENCE IN CHANGING POLITICAL AND SOCIAL ENVIRONMENTS: THE GARRI PASTORALISTS IN SOUTHERN FRONTIERS OF ETHIOPIA

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**Abstract.** While conflict and the resulting damage to livelihoods displacement are commonly seen as socio-economically and politically disruptive, yet it is essential to recognize that they can also present opportunities for social transformation and collective continuity. This study used historical methods to examine how Garri communities cope with recurring displacement and instability. Through historical analysis and interviews, the study explores Garri's resilience in a complex political setting. Garri's ability to handle crises and create stability is influenced by their historical experiences, cultural adaptations, and strategic alliances. Particularly, the Garri shift from reactive to proactive resilience helped them maintain their collective continuity and ontological security. The town-making and commercialized pastoralism highlights their adaptability to uncertainties and proactive response to evolving circumstances. Proactive resilience is irreversible, sequential, autonomous, and result-oriented. Therefore, Garri's resilience mechanisms reveal multifaceted narratives of adaptation, transformation, and strategic response, offering valuable insights into the complex dynamics of survival, living with and adapting to uncertainties, and community rebuilding within a dynamic environment. The study argues that conflict and displacement, despite their hardships, should be viewed as opportunities for collective development and continuity. Communities can achieve ontological security and collective continuity by adopting proactive resilience mechanisms and seeking constructive solutions.

**Key words:** *frontiers, displacement, town-making, somalization, commercialization.*

**Rezumat.** Conflictele și daunele care rezultă asupra deplasării mijloacelor de trai sunt considerate în mod obișnuit ca perturbatoare din punct de vedere socio-economic și politic, dar acestea pot prezenta și oportunități de transformare socială și continuitate colectivă. Acest studiu a folosit metode istorice pentru a examina modul în care comunitățile Garri fac față deplasărilor și instabilității recurente. Prin analize istorice și interviuri, studiul explorează rezistența comunității Garri într-un cadru politic complex. Capacitatea de a gestiona crizele și de a crea stabilitate este influențată de experiențele lor istorice, adaptările culturale și alianțele strategice. În special, trecerea Garri de la reziliența reactivă la reziliența proactivă

i-a ajutat să-și mențină continuitatea colectivă și securitatea ontologică. Păstoritul urbanistic și comercializat evidențiază adaptabilitatea lor la incertitudini și răspunsul proactiv la circumstanțe în evoluție. Reziliența proactivă este ireversibilă, secvențială, autonomă și orientată spre rezultate. Prin urmare, mecanismele de reziliență ale comunității Garri dezvăluie narațiuni cu mai multe fațete ale adaptării, transformării și răspunsuri strategice, oferind perspective valoroase asupra dinamicii complexe ale supraviețuirii, conviețuirii și adaptării la incertitudini și reconstruirii comunității într-un mediu dinamic. Studiul susține că conflictele și strămutarea, în ciuda dificultăților lor, ar trebui privite ca oportunități de dezvoltare și continuitate colectivă. Comunitățile pot obține securitate ontologică și continuitate colectivă prin adoptarea de mecanisme proactive de reziliență și căutând soluții constructive.

**Cuvinte cheie:** *frontiere, deplasare, urbanism, somalizare, comercializare.*

## 1. Introduction

Pastoralists experience various uncertainties and insecurities from constant migration, mobility, and displacement caused by climate change, conflict, and development-induced relocation [1-3]. Displacement disrupts people's lives and breaks the established social, cultural, and economic networks of the displaced, which are crucial for sustaining their lives and livelihoods. Africa has a higher number of displaced people affected by conflict, violence, and natural disasters. The Horn of Africa is characterized by significant population displacement due to various factors such as conflict-induced displacement, natural disasters, development initiatives, and other demographic shifts. Conflict-induced displacement has been a long-standing and pervasive issue in this complex and dynamic region, leading to both internal and inter-continental displacement. Ongoing conflicts, political instability, and historical tensions have forced communities to migrate, contributing to the displacement pattern in the region [4]. For a long time, the Horn of Africa has been subjected to the interplay of foreign interests and local forces, resulting in destabilizing consequences for the wider region [5].

The term 'displaced population' refers to people forced to leave their original residential place and community due to conflicts, violence, natural or human-made disasters, or development projects [6,7]. People in this community are highly vulnerable to disasters due to their limited social networks and inability to share their problems with their neighbors. Thus, they do not receive adequate support during and after disasters. They also remain at high risk of physical attack, assault, and abduction, and frequently, they are deprived of adequate shelter, food, and health services.

For several centuries, in the past and recently, Southern Ethiopia has become prominent for frequent displacement of people caused by several factors. Recently, the problem has become ethnic conflict or state intervention-driven conflicts between ethnic or communal groups [1,8]. Notably, in numerous instances, state interventions have been identified as aligning with specific groups, intensifying ethnic tensions, and amplifying displacement [9,10]. This area has witnessed the development of communities primarily comprised of groups who have been displaced due to frequent violent conflicts and natural disasters.

Historically, pastoralist groups such as the Garri, Gabra, Sakuye, and others have been recognized for their frequent mobility, displacement, and flight traditions when confronted with insecurity challenges [11,12], including several natural calamities, conflict, and

mistreatment. This mobility behavior is the response to challenges that reflect a long-standing adaptive pastoralist livelihood strategy deeply rooted in the socio-cultural and economic fabric of the area. The historical precedent of mobility is often intricately tied to the pastoral or semi-pastoralist lifestyles traditionally practiced by these arid land communities [13,14]. In times of pastoral resource scarcity, inter-group competition, and conflict, the decision to migrate has served as a means of physical survival and a strategic response to safeguard cultural heritage, resources, and social cohesion. Decision-making about migration in conflict situations is complex and influenced by a range of factors, including possession of knowledge about the environment, existence of reliable resources, dependable allies, stable social relations, assessments of risk factors like disease, social networks, and political and structural conditions in the destination areas or societies [15].

During the 1960s and 1970s, inter and intra-state conflicts in the region displaced various pastoral communities. This included the Garri, Gabra, Arssi, and other Somali and Oromo-speaking groups in the region [9,16]. Most of these people were displaced locally within the state's border, while others were forced to cross state borders and move into other locations in the Somalia and Northern Kenya Communities [17]. Previous research indicates that Somali or Somali-affiliated pastoral communities have been particularly affected by conflict-induced threats [18]. Despite being impacted by displacement experience, they were often categorized as 'victims,' but it is essential to recognize that they possess agency and actively respond to risks emerging from the challenges of displacement experience [19]. These prove resilience in the face of displacement. The specificities of each displacement situation play a crucial role in shaping the response to be taken in the form of livelihood patterns [20].

This paper explicitly emphasizes the Garri in the Southern frontiers of Ethiopia, exploring their resilience mechanisms in response to recurring uncertainties, risks of natural disasters, conflict, and displacement effects through historical analysis. Based on an empirical analysis, the study seeks to unravel the multifaceted strategies employed by the Garri community to cope with the risks, uncertainties, and challenges posed by frequent disruptions to their livelihoods, organization of their society, and socio-cultural fabric. By delving into the complex dynamics of their resilience to uncertainties and risks, the research aims to contribute nuanced insights into how the Garri community copes with the enduring impact of risks of uncertainties, conflict, and frequent experiences of displacement, shedding light on the adaptive measures, community networks, and cultural strengths that sustain their cohesion in the face of adversity.

## **2. Context of the study**

The historical frontier between Ethiopia's and Kenya's contemporary state of artificial colonially created territorial borders has been marked by a complex interplay of mobility and multiple frequent displacements [21-23]. These were mainly created by frequent natural disasters, pastoralists' mobility needs, frequent resource-based competition, and violent conflict. Accordingly, pastoralists in this frontier region frequently cross this border for various reasons and face the risk of flight and involuntary displacement. There is a risk of disruption of their traditional migration pattern and pastoral livelihood. It also disrupts their patterns of access to pastoral resources and thereby strains their social and economic stability. This frontier region is home to various Somali and Boran/Oromo-speaking mobile pastoralist communities consisting of the Garri, Gabra, Borana, Rendille, Sakuye, and others [12,21]. Mobility-based multi-species herding base pastoralism is a vital feature of their

livelihood, so they keep cattle, goats, sheep, and camels [24]. This traditional way of life is deeply woven into their cultural fabric, shaping their social structures, economic systems, and traditional knowledge [25,26]. Their rich knowledge of the land, its resources, and the seasonal movements of their herds has been developed over generations.

While this frontier region is home to different Somali and Borana/Oromo-speaking pastoralists, their relationship is marked by both cooperation and conflict. During the pre-colonial era, these groups established a formidable alliance known as *pax-Borana* [11]. However, this cooperative relationship has been transformed into tension, animosity, and erosion of these groups' socio-cultural and economic bonds. Specifically, the colonial intrusion and domination in the Horn region and the southward expansion of the Ethiopia state in the late 19<sup>th</sup> Century played a significant role in triggering this shift [21]. This shift represents a departure from a solid inter-group partnership to an atmosphere of mutual suspicion and lack of cooperation, impacting the overall dynamic between the communities involved. One of the significant challenges is the escalating resource competition and conflict in the area, which has resulted in disrupted access to grazing lands and water resources. The reduced access to traditional scarce grazing lands and water resources and the state's unilateral interventions contradicting pastoralists' interests have undermined pastoralist livelihoods' long-term sustainability [14]. Among the communities directly affected by these conditions are the Garri. They faced a significant involuntary displacement situation, with more than half a million people displaced from the southern part of the country [8,9]. According to Getachew [9], this large-scale displacement crisis was unprecedented in Ethiopia's history and has been recognized as one of the country's humanitarian crises.

The Garri community has encountered notable flight and displacement experiences throughout history. One of the well-known mass historic flights or exodus is *Keed Gurayi*. It was a trick/flight that took place as a strategic response to escape and avoid dominance imposed by the Borana [11,14]. Bul Hussein, the esteemed community leader, designed and led the Garri flight to the east of what is now the Southern Somalia region. This flight among the Garri served as a symbol of resilience and social identification. The second displacement occurred during the reign of Emperor Haile Selassie I, followed by the defeat of Italians by Ethiopians' restoration of the imperial government [9,16]. During the Italo-Ethiopian war of 1935-41, the Garris suffered from victimization and reprisals, forcing them to flee and seek refuge among their ancestral relatives. The emergence of *Jig-heer*, a rebellion against the restored imperial administration during the post-Italian occupation era, marked a significant period of resistance [22]. In their struggle against the repressive imperial regime, the government took a retaliation measure. These measures were explicitly targeted at the Garri residing in the Somali-inhabited regions in the southern frontier of Ethiopia [16]. Many Garri people were forcibly displaced from their homes, uprooted from their ancestral lands, and separated from their families and support networks. This displacement caused immense hardship. The Garri community underwent their subsequent displacement during the Derg regime. This displacement was driven by the rise of Somali nationalism and irredentism policy, which aimed to unify dispersed Somali communities residing in the Horn of Africa [27]. Accordingly, after Somalia achieved independence in the 1960s, the government asserted territorial claims over neighboring Kenya and Ethiopia. This entangled the border region of Somali-speaking groups in the intra-state territorial conflict [28]. The Garri and other groups allied with the Somali irredentist movement experienced the repercussions of this evolving geopolitical tension. Following the defeat of the Somali state and the irredentism movement,

a wave of reprisals followed [9]. Ethiopian state reprisal was violent and characterized by the destruction of villages, looting of livestock and property, and indiscriminate killings of individuals. The severity of the state's violent military measures prompted people to flee in various directions. In his works, Getachew [9] stated that, many sought refuges in Somalia and Kenya, while others sought support from relatives in urban centers such as Negelle and Moyalle. Additionally, some opted to submit to the protection offered by the Ethiopian army in villages that were created as a safe haven by the military.

The complex involvement of diverse actors and factors intertwined with incompatible actors' interests in local conflicts often complicate the outcome of the displacement and responses to the situation. This, in turn, further complicates the dynamics of intergroup relations and cooperation within the region. Accordingly, to adapt to uncertainties and unpredictable situations in the region, the Garri have developed reactive and proactive resilience mechanisms upon returning from displacement to defend their internal cohesion, collective survival, and livelihood. These approaches entail utilizing external alliances, traditional social networks across boundaries, and shifting alliances as strategic resources and social capital. These mechanisms have reshaped across generations as the Garri community adapts to the evolving challenges of recurring natural calamities and inter-groups conflict and its subsequent displacement. This article, therefore, discusses the complex network of resilience mounted among the Garri community, explaining their reactive strategies in response to displacement and their proactive initiatives designed to envision conflict-induced discontent.

### **3. Methodology**

This study adopted a historical methodology to explain the resilience mechanisms employed by the Garri community in response to recurring displacement, drawing upon a historical review. Supplementary information was gathered through interviews with community members. By synthesizing existing knowledge and integrating firsthand experiences, the article aims to comprehensively understand Garri's resilience strategy within a complex socio-political landscape context.

#### **3.1. Study design**

The study utilized a qualitative grounded theory approach to guide the research process. Grounded theory is a qualitative research method that involves systematically collecting and analyzing data to develop dimensions based on the experiences of individuals. This approach allows for the progressive development of abstract conceptual categories, enabling the synthesis, explanation, and understanding of the data and the identification of patterned relationships within it [29].

#### **3.2. Study setting**

The study explored the dynamics of conflict, displacement, and resilience within the Dawa Zone of the Somali Region in Southern Ethiopia, explicitly focusing on four Woredas: Lehye, Udet, Mubarak, and Qededuma. These Woredas were selected based on their historical significance in the long-standing inter-group pastoral conflict, frequent displacement experience, and resilience discourse. By examining these specific areas, the study aimed to understand better the unique challenges and resilience strategies employed by communities in this region. This geographic focus allowed for a more comprehensive exploration of the complexities of navigating the interplay between pastoralism, frequent natural disasters, inter-group conflict, displacement, and resilience.

## 4. Results and Discussion

### 4.1 The Early Political History: Resource Based Rivalry and Collective Action and Contested Boundaries

Historically, the pastoral communities in southern Ethiopia exhibited typical characteristics involving mutual raiding, feuds, and local warfare [12,14]. Despite the relatively good record of cooperative history, the communities in the area have been plagued by ongoing mutual hostilities and conflicts, negatively influencing the inter-group cooperative relationships between different groups. According to scholars, the emergence of this conflict can be linked to three interrelated factors: intense rivalry for over access to pastoral resources [28], such as grazing lands, water sources, and control of critical trade routes [30].

The conflict has been crucial in defining collective social boundaries, differentiating among others, and securing grazing rights. One of the informants explained that the inter-group conflict over access and use of pastoral resources in contested areas becomes intense during dry seasons. Conflict over claims to specific territory is one factor in demarcating borders. At the end of the conflict, however, negotiations over the contested boundaries often led to the demand for a truce or the pursuit of reconciliation. Those who are defeated often manage traditionally to avoid destruction. According to Getachew [9], the party that lost the contest sought refuge with neighbors or relatives, integrating into their social groups as clan siblings or vassals or forging new alliances if they remained organized and decisive. The dynamic nature of social interactions in the aftermath of conflict further underscores the adaptability of different social groups. Accordingly, social virtues play a crucial role as catalysts for reshaping the evolving social fabric.

*Keed Gurayi*, is not just a history of flight but also an example of social adaptability in the face of social calamities and associated risks. It is a story widely held among various communities, such as the Garri, Ajuran, Sakuye, and Rendile. It is a story in which people's decision to escape undertaking a shift portrays a long migration trick towards the southeast. It was caused by the oppressive and brutal actions of the then most influential group of the Borana Saboo towards the Garri. This oppressive rule and competition for limited resources such as pasture and water created a volatile resource competition. According to the informants' narration, Sheki Bule Hussein, a prominent wise leader in the Garri community, is said to have proactively sought a peaceful and resource-endowed territory. His exploration led him to Konfur, where he identified the area as suitable for temporary shelter.

Consequently, many families of the migrant Garri and related groups sought refuge among their Somali neighbors and were incorporated as clients (*sheegat* in the Somali language), while others formed alliances. However, those who opted to stay with livestock in their original habitat became vassals (*tirisso* in the Boran language) of the Borana. The social dynamism in the frontiers fostered multilingualism among most groups [13]. They speak the af-Somali and affan-Borana, specifically the Borana dialect, which led to sharing various cultural practices, attitudes, and beliefs. It also often facilitated shifts in identity besides language, adapting new cultural characteristics, or preserving their pastoral livelihood.

Despite existing differences, various social groups on the frontiers come together and make temporary alliances in the face of common enemies to create collective structures and unite against common enemies. The virtue of the alliance extends beyond ethnic and religious identities [14]. The Borana and various non-Oromo groups, such as the Garri, transcended their historical differences to create an unprecedented alliance known as the

*pax-Borana*. This alliance significantly departed from the prevailing socio-political crisis, primarily characterized by politicized and religious boundaries. This alliance, characterized by supra-clan collaboration and a determination to overcome past animosities, emerged as a strategic response to external threats. According to Schlee [12], a notable example of their collaboration was their collective efforts in countering common adversaries, such as the Maasai. This alliance cultivated resilience and laid the foundation for ongoing cooperation and shared accomplishments.

The alliance's impact was particularly evident during the dire epidemics and severe famine of the nineteenth Century. The devastating natural calamity known as '*titte cinaaca guuraca*' epidemic, characterized by livestock disease with rib cages blackened with flies, led to widespread displacement. Accordingly, the Garri, Gabra, Garrimarro, Sakuye, and Arissi fled in different directions and sought refuge in various directions during this period among the various groups. Significantly, Borana groups hosted evacuees from various social backgrounds [14]. Mutual assistance was also observed between the relatively unaffected Garri and Garrimarro and Somali clans hosting displaced Borana. This support contributed significantly to the resilience and post-disaster rehabilitation and recovery of diverse communities from the challenges of epidemics and famine. By transcending the narrow ethnic, religious, and local boundaries, these groups secured the sustainability of their communities.

#### **4.2 The colonial partition and its political practices: Redefining Relationships**

Nonetheless, the Garri of the frontier regions and Garris established alliances have undergone a significant shift from colonial conquest and fallacies in the political and social landscape from the last decade of the 19<sup>th</sup> Century. The colonial powers' imposition of colonial rule, subsequent partitioning of the region and the people, and the division of groups along clan lines, formerly one cohesive group into two states and two different citizenships, have created new and complex dynamics [31]. The establishment of Italian Somaliland and the Kenya colony and the expansion of the Ethiopian Empire divided the grazing lands between three states [9, p.112]. They created new political identities and loyalties, often leading to conflict and tensions between neighboring communities [16]. The redefinition of social, economic, and political relations among the various communities has been a significant outcome of these experiences. The arbitrary boundary lines and colonial administrators' efforts to restrict cross-border mobility in Kenya caused significant tensions. In 1910, to stop Somali expansion into Borana areas, British colonial administrators introduced tribal areas and "the Galla-Somali line," imposing fixed boundaries and implementing police patrols to regulate the movement of nomadic communities [23]. One significant consequence was denying access to pastures across borders, contributing to inter-group tensions. The existence of armed robbers and cattle rustling and armed colonial force police (*duba*) intensified conflicts as allies were armed and encouraged to raid other groups. This escalated violence and deepened animosity, perpetuating a cycle of retaliation. These changes have profoundly impacted the Garri and their alliance, as they have struggled to adapt to the new realities and maintain their cultural and economic traditions.

Moreover, the communities on the Ethiopia-Kenya-Somali borderland's mobile pastoral livelihoods patterns, which involved crossing international borders, made them vulnerable to attacks and impacts of natural calamities. Consequently, they were often accused during inter-state conflicts. Incidents along borders involving government troops were noted as early as 1900 and persisted through the 1920s and 1930s [23,32]. The

inevitable entanglement of ethnic groups with their traditional grazing territories extending across national boundaries led to their involvement in these local as well as transnational regional conflicts. Besides, the British implementation of the divide-and-rule policy heightened tensions between neighboring communities, exploiting cultural, linguistic, and religious differences to fuel animosity. As a result, communities such as the Garri, Borana, and Gabra were displaced from their pastures in northern Kenya, consequently abandoning their territory to Somali clans. This strategy deepened the impact of conflicts on pastoralist groups, leading to their forced displacement and territorial losses [33].

On the Ethiopian side, the imperial regime pursued British policy in Northern Kenya more or less, emphasizing pursuing one group over others for effective frontier governance. These had, in turn, significantly contributed to the erosion of long-established inter and intra-group relationships, undermining the social cosmology of the inhabitants of the regions. As a result, the regime has begun to support the militarily then powerful group the Borana over all other groups, specifically the Muslim Oromo and Somali pastoralists [34]. This preference can be attributed to several factors, including their 'historical dominance' and kin's position towards the imperial regime [16]. Consequently, as the most trusted allies of the regime, the Borana were granted protection and appointed to positions of power within government offices. In contrast, the Muslim Oromo and Somali-speaking pastoralists experienced political marginalization and exclusion from positions of influence and power. Indeed, the inequalities in treatment based on religious, linguistic, and cultural affiliations generated inter-group tensions, aggravating the divisions among the groups on the frontiers.

During the short fascist Italian occupation between 1936 and 1941, significant changes in the political and administrative practices occurred in the southern frontiers of Ethiopia. These changes impacted the area and its residents, including the Borana allies of the overthrown Ethiopian government. The effects of the relatively short Italian occupation were profound. There was a notable shift in policy regarding the frontier groups. According to Oba [16], the Italian authorities adopted a policy of granting privileges to Muslim groups to undermine the Christian Ethiopian regime. According to Galtay [35], this policy shift had far-reaching consequences for the Borana allies. They endured a significant number of casualties, resulting in significant mortality. Therefore, these events' impacts unequivocally shaped the region's history, fundamentally redefining inter-group relationships.

After the 1941 liberation of the colony, there was a shift in the government's policy towards the Somali and Oromo on the southern frontiers [36]. The Imperial regime aimed to reward the Borana for their loyalty and support during the struggle against the Italian occupation. Then, the state granted privileges to the Borana. However, it adopted a different approach towards the Muslim Oromo and Somali groups, viewing their support for the Italians as a betrayal. During that time, a resistance force known as the *Jig-heer* rebellion emerged, backed by the Italians, as a counter to the imperial regime [16]. However, in the march against this rebellion, a lot of Garri communities were indiscriminately killed, and some fled to relatives in the neighboring regions [9]. The imperial regime eventually crushed the rebel forces along with the local Borana militia. Therefore, the shift in policy within the periphery and state became dynamic. On the one hand, the government favored Borana and gained advantages, as well as military training and arms delivery backing from the government administration, consolidating their position in the area and beyond the frontier in Kenya. On the other hand, the policy led to heightened tensions and resource, territorial claim centred



conflicts between Somali herders and the Borana, and Borana, Arssi, and Guji Oromo on the other hand, resulting in destabilization of the region.

The tension between the Borana and other groups in the frontier's region began to resurface in the following decades. In order to manage inter-group conflicts and maintain control, the Imperial government of Ethiopia implemented a strategy of creating tribal grouping territories or tribalism and imposing restrictions on mobility [14]. Any group whose members crossed into another group's territory risked penalty or financial payment. However, this policy did not stop pastoralists from crossing the administrative boundary and creating tribal borders; instead intensified competition over limited resources. Raids, fuelled by the desire to secure resources, made conflicts increasingly prevalent. In 1963, a significant conflict erupted in Diree, which is now the southern part of Borana and Guji zone between the Garri and Borana, pressuring the government to intervene militarily. However, as Getachew [9] noted, the government's position or support and alliance with Borana created a contradiction in its actions against Muslim Oromo and Somali-speaking pastoralists involved in the transnational conflict.

Consequently, tensions escalated between the Borana Oromo and Somali pastoralist communities. This tension intensified conflict and led to a series of violent massacres in which a significant number of Garri individuals lost their lives. According to eyewitness informants, among those killed were Robow Hassen Gababa, the Garri chief, and six influential clan elders. The assassination of the then Sultan and the head of Garri's prominent elders, coupled with the indiscriminate use of state violence, had a profound impact, fuelling widespread resentment among the Garri.

#### **4.3 Garri's Role in the Rise and Growth of Resistance Movements**

In response to these grievances, a guerrilla campaign led by Alio Hassen Gababa emerged against the Ethiopian army during the *Shifita War* (1963-1970). This resistance movement culminated in the establishment of the Somali Abbo Liberation Front (SALF) during the Ogaden War (1976-78) [16,22]. Simultaneously, along the Kenyan border, an armed struggle against the oppression imposed by Muslim pastoralists was led by Hassan Goro, a fighter who later became a prominent military commander along with Aliyow. These interrelated conflicts, collectively called the *Shifita Wars*, underscore the complex dynamics of regional unrest, ethnic tensions, and the emergence of resistance movements during this historical period [9]. The subsequent resistance efforts revealed profound grievances and a desire for self-determination among the Garri, other Somali groups, and Islamised Somali-speaking communities such as the Gurra, Gabara, and Muslim Borana and Guji. This highlights how the government's policy and its actions not only intensified interethnic tensions between the Oromo and Somali communities but also fuelled broader regional conflicts and resistance movements.

The continued active armed resistance and the government's determination to crush the rebellion by force had a bold and lasting impact on the Muslim pastoralists in the southern frontiers. This resulted in multifaceted repercussions that significantly influenced various aspects of the pastoralists' livelihoods, including pastoralism, trade, and other networks. First, the strategic decision of the Ethiopian administration to recruit, train, and arm them with modern weapons to arm the Borana and utilize them in military operations against the Garri and their allied groups marked a significant turning point in the local and regional war in the area. This Ethiopian government decision had profound implications for the dynamics and outcomes of the conflict. In other words, the alliance intensified the

violence and laid the groundwork for long-term hostilities between the Borana, the Garri, and other neighbors of the Borana. Secondly, the aftermath of the widespread anti-government and Borana loyalty witnessed a significant reconfiguration of power dynamics within the local administration. This led to a fundamental restructuring of authority and influence security in the region. The Borana, owing to their strong allegiance and support to the regime, were appointed to prominent roles in the military, security, and administrative positions in the local and other state positions in local administration. Their role mainly involved overseeing security, surveillance operations, and suppression of anti-government and forces activities. This consolidation of Borana's military and administrative power enabled the Borana to strengthen their influence on the frontier region, which involved solidifying their political and military authority. However, this similarly resulted in the marginalization of other ethnic groups and exclusion of all other groups not allied with the government, intensifying pre-existing tensions in the region. Finally, the consequences of these one-sided Borana-favored government actions reached the grassroots level, leading to the physical destruction of villages' water points and widespread looting of livestock and personal property. Garri and other Muslim Somali and Borana-speaking communities suffered from indiscriminate military and extreme human rights abuses, resulting in substantial human lives loss and mass displacement.

In response to turmoil and the subsequent loss of livelihoods and mass displacement, people adopted various alternative paths to ensure survival. They mainly relied on migration or flight to Somalia, seeking temporary shelter and safety [9,19]. This decision epitomizes a pragmatic approach toward the volatile and insecure situation where individuals sought personal and community safety and temporary shelter. Some individuals or families decided to settle among kin and friends' family in urban centers like Negelle, Hudet, Wachile, and others in the region, relying on familial and kinship support networks. Nevertheless, a minority of individuals who lacked alternative options opted to seek refuge in settlements created under the protection of the Ethiopian army. During this period, the Ethiopian government implemented strategic measures to consolidate its control and authority over the Garri territory and enhanced security surveillance. Troop deployment was extensive, covering the area expansively, with a particular emphasis on selected critical locations such as Wachille, Udet, Wallena, Dedertu, Ley, El Der, Jara, Malka-Mari, and Qadadduma. The deployment of a large number of government troops was meant to prevent potential disruptions and preserve governmental control over the territorial expanse [16].

Furthermore, according to Getachew's [9] assessment, the territorial claim advanced by the government of Somalia over the Ogaden and Somali inhabited areas of the southeastern Ethiopia region further contributed to suspicion towards Somali and Muslim Oromo pastoralists. The Bale and Borana region's suspicion emanated from the perceived capacity of Somalia's territorial claim to influence this specific demographic group. Therefore, Muslim pastoral and agro-pastoral were subjected to discriminatory surveillance and treatment. The regime provided substantial administrative and military backing to the Borana to implement this surveillance, positioning them to implement state, military, and surveillance measures. However, this policy inadvertently led to the increasing dominance of Borana and solidified their sphere of influence in overall other groups in the frontier region. For that reason, the Borana vigorously contributed to supporting their military raids against Muslim pastoralists suspected of aligning themselves with Somalia during the Ogaden War of 1977/78. Therefore, many individuals from the Garri community sought refuge in

neighboring Kenya and southern Somalia. This war-displaced population included the Garri people and various Muslim groups, such as the Gabra, Guji, Degodia, Gura, Arsi, Marrehan, and Borana peoples. The magnitude of the humanitarian crisis caused by this displacement was significant, leading to the intervention of the United Nations High Commissioner for Refugees (UNHCR) [1]. The support provided by the UNHCR in locations such as Lugh, Baidowa, Bardera, Bulhoo, and Northern Kenya played a crucial role in ensuring the safety and well-being of these refugees throughout their displacement.

#### **4.4 Survival Struggles: Multiple Citizenship and Avoiding Atrocities**

The protracted state of oppression that plagued the Garri and Somali clans in the southern Ethiopian borders and region reached its peak during the devastating drought of 1974-75, compelling them to seek refuge in Somalia. This shift in allegiance was primarily driven by the prevailing circumstances of persistent political and administrative oppression, which left them with no other choice. The irredentist Somali government of the time exploited the resentment and grievance of the area's people towards the Ethiopian government's vulnerability to further its national political interests. Getachew [37] claimed that Somalia had been supporting dissident factions within Ethiopia, taking advantage of the political turmoil after the downfall of Haile Selassie's regime. Amid the political turmoil and instability in the region, Somalia increased its involvement in Ethiopian affairs. It supported the liberation fronts operating in the Ogaden and southeastern Ethiopia region of the then Bale and Borana districts, resulting in the spread of pastoralist insurgent movement in the Borana and Bale region [27]. This effort by the government of the Republic of Somalia to assist dissident or insurgent Somali and Muslim Oromo (Arsi, Guji) groups amplified unrest, intensifying the already dire insecurity situation the Garri and other Somali clans faced. The Garri informants describe this period as a time when individuals were forcibly surrounded "*gaaf-naam ya ban*" and individuals were being forcibly conscripted against their will into the army or standby force. However, the prevalent use of military force emerged due to government tyranny and widespread political unrest, resistance which finally compelled Garri and other political unrest, compelling people to seek refuge and support from anyone in any way possible.

The inter-group conflict in 1960 worsened after Somalia gained its independence. The Somali government, driven by its newfound sovereignty, made territorial claims on Somali-inhabited regions of southern borderlands regions inhabitants of Kenya and Ethiopia. Consequently, this geopolitical manipulation entangled the clans in a transnational inter-state conflict that unfolded between Ethiopia, Kenya, and Somalia. As a response, the Ethiopian government implemented oppressive administrative strategies to maintain its administrative control on the Somali inhabited region. These measures sought to restrict the movement of pastoralists across borders and enforce their settlement in government-selected areas, allowing for increased government surveillance of Somali citizens. According to an informant from Qededuma, the event was recalled as highly frustrating (*nama jeeqa*), with government forces stationed nearby, creating a tense atmosphere. Many soldiers were deployed in major military garrison towns to maintain a robust military presence. Therefore, people found themselves trapped amid escalating tensions and growing inter-state border clashes. The volatile situation peaked with the Ogaden War of 1977-1978, dragging the local population and their local inter-group disputes to become part of the inter-state regional conflict. They became the epicenter of a more significant intra-state conflict.

The Somali ethnic and Somali-inhabited areas of southern Ethiopia launched an offensive in early 1977 to capture the Ogaden region in Ethiopia. In the case of Southern Ethiopia (Bale and Borana) faced little resistance and made significant territorial gains until they reached the area of Ogoba near a place South of Negelle town. At this point, the Mengstu government organized a counter-offensive, supported by international socialist allies' forces, which turned the flow of the conflict [38,39]. By mid-1978, the Somalian forces were forced to retreat, unable to withstand the Ethiopian government and its ally's forces. However, guerrilla warfare continued for several years, resulting in dire consequences for the civilian population, including large-scale massacres. Accordingly, the conflict perpetuated a cycle of violence and bloodshed. A significant portion of the dissident Somali and non-Somali Muslim population, including many Garri individuals, sought refuge in neighboring Somalia [9,37]. Due to the loss of their pastoral livelihoods and the resulting destitution, many individuals or families were compelled to leave their homes. They sought kin support across the Ethiopian borders in Somalia and Northern Kenya. Others took up arms against the repressive regimes and their supporting forces, fighting for their rights and freedom. According to informants, for the majority, Garri and their neighbours' lives became difficult for those who remained in the conflict-ridden area, marked by immense challenges and hardships. They further explained, the war resulted in widespread poverty, hunger, involuntary relocation, and forced sedentarization of people. Communities were torn apart, leaving people divided and separated from one another.

Though exact figures are not available, it is estimated that the number of individuals forcibly displaced across the Ethiopian-Somalian border from 1960 to 1990 exceeded 200,000 [9,40]. This large-scale displacement of local people affected not only Garri but also other communities, including Gabra, Gujji, Marrehan, Arssi, Garrimarro, Gurra, Digodia, Somalized Arssi Oromo group, Sidama, and specific Islamized Borana communities. However, precise statistical data regarding Ethiopian refugees' migration patterns into Somalia and their subsequent repatriation to Ethiopia remains elusive. According to Getachew's [9, p.116] analysis, several factors contributed to the current unavailability of such data. Firstly, social upheavals in southern Ethiopia, 'western Somalia,' and northern Kenya since the 1960s have resulted in population displacement and migrations on both sides of the state border. The volatile nature of these state frontier regions has led to migration patterns that are often simultaneous and overlapping. This complexity makes it challenging to track and quantify the number of individuals crossing borders as "refugees," "returnees," or "stayees" to their home countries. Secondly, the complex dual or multiple-state citizenships issue among mobile pastoralist groups residing in the Ethiopia-Kenya-Somalia border region adds a layer of complexity. These communities have traditionally disregarded and disrespected this artificial state and administrative boundaries in their search for water sources, grazing lands, and market access. Besides, there has been significant intermingling between people of diverse ethnic identities in these areas. Lastly, during the 1970s and 1980s, the Somalian government intentionally inflated the number of refugees to secure foreign aid. The deliberate inflation of refugee numbers by the government of Somalia for political and economic purposes has distorted data. Accordingly, it became difficult to measure and accurately determine the magnitude of the refugee influx and subsequent repatriation.

Following the 1980 USA-mediated peace agreement between the governments of Somalia and Ethiopia, the repatriation process encountered various challenges and complexities. Initiated in 1981 and gaining Western economic aid in 1984, it faced significant

political obstacles. The Somali government, heavily reliant on aid, resisted the repatriation facilitated by the United Nations High Commissioner for Refugees (UNHCR) [9]. Equally, the Ethiopian government appealed that it would provide security to the returnee refugees and insisted on the return of Ethiopian refugees through government-controlled centers. Aid distribution became a tool for using state control in Ethiopia, while the Somali government continued to oppose the repatriation process, asserting that Ethiopia was unsafe.

Finally, following substantial international pressure and persistent negotiations, a tripartite agreement was ultimately achieved in 1986. This landmark achievement marked a significant turning point, paving the way for resolving the long-standing conflict. This agreement facilitated the repatriation of refugees from Somali camps to the border town of Dollo-Gedo and later to the temporary UNHCR receiving center in Boqolmayo. Scholars argue that the resettlement process failed to consider the returnees' original homes and preferences, resulting in tensions stemming from historical conflicts over resources such as grazing lands and water rights [9,13,41].

Amidst the deteriorated situation, the majority of Ethiopian refugees in Somalia opted for informal repatriation, bypassing government-regulated channels. Escaping camps without assistance, many returned to Ethiopia via Kenya. However, their reintegration was marred by mistreatment, including assault and imprisonment, as they were seen as traitors' allies of the Somali enemy. Also, the returnees were resettled in highly disputed and contested areas with pre-existing long-standing conflicts with their traditional adversaries, often lacking vital resources like water, building materials, and firewood. The scarcity of pastoral resources and lack of access to essential social services posed a persistent challenge to the survival of the Garri people. Resource-based territorial conflicts emerged as a significant issue, transforming the frontier region's local politics into conflicts over valuable resources along ethnic identity lines. Amid this intricate situation, the government of Ethiopia nurtured tensions among different regional groups in its pursuit of effective control over the frontier region. The government, using military and other tactics, fuelled tensions between different groups, including the Garri and the Degodia, Degodia-Borana, Degodia-Arssi and Borana and Merhan, Garri and Boarana, and Degodia-Marrehan, etc [36].

Moreover, instead of seeking to address long-standing ethnic conflicts, Ethiopian governments opted to arm specific groups that intensified ethnic strife. According to the research conducted by Getachew [9,37], the decision to arm certain government-favored allied groups in the Horn of Africa with advanced weaponry has resulted in far-reaching and profound consequences. This strategic choice has profoundly impacted the region's political, social, and economic landscape. This has resulted in an ongoing cycle of violence that remains a significant challenge in the 1990s. This influx of modern small and light weapons has caused the continuous displacement of people, leading to their separation from their means of livelihood. Significantly, local rivalries became intertwined with more significant clashes, complicated efforts to address through traditional rituals like blood compensation. The different practices vis-à-vis compensation between the Somali *dia paying* and the Oromo *aada seera*, as Oba [16, pp.137-139] argued persuasively, greatly complicated the search for/in finding a resolution to the conflict between Garri and Borana. The contrasting social cosmologies further hindered addressing the conflict and its underlying ontology.

#### 4.5 Connotations and major tenets of Garri Resilience mechanism

Despite the complex post-return landscape, the Garri communities devised reactive and proactive resilience mechanisms to cope with the emerging challenges. In an earnest endeavor to end the cyclical conflict and the consequential displacement, various mechanisms were put into place. These approaches were considered to address the root causes and mitigate the recurrence of hostilities and the subsequent forced displacement of individuals and communities. The reactive mechanisms can be considered as short-term strategies. They were implemented as immediate responses to the conflict and displacement, aiming to address the pressing needs of the affected individuals and communities. According to Getachew's [9] analysis, one reactive approach that was utilized in response to the conflict was the strategic division of family members across different locations and across the frontiers in Northern Kenya towns Mandera, Rammu, Moyale, and others, dispersing them into nearby towns and across the national borders in the wider Horn of Africa region. Dispersion into nearby towns such as Moyalle, Arero, Mega, or Negelle became a common practice as individuals sought opportunities for employment and secure livelihoods. These urban centers provided promising prospects for stable income and access to vital resources that were limited in their villages. Besides, this approach aimed to mitigate the risks associated with concentrated groups and minimize the potential for further escalation of tensions. By dispersing family members, it was hoped that the conflict dynamics would be disrupted, fostering an environment for de-escalation and reducing the likelihood of violent confrontations.

Furthermore, another reactive strategy employed by the Garri communities involved seeking support from non-displaced relatives and kin in the diaspora. As Getachew [9] stated, old customs and social networks remained a powerful influence and helped to rehabilitate and reestablish the dispersed communities. This approach enabled them to temporarily mitigate the impacts of displacement by relying on the social support networks of their extended families and clan brothers. They have received *hiirb*, a livestock donation, food, or money collected from the clan, the victim members, or begged *dabarre*, a livestock loan for up to three generations [9, p.121]. However, some remained in their villages or near the UNHCR Offices and temporary shelters in Negelle Borana and other centers. They sought to voice their grievances and advocate for addressing their needs. However, relying on reactive resilience did not provide the Garri with long-term sustainability nor adequately enable them to survive the pressures from the state and local community they encountered. The frequency of regional and local instability has necessitated a revision of the existing paradigm of safe existence. Since new challenges and threats are no longer typical, the protection system for their leveling is not well developed in the social systems as expected.

As a pragmatic response to breaking free from the perpetual cycle of discontent caused by displacement, the Garri followed progressive and innovative solutions to build a sustainable and resilient future for the Garri society. Adopting this approach was driven by a clear recognition that relying solely on reactive strategies would not be enough. It became evident that merely reacting to the immediate short-term consequences of displacement perpetuated a sense of marginalization and a cycle of violence. This collective consciousness catalyzed change, prompting the adoption of a proactive resilience approach as an ontological turn. The recalibration of resilience signifies an emancipatory shift, demonstrating their pledge to find more effective and enduring ways to address the challenges of recurring displacement. This shift represents a fundamental transformation in

their approach as they strive to address the challenges more effectively and enduringly. Scholars also proved that during periods of crisis, when the fundamental value orientations of development change, forming and nurturing a new ideology of safe development on a new value basis usually begins [42]. Despite their hardships, crises should be considered personal and collective development opportunities. Therefore, the discontent in the area and the persistent sense of otherness objectively played a role in the Garri community's consolidation as social entities. These factors compel them to address internal contradictions, fostering self-preservation and sustaining stable social development and collective continuity.

One of the notable proactive resilience mechanisms adopted by Garri communities was town-making or deliberate promotion of settlement or sedentarization initiatives to create a stable and organized community. These efforts involved deliberate planning and organization to develop designated areas where community members could farm in sheltered settlements, reside and build durable modern houses, open connecting roads to main highways, merchandising shops, and engage in various activities. The Garri communities sought to enhance social cohesion, promote collective decision-making, and foster a sense of belonging and security by creating structured involvement in educational and health facilities in the settlement areas. Another notable proactive resilience mechanism employed by the Garri communities was 'Somalization,' which drew upon traditional knowledge and practices well-suited to their specific context. This initiative aimed at embracing and incorporating traditional wisdom; the Garri leveraged their cultural heritage to navigate the challenges they faced. 'Somalization' along with 'Islamization' allowed them to tap into their rich traditions, customs, and indigenous systems of governance to address social, economic, and environmental issues. The final proactive resilience mechanism employed by the Garri communities was the commercialization and diversification of their pastoral livelihoods. This commercialization involved engaging in various economic activities and embracing entrepreneurial endeavors. According to Coote and Angel [43], the safe existence of the social system depends on maintaining social solidarity to counter internal and external factors of instability. Accordingly, the Garri communities, by diversifying their sources of income and exploring new economic opportunities, engaged in trade, agricultural activities, import and export, and international business aimed to enhance their financial stability and reduce their vulnerability to external shocks. These strategies were crucial in enhancing the communities' adaptability and resilience.

From the perspective of proactive resilience mechanisms, the subsequent exploration explores the strategic approaches adopted by the Garri communities in southern Ethiopia, Kenya, Somalia, and the diaspora. This discussion aims to highlight the importance of these mechanisms in mitigating challenges and addressing the entropy that arises within the space-time continuum.

#### **4.6. Garri Resilience: From Flight to Town-making**

One significant resilience approach employed by the Garri pastoralists involved the establishment of settlements and their town-making, representing a departure from their traditional livelihood and flight trend. In the past, historical accounts indicate that the Garri was known to flee when faced with challenges, including conflicts and ecological crises [11,14,34]. However, upon their return to their homeland after experiencing displacement due to conflicts in the 1960s and 1970s, the Garri underwent a significant shift in their response. Although the returnees were initially accommodated in temporary facilities

provided by the UNHCR, and later, some were allowed to return to their homelands, the Garri remained dissatisfied. The reason behind their dissatisfaction was the historical complexities surrounding the Garri communities. As one of the informants stated, these complexities include mistreatment by neighboring communities [borana] and the state, as well as claims of alliance during the Italian occupation and Somalia expansions. Institutional othering was prevalent, disproportionately channeling resources to certain social groups. As a result, tension escalates, and intergroup relations worsen. The Garri individuals who had settled in areas outside their vicinity began to experience displacement. Although certain areas experienced significant development initiated by the Garri community, they were displaced.

Faced with adversarial conditions and the trend towards fragmentation, the Garri strategically transformed small villages into towns with a distinct Somali culturalization. The towns, particularly the smaller ones, traditionally have a village-like atmosphere. This adaptive strategy was a pragmatic response, reflecting a shift from traditional nomadic livelihoods to urban settlements. Hudet is a very good example of Garri's promotion of town-making. Accordingly, the traditional scattered settlement pattern underwent a significant transformation. It transitioned into organized towns characterized by the construction of mosques, Islamic centers, and the establishment of various businesses. Udet, Chilanqo, Ley, and Qededuma, among other small settlements, have undergone a remarkable transformation, evolving into robust Garri settlement areas. The transformative process represents a significant consolidation of the community. Previous villages have undergone a substantial metamorphosis, emerging as centers of Garri. The transformation into strong Garri settlement areas, as Getachew [9] claims, fostered a sense of solidarity and collective security.

The Garri strategically formed ethnic enclaves as a proactive measure to shield themselves against the dominance and hegemonic influences exerted by the majority of Borana. Similarly, it serves as a countermeasure in response to these dynamics. Once seen primarily as a means of escaping conflict and displacement, flight transformed into a settlement approach through the townization of villages and ethnic enclaves. As expressed by one informant, this shift was supported by influential figures within the Garri community, including clan leaders and the Sultan. Their endorsement reflects a deliberate and collective effort to resist the recurring conflicts that often lead to displacement. They intended to create a more stable and secure environment as an emancipatory turn. One informant further confirmed that prominent Garri leaders are pivotal in guiding the community toward embracing settlement as a proactive resilience approach. Prominent leaders like Haji Mohammed Hassen Gababa were among them. Their endorsement recognizes the limitations of reactive resilience and asserts the community's agency in addressing persistent conflict.

In addition to town-making, the Garri elders and leaders formed towns with mixed clan settlements. According to my key informants, the rationale behind this was to avoid intra-clan resource competition, feuds, and territorial disputes, which could make them vulnerable to external threats. Through advocating for settlement, these leaders aim to offer a tangible alternative to the cyclical nature of conflict and displacement experienced by Garri communities.

Following their extended stay in the Somali Republic, the Garri underwent a profound transformation in both socio-cultural and economic dimensions. It influenced their subsequent preferences and choices upon returning to their homeland. This transformative shift may have manifested as a distinct preference towards urbanized living instead of the traditional nomadic pastoralist existence. According to Sato [19], exposure to urban



environments played a pivotal role in reshaping the outlook of returnees, accentuating the appeal of town life over their former nomadic lifestyle. In southern Ethiopia, a town is the center of commerce, and occasionally, there are small farms around the town. The town is often located at a critical point along the main road and trade routes. The study's empirical findings unequivocally assert that town-making (*townization*) serves as a mechanism for diversifying economic activities and is a substantial mitigation strategy against the daily risks of attacks and violence. By asserting their territoriality, the Garri effectively curtail their exposure to disputes around crucial resources such as water points and grazing areas. As the study observed, territoriality contributes to reducing conflicts' vulnerabilities. It thereby enhanced the ontological security and collective continuity of the Garri community.

#### **4.7. The Transformative Trajectory of Somalization**

As historical research has shown, the southern frontiers of Ethiopia have undergone a nuanced historical trajectory [14,16,41]. The processes of 'Boranization,' 'Amharanization,' and 'Somalization' characterize this trajectory. Different forces attempted to expand their sphere of influence over the frontiers. Amid the colonial partition, frontier communities faced significant pressure from the British and Ethiopian states. These processes strongly prove the diverse cultural influences that have [re]shaped the area over time. Historical sources suggest that during boundary demarcation, there were instances where the Garri community faced significant pressure to claim an affiliation deceptively or to identify themselves as a Borana group [23]. These sources indicate that external forces influenced the Garri, compelling them to align themselves with the Borana identity, even if it contradicted their historical and cultural heritage. This pressure arose due to the agreement between the British and Ethiopian Imperial states to delineate the boundary along tribal lines. However, due to their unique settlement patterns, social movements, and historical incidents, the social group on the frontiers developed a distinct identity pattern. According to a study by Getachew [9,37], the historical backdrop of the southern frontiers is not characterized by cultural homogeneity but rather by various influences that have contributed to its rich and multifaceted identity.

The Garri, strategically settled between the Borana and Somali groups, fostered a distinctive identity incorporating elements from both cultures. This unique identity had a significant impact on the overall settlement pattern. People residing close to the Borana community evolved a linguistic affinity by developing the Affan Oromo, a Borana dialect. Conversely, those near the Somali community cultivated the Rahawein southern Somali dialect of Aff Somali. They became bilingual speakers, proficient in the Affan Oromo and Aff Somali. Their linguistic dexterity empowered them to actively participate in business networks and act as intermediaries between the Somali and Oromo groups.

After establishing a modern state based on the Westphalian concept of territory, frontier communities underwent a shift in dynamics, marked by tense relationships. The state's preference for one group over another through patronization created distrust among the communities on the frontiers. The Garri, in particular, experienced institutionalized marginalization, causing ontological insecurity. They faced a history of frequent displacement involving securitization of their identity [*Somali*]. As a result of this policy and local conflicts, the Garris frequently experienced displacement, which compelled them to form alliances with foreign forces for their protection. Under the reign of Haile Selassie and the Derg, the Garri were targeted by the exclusionary policy, compelling them to seek refuge in neighboring

countries. Consequently, upon their return from refugee camps, a significant process of somalization among the Garri commenced.

The Somalization of towns represents an emancipatory move in which urban centers embrace Somali cultural practices, entrepreneurship, architecture, social norms, eating habits and etc. The houses transformed, adopting a Somali architectural style with Islamic influences. Simple clothing evolved into Islamic and Somaloid patterns, previously worn only by respected elders and the Sultan. In the process of somalization, language emerges as a paramount cultural paradigm. It wields profound implications for identity, communal cohesion, and the acculturation of individuals within urban environments. Sato's [19] observation underscores that individuals who experienced their formative years as refugees in Somalia show a greater proficiency in the Somali language than their command of the Borana language. The significance of language, particularly the fluency in Aff Somali, becomes emblematic of the embodiment of town culture and social categorization. Therefore, language was critical in shaping individual and collective identities within urban environments.

The historical relationship between the Garri and the Borana community, who are close to each other, has resulted in the Garri adopting the Aff Borana language. This linguistic connection has led some to perceive the Garri as a subgroup within the Borana community. The shared language has contributed to a perceived cultural association, leading to the classification of the Garri as an integral part of the Borana collective [14]. However, the Garri community's assertion of their Somali identity has introduced a complex layer of contestation regarding their land. As they affirm their Somali cultural affiliation, the uncontested use of the Aff Borana language becomes a contested terrain. According to scholars, this shift in the assertion of Somali identity among the Garri community has significant implications for their use of the Aff Borana language and their territorial claims [13,21,28]. The persuasive argument emerges that fluency in Aff Somali facilitates social cohesion and serves as an identity marker, belongingness, ethnic identification, and emancipation within the fabric of the overall Somali culture. However, it is essential to note that the strategic settlements of the Garri community have resulted in their development as multilingual communities capable of conversing in Somali, Kiswahili, Affan Oromo, Arabic, and Amharic. Due to these, the Garri leaders encourage formal and informal education and inspire the youth to learn diverse languages and skills. All this is part of preparing the Garri youth for unknown future challenges and uncertainties.

In addition to language, a study conducted by Schlee [11,12] reveals that both the Garri and Gabra communities consider their Islamic religion a fundamental aspect of their ethnic identity. This religious affiliation is a significant marker that aligns them with other Somali clans, fostering a sense of unity. The relationship between the Garri and Borana communities became strained as they started to use religious affiliation as crucial markers, leading to tensions between them. In their interactions, the Garri community adopted the term "*Kuffar*" as a pejorative reference to the Borana, labeling them as unbelievers. Conversely, the Borana utilized the concept of "*Safara*" to identify Somali groups as newcomers. As Durkheim [44] contended, religion is crucial in fostering community cohesion, promoting social control, and providing individuals with meaning and purpose during life's transitions and tragedies. Therefore, the Garri, using their Islamic religion *Sunni/shafii*, as an ethnic marker, emphasized their unique cultural heritage, asserting their identity within the broader Somali social identity. The Garri viewed the somalization of their identity and

adherence to the Islamic faith as an emancipatory process aimed at escaping domination, marginalization, and institutional anarchy. The Garri community's strong sense of Garri identity remains unwavering, as their leaders and the majority firmly assert their Garri heritage. However, they also desire to maintain autonomy within the broader Somali context. Historical and present-day factors influence this pragmatic approach to embracing Somali cultural identity. One significant factor shaping the Garri community's decision to embrace Somali cultural identity is the process of state formation and the dynamics of federalism. As various Somali-speaking groups navigate the complexities of statehood, the Garri community recognizes the importance of aligning themselves with the Somali identity to maintain their distinct cultural heritage while participating in the larger Somali political landscape.

Another factor impacting the Garri community's preference for embracing Somalization is the phenomenon of ethnonationalism, particularly the assertive influence of Oromization on the Garri and other smaller Oromo-Somali-speaking groups. The Garri community, faced with the encroachment of Oromo cultural influence, finds strategic value in aligning with the broader Somali identity to preserve their distinct heritage and safeguard their autonomy.

Recently, the Garri adopted customary rules known as ***Xeer Kerri/Garri*** [*xeer-Dhaqameedka*] standard law for the entire Garri community to regulate internal relations and alleviate external vulnerabilities. These rules were an essential part of their somalization process, similar to those of their Somali counterparts. This traditional system encompasses various aspects of communal life, offering a comprehensive framework for resolving disputes, upholding justice, and regulating behavior. The principles enshrined within ***Xeer Garri*** have played a significant role in maintaining social order, nurturing a strong sense of social cohesion, and fostering mutual understanding. Informants also noted that ***Xeer Garri*** not only draws upon the principles of Sharia law but also integrates contemporary governance values. This blending of traditional and modern influences reflects the adaptability and dynamic nature in response to the changing dynamics of their social fabric. In 2021, there has been a notable development regarding ***Xeer Garri***. Efforts have been made to document the oral traditions of this customary law in written form, recognizing its importance. This initiative aims to preserve and safeguard the knowledge and wisdom embedded within ***Xeer Garri*** for future generations. By transitioning from an exclusively oral tradition to a documented form, the Garri community seeks to ensure the longevity and accessibility of their cultural heritage, allowing for broader dissemination and study of ***Xeer Garri's*** principles and practices.

#### **4.8. Commercialization of Livelihood: From Camel Herding to Business Networks**

The Garri, in contrast to their neighboring communities, have embraced diversification and promoted a livelihood system that combines pastoralism, agro-pastoralism, and commerce activities. Notably, camel herding is central to the Garri's commercial activities. Their involvement in local and long-distance livestock trading commercial activities, particularly camel herding and livestock trade, has profoundly shaped their livelihood system. Historical records indicate that the Garri have a long-standing reputation as exceptional camel breeders and participation in regional commercial activities in the Horn of Africa, with their expertise in this field dating back to the 18<sup>th</sup> Century [14,19,22]. The Garri's camel breeding expertise has earned them a reputation as renowned suppliers of camels to Somali and Oromo traders. These traders relied on their camels for long-distance caravan trade, establishing a solid demand for the Garri's camels. Despite the decline of caravans in the 1920s to 1940s, the Garri played a significant role in the camel trade [19].

During the late 19<sup>th</sup> Century, commercial activities in the region predominantly operated through barter systems. However, with the arrival of British colonial rule, which expanded to Moyale in 1905, the traditional trade paradigm experienced a significant transformation [14,16,23]. During the 1920s and 1930s, the government implemented policies intended to promote cash trading. These policies included introducing tax payments, supporting shopkeepers, and prohibiting peddling and bartering [45]. This marked a significant departure from traditional trading practices. In the post-World War II era, cash trading became increasingly prevalent, as observed by Turton [23]. Notably, the northern trade, primarily facilitated by Somali traders, diverges via Negele, while the northern trade through Yabelo is primarily conducted by Borana and Garri traders [19]. Somali and Garri traders, though, orchestrate both the eastern and southern trades. These trade routes indicate socio-economic interdependence and collaboration among diverse ethnic and cultural groups in the region. Though, Garri's commercial trade system has significantly influenced the regional economy.

The Garri economy comprises three distinct sectors: subsistence herders, traders engaged in livestock and goods exchange, and agro-pastoralism. Their exceptional ability to combine herding with trade sets them apart from neighboring communities. They integrate commercial activities into their livelihood system, unlike others who may solely focus on one aspect of livelihood. Sato [19], in his seminal work, advised against interpreting Garri's commercial herding merely as a compromise between two distinct lifestyles. Instead, he claimed it should be considered a unique and resilient livelihood. The Garri's involvement in commercial trade and their success in raising a large number of camels emphasize the commercialization of their livelihood. Livestock trade is central to them, shaping their livelihood system and contributing significantly to the regional economy. However, the commercial endeavors of the Garri people extend beyond individual efforts. They are strengthened by the formation of business networks and the establishment of marriage alliances between trading families. Accordingly, social networks played a pivotal role in driving the commercialization of the Garri community. These networks, strengthened by shared bonds of friendship and Islamic ties, often transcend ethnic identity. It is based on the mutual interests of families, facilitating the exchange of goods, resources, and knowledge, creating opportunities for trade and economic growth. Therefore, they can access a broader market and establish a more vigorous business landscape through collaboration.

In the face of severe natural calamities, drought, famine, or man-made crises such as conflict, the Garri community relies on their enduring networks to cross these challenging circumstances. Leveraging their unique commercialized livelihoods, they employed these networks as resilient mechanisms to overcome adversities. The experience of displacement during the Imperia and Derg regimes reshaped Garri's economic strategies and settlement pattern. While the virtue of commercialized livelihood remained unchanged, the experience of displacement caused significant disruption to Garri's long-established networks. However, upon their return from displacement, the Garri strategically positioned towns along main roads as crucial business hubs. The geographical placement of these towns is not arbitrary; it reflects a calculated response to historical experiences, underlining Garri's adeptness in the caravan trade. The appeal of urban living was not solely rooted in cultural adaptation but was further underscored by the pragmatic opportunities it offered for economic activities and income generation. Sato [19] stresses that the transformative process was not merely a result of cultural assimilation but a strategic response to the economic challenges posed by

displacement. Accordingly, establishing town life by the returnee can be considered an adaptive strategy, aligning with broader regional trends. As Getachew [9] similarly underlined, displaced populations are increasingly drawn to urban centers as hubs of economic opportunity and community rebuilding.

Fortunately, Garriland occupies a crucial strategic position within the tripartite border region, situated at the intersection of major trade towns in southern Ethiopia and northern Kenya. As Sato [19] claims, this prime geographical location allows Garri to capitalize on the economic opportunities arising from the convergence of trade routes and the movement of goods and services. The town's significance as a trading center further strengthens its role as a key player in the regional economy. At the heart of this active trading hub lies Moyale, a town that has emerged as a pivotal transit point. The historical growth of Moyale is closely linked to the expansion of the Ethiopian State in the late 19<sup>th</sup> Century. This expansion resulted in the establishment of administrative and military centers in newly conquered territories. Moyale, playing a vital role, facilitates the exchange of diverse merchandise between the North and South [37,45]. Despite the disputed claims over Moyale by the Garri, Borana, and Gabra communities, the area has gained notoriety as a hub for contraband, where various resources are readily available. On the Ethiopian side, Moyale serves as the capital for two competing woredas – Oromia-Moyale and Somali-Moyale. Apart from the Kenya Moyale, the ethnic or language identity-based federalism arrangement of post-1991 in Ethiopia led to dual authorities overseeing various government activities at the district level.

Despite administrative duality, Garriland remains a central hub in the tripartite border region. It is a focal point for multiple trading routes and facilitates economic interactions among diverse communities. The geographical centrality of Garriland underscores its strategic importance as a key node within the region's broader commercial landscape. Recently, Moyale's and Dawa zones' position on the western trade route has been solidified, particularly with the progress of the development of the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) Corridor [30]. This strategic positioning enables the Garri to play a crucial role in trade and economic activities, connecting different communities and contributing to the overall socio-economic development of the tripartite border region. The anticipation of reaping the benefits of this project has played a pivotal role in motivating Garri leaders to make the significant decision to establish a town. The potential advantages of the project, such as improved infrastructure, economic opportunities, and enhanced social services, have served as compelling factors for the Garri leaders to embark on the endeavor.

### **5. Concluding Remark**

The resilience mechanisms employed by the Garri communities exemplify their remarkable ability to navigate socio-economic challenges and establish stability in their post-return environment. Through a dynamic interplay of historical experiences, cultural adaptations, and strategic responses, Garri has transitioned from reactive to proactive resilience. This shift underscores their commitment to finding enduring solutions amidst recurring displacement and regional instability. A notable side of their resilience lies in the transformative trajectory of *town-making*, *Somalization*, and the strategic adoption of proactive strategies like the *commercialization* of livelihood through combining camel herding, livestock market, and agro-pastoralism.

Furthermore, the Garri communities exhibit a proactive and enterprising spirit in their involvement in various local, regional, and international trade networks and commercial activities. They have astutely established expansive business networks and forged strategic

marriage alliances, showcase their collaborative approach to boost economic growth and development. By leveraging their available resources, knowledge, and skills, the Garri communities play a significant role in regional economic interactions, particularly due to their advantageous central position within the tripartite border region. Their active participation in trade networks enables them to tap into diverse markets, facilitating the exchange of goods, services, and ideas. This not only fosters economic prosperity within their communities but also contributes to the overall development and interconnectedness of the region. The Garri communities' strategic location at the crossroads of various trade routes positions them as key players in the regional economic landscape. Their geographical proximity to multiple markets enables them to act as intermediaries, facilitating trade between regions and promoting economic integration efforts in the IGAD/Horn of Africa region and EAC. This central role benefits the Garri communities and enhances the economic ties and interdependence among neighboring communities and states. These evidenced that proactive resilience is irreversible, sequential, autonomous, and goal-oriented.

Moreover, the adaptations displayed by the Garri community showcase their flexibility and resilience. They actively respond to evolving circumstances and seek innovative methods to maintain collective continuity. The Garri community's choice to embrace Somalization and align themselves with the broader Somali national identity is a strategic move to ensure the continuity of their collective Garri identity. This decision also serves as a form of resistance against and reversal of the aggressive state-building efforts and Oromo ethnonationalism-driven assimilation policies. By adopting this pragmatic approach, the Garri community can ensure the preservation of their unique identity within the framework of the Somali national identity. The leadership of Garri figures such as Haji Mohammed H. Gababa played a vital role in making this decision. Their foresight and strategic thinking resulted in recognizing the Dawa zone, which is governed by the Garri community. This recognition grants the Garri community autonomy and control over their affairs, further solidifying their collective identity and enabling them to shape their destiny within the Somali national framework.

In conclusion, the resilience mechanisms utilized by the Garri communities reveal a multifaceted narrative of adaptation, transformation, and strategic response. Their ability to integrate historical knowledge with contemporary challenges highlights their resilience and emphasizes their crucial role in shaping the socio-economic landscape of the southern frontiers. Amidst continuing challenges, the resilience mechanisms of the Garri suggest valuable understandings of the complex dynamics of survival, adaptation, and community rebuilding within a dynamic environment.

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## RESEARCHING PUBLIC SATISFACTION IN SOCIAL GOVERNANCE THROUGH THE APPLICATION OF THE FUZZY COMPREHENSIVE EVALUATION METHOD

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**Abstract.** Social governance is an essential component of China's governance system and is the cornerstone of "Governance of China." In the new era, the Communist Party of China adopts the core value pursuit of "People-centered" as the rational choice for governing the country. "People-centered" is also the core concept of social governance in China. As participants in social governance, the satisfaction of the public is an important evaluation indicator for measuring the effectiveness of social governance. How to scientifically quantify and evaluate the satisfaction with social governance has always been a key issue in evaluating the effectiveness of social governance. This study constructs a scientific evaluation indicator system and uses the fuzzy comprehensive evaluation method to make a scientific evaluation of public satisfaction with social governance. This is also beneficial for carrying out other social governance work based on the evaluation results, thereby improving governance effectiveness.

**Keywords:** *Social governance; Public satisfaction; Fuzzy comprehensive evaluation method; Evaluation research.*

**Rezumat.** Guvernarea socială este o componentă esențială a sistemului de guvernare al Chinei și piatra de temelie a „Guvernării Chinei”. În noua eră, China adoptă urmărirea valorii de bază „centrată pe oameni” ca alegere rațională pentru guvernarea țării. „Centrat pe oameni” este, de asemenea, conceptul de bază al guvernării sociale în China. Satisfacția publicului este un indicator important de evaluare pentru măsurarea eficacității guvernării sociale. Modul de cuantificare și evaluare științifică a satisfacției față de guvernarea socială a fost întotdeauna o problemă cheie în evaluarea eficienței. Acest studiu construiește un sistem de indicatori de evaluare științifică și utilizează metoda de evaluare cuprinzătoare fuzzy pentru a face o evaluare științifică a satisfacției publicului față de guvernarea socială. Acest lucru este, de asemenea, benefic pentru desfășurarea altor activități de guvernare socială pe baza rezultatelor evaluării, îmbunătățind astfel eficiența guvernării.

**Cuvinte cheie:** *guvernare socială; satisfacția publicului; metodă de evaluare cuprinzătoare neclară; cercetare de evaluare*

## 1. Introduction

The report from the 20<sup>th</sup> National Congress of the Communist Party of China proposed that social governance should continuously perfect the governance system, improve the social governance system of co-construction, co-governance, and sharing, enhance the efficacy of social governance, ensure and regulate the channels for the expression of public demands, interest coordination, and rights protection, and build a social governance community where everyone is responsible, everyone fulfills their responsibilities, and everyone enjoys rights. As an important aspect of national governance, establishing a "people-centered" social governance concept is the core goal of social governance in the new era [1]. Based on the pluralistic co-governance theory of governance studies, the public is both a participant in and beneficiary of social governance, and public satisfaction with social governance to some extent determines the effectiveness of social governance [2]. Governance satisfaction is a dimension for measuring the effectiveness of social governance [3], and under the influence of the "people-centered" concept of modern social governance in China, public satisfaction with social governance will inevitably be an important indicator and one of the significant objectives of social governance. How to scientifically evaluate this subjective issue of social governance satisfaction and how to reflect it with scientific quantitative data poses a key question in evaluating the effectiveness of social governance, making a scientific assessment of governance effectiveness an extremely important aspect. Adhering to the principles of scientific and quantitative evaluation, this study chooses the fuzzy comprehensive evaluation method for an objective and scientific assessment of public satisfaction with social governance. This evaluation method is based on a scientifically reasonable set of evaluation indicators and transforms subjective judgments into evaluations that facilitate the analysis of the combined effects of various factors [4].

## 2. Methods

The fuzzy comprehensive evaluation method is a comprehensive evaluation approach based on fuzzy mathematics. This method transforms qualitative evaluations into quantitative evaluations according to the theory of membership degrees in fuzzy mathematics, that is, it uses fuzzy mathematics to make an overall evaluation of things or objects constrained by various factors [5]. It is characterized by clear results and strong systematicity, capable of effectively solving fuzzy and difficult-to-quantify problems, making it suitable for addressing various uncertainties [6].

### 2.1 Construction of a Public Satisfaction Evaluation Indicator System for Social Governance

The selection of evaluation indicators and the establishment of an evaluation indicator system are the premises and foundations for scientifically evaluating the satisfaction of residents with social governance. To ensure the scientific rigor of the evaluation, this study refers to the secondary indicator "Public Satisfaction" in the China Social Governance and Development Index (CSGDI) indicator system developed by Tsinghua University. This includes six dimension indicators: "Public satisfaction with the government, residents' sense of fairness, residents' sense of happiness, residents' sense of participation, residents' sense of security, and residents' future expectations" to construct the evaluation indicator system for public satisfaction with social governance.

### **2.1.1 Selection of Evaluation Indicators for Public Satisfaction with Social Governance**

Building on the evaluation indicators from Tsinghua University's China Social Governance and Development Index (CSGDI), this study further elaborates on the six indicators related to public satisfaction according to the actual situation of the research. The aim is to ensure that the established indicator system is fully compatible with the evaluation method proposed in this paper, allowing for a more scientific and reasonable assessment of public satisfaction with social governance.

#### **a) Public Satisfaction with the Government**

Public satisfaction with the government refers to the public's psychological acknowledgment of the government based on subjective perception [7]. It includes emotional experience (i.e., citizens' positive or negative emotional responses to the government) and cognitive experience (referring to citizens' beliefs or perceptions about the government). Public satisfaction with government participation in social governance encompasses not only the satisfaction evaluation of government governance actions but also the level of satisfaction with public services provided by the government. Considering the theoretical practice of multi-stakeholder co-governance in social governance and the goals of "co-construction, co-governance, and sharing" in the new era of social governance, selecting public satisfaction with the government's social governance as an indicator for evaluating public satisfaction with social governance is both scientific and realistic.

#### **b) Residents' Sense of Fairness**

The public's sense of fairness is essentially a value judgment based on the foundation of equal rights and interests. A sense of social fairness arises only when individual rights and interests are protected [8]. Rawls (1988) proposed the principles of equal liberty, the difference principle, and the principle of equal opportunity in "A Theory of Justice" [9,10]. The public's sense of fairness is a subjective value judgment by citizens on whether they belong to a disadvantaged group. It's a psychological comparison that members of society make between themselves and others, and between the present and the future, influenced by cognition, reference objects, and personal emotions. Incorporating a sense of fairness into the evaluation of satisfaction with social governance and quantifying it through the fuzzy comprehensive evaluation method adds persuasive power and scientific validity to the assessment.

#### **c) Residents' Sense of Happiness**

Happiness is a mental state of being satisfied with one's life over a long period and maintaining a pleasant mood throughout [11]. The concept of happiness, originally derived from psychology, refers to psychological happiness. The notion of psychological happiness primarily stems from Maslow's Hierarchy of Needs Theory proposed in 1943 [12]. Psychological happiness emphasizes the realization and satisfaction of individual self-worth, with happy individuals often focusing more on the harmony between their self-worth and their true selves [13].

One of the main goals of social governance in the new era in our country is to meet the people's growing needs for a better life, the internal manifestation of which can be summarized as residents' sense of happiness. Therefore, including residents' sense of happiness as an evaluation dimension when assessing public satisfaction with social governance is necessary and reasonable.

#### **d) Residents' Sense of Participation**

The theory of social participation was proposed by the American scholar Barron in "The Right to Participate in Newspapers" as a right of citizens [14]. Participation means getting involved and taking part, referring to joining, integrating into, and engaging in the planning, discussion, and handling processes of an event or activity as a second or third party [15]. The 20th National Congress of the Communist Party of China proposed to perfect the social governance system, improve the system of co-construction, co-governance, and sharing, and enhance the efficacy of social governance. Building a social governance community where everyone is responsible, fulfills their duties, and enjoys rights advocates for residents' participation in social governance, where residents are both the subjects and beneficiaries of social governance. From the perspectives of pluralistic co-governance theory and the top-level design of national social governance, social governance emphasizes public participation, making residents' sense of participation one of the important indicators for evaluating public satisfaction with social governance.

#### **e) Residents' Sense of Security**

A sense of security is an innate feeling closely related to human needs, manifested as confidence, belief, and freedom. The concept of "sense of security" originally derived from Freud's "Theory of Anxiety" [16]. According to Maslow, a sense of security is an internal feeling. When people are freed from worries, the feeling of confidence and ease is the sense of security [17,18]. Giving people a feeling of confidence, determination, and freedom can enhance their sense of security. An important aspect of social governance is to enhance social safety and stability, and whether residents feel secure is a crucial indicator of the effectiveness of social governance.

#### **f) Residents' Future Expectations**

Future expectations refer to the belief in the occurrence of specific events in the future. Some scholars link future expectations with hope and an optimistic attitude, defining future expectations as holding a positive hope and an optimistic attitude toward possible outcomes in the future. This study considers residents' future expectations as their anticipation related to being the audience of social governance outcomes, direct participants in social governance, adapting to social governance results, and stimulating and achieving behaviors related to the anticipated future state. Setting residents' future expectations as an aspect of the evaluation of residents' satisfaction with social governance is beneficial for scientifically assessing social governance.

### **2.1.2 Establishment of the Evaluation Indicator System**

#### **a) Determination of Weights**

Weights reflect the relative importance of each indicator in the overall evaluation. The purpose of setting weights is to highlight key aspects when evaluating public satisfaction with social governance, making it more scientific and realistic, and to build a flexible system for evaluations across different regions and demographic groups. Weights are determined among various evaluation indicators, with a set of weights corresponding to an evaluation indicator system forming a weight system. This paper uses the Delphi method to determine the weights of the indicator system. To ensure the practicality of the constructed indicator system, 20 experts in the field of social governance are selected nationwide, including 10 research experts from different regions, 10 social governance officials from different regions and levels, and 10 members of the public from different regions, ages, genders, and

educational backgrounds, to form an expert group. The Delphi method is used to assign weights to these six indicators. To ensure the comprehensiveness and democracy of the evaluation, 10 participants in social governance from Region A are also involved in the Delphi weighting process. After three rounds of back-to-back communication and feedback, the final weight coefficients are obtained. Following discussion by the expert group and considering the realistic impact of the evaluation, the weight coefficients for the evaluation indicators are set as: (0.2, 0.1, 0.1, 0.2, 0.1, 0.2).

### **b) Construction of the Indicator System**

Based on the actual needs of evaluating residents' satisfaction with social governance and using the Delphi method for weighting the evaluation indicators, the following evaluation indicator system is ultimately established, Table 1.

*Table 1*

| <b>Evaluation Indicator System</b>      |                           |
|-----------------------------------------|---------------------------|
| <b>Indicator</b>                        | <b>Weight Coefficient</b> |
| Public Satisfaction with the Government | 0.2                       |
| Residents' Sense of Fairness            | 0.1                       |
| Residents' Sense of Happiness           | 0.2                       |
| Residents' Sense of Participation       | 0.2                       |
| Residents' Sense of Security            | 0.1                       |
| Residents' Future Expectations          | 0.2                       |

## **2.2 Fuzzy Comprehensive Evaluation**

The six indicators of public satisfaction with social governance are mostly psychological feelings, which are difficult to quantify. Applying the fuzzy comprehensive evaluation method in the study of the evaluation of residents' happiness in social governance converts qualitative comments into feasible quantitative evaluation results. This ensures the objectivity of the evaluation and the uniqueness and certainty of the evaluation results. In practical evaluation processes, these results can provide a scientific reference for assessing satisfaction with social governance and the effectiveness of social governance.

### **2.2.1 Establishment of the Factor Set**

A scientific evaluation indicator system is the basis for evaluating public satisfaction with social governance. The comprehensiveness and scientific validity of the evaluation of social governance effectiveness and residents' satisfaction with the outcomes of social governance depend on the indicators. This paper takes the six indicators of public satisfaction with the government, residents' sense of fairness, residents' sense of happiness, residents' sense of participation, residents' sense of security, and residents' future expectations as examples to study the application of the fuzzy evaluation method in assessing named satisfaction in social governance. These factors form the indicator system for the evaluation scheme, using this evaluation indicator system to constitute the factor set of the fuzzy comprehensive evaluation:  $U = \{U_1, \dots, U_n\}$ . Where  $U_1$  represents public satisfaction with the government;  $U_2$ : residents' sense of fairness;  $U_3$ : residents' sense of happiness;  $U_4$ : residents' sense of participation;  $U_5$ : residents' sense of security;  $U_6$ : residents' future expectations.

### 2.2.2 Establishment of the Comment Set

Based on the establishment of the factor set, the comment set for evaluating the scheme is established. Select all residents of Area A (typically a specific community or administrative village) or randomly choose a portion of residents to form an expert evaluation team. Evaluations are conducted via questionnaires, categorized into five levels: Very Satisfied, Satisfied, Neutral, Dissatisfied, and Very Dissatisfied. Each indicator within the factor set is scored individually, Table 2.

Comment Set:

$$V = \{V_1, V_2, \dots, V_n\}, \quad (1)$$

where:  $V$  is collection of commentaries.

Among them, element  $V_n$  represents the  $n$ th evaluation result.

Table 2

| Comment Set |                   |
|-------------|-------------------|
| $V$         | Comment           |
| $V_1$       | Very Satisfied    |
| $V_2$       | Satisfied         |
| $V_3$       | Neutral           |
| $V_4$       | Dissatisfied      |
| $V_5$       | Very Dissatisfied |

Source: prepared by authors.

With the factor set and comment set established and referring to the weight coefficients, experts are organized to evaluate each single factor. The Delphi method can also be used at this stage to collect expert comments, further enhancing the scientific rigor and precision of the fuzzy comprehensive evaluation. After consulting experts, statistics for each single factor are compiled. For example, after evaluating the satisfaction with the government factor, data is collected showing that 30% of residents are very satisfied, 30% are satisfied, 10% are neutral, 20% are dissatisfied, and 10% are very dissatisfied. This results in an evaluation vector for the government satisfaction factor of (0.3, 0.3, 0.1, 0.2, 0.1). Using this method, evaluations for other factors can be conducted to obtain corresponding single-factor evaluation vectors, Table 3. By synthesizing these single-factor vectors, a comprehensive evaluation matrix for the satisfaction of residents with social governance in Area A can be constructed:

$$R = \{r_{ij}\} \quad n \times m, \quad (2)$$

where:  $R$  is evaluation matrix.

$r_{ij}$  is the degree of membership of factor (indicator)  $i$  to comment  $j$ .

$n$  is the number of comments.

$m$  is the number of factors (indicators).

Table 3

| Evaluation matrix |   |                |         |                |                |                |                |                |
|-------------------|---|----------------|---------|----------------|----------------|----------------|----------------|----------------|
| R                 | U | V              | Weights | V <sub>1</sub> | V <sub>2</sub> | V <sub>3</sub> | V <sub>4</sub> | V <sub>5</sub> |
|                   |   | U <sub>1</sub> | 0.2     | 0.3            | 0.3            | 0.1            | 0.2            | 0.1            |
|                   |   | U <sub>2</sub> | 0.1     | 0.3            | 0.2            | 0.1            | 0.2            | 0.2            |
|                   |   | U <sub>3</sub> | 0.2     | 0.4            | 0.1            | 0.1            | 0.2            | 0.2            |
|                   |   | U <sub>4</sub> | 0.2     | 0.3            | 0.3            | 0.2            | 0.1            | 0.1            |
|                   |   | U <sub>5</sub> | 0.1     | 0.2            | 0.3            | 0.3            | 0.1            | 0.1            |
|                   |   | U <sub>6</sub> | 0.2     | 0.4            | 0.2            | 0.1            | 0.2            | 0.1            |

**Note:** R-evaluation matrix; U-Factor set; V-Comment set. Source:prepared by authors.

### 2.2.3 Establishment of Fuzzy Set

The fuzzy vector X on the factor set U is transformed into a fuzzy set on the comment set V through the judgment matrix R, applying the "weighted average type operator".

$$W = (0.2, 0.1, 0.2, 0.2, 0.1, 0.2) \times \begin{Bmatrix} 0.3 & 0.3 & 0.4 & 0.3 & 0.2 & 0.4 \\ 0.3 & 0.2 & 0.1 & 0.3 & 0.3 & 0.2 \\ 0.1 & 0.1 & 0.1 & 0.2 & 0.3 & 0.1 \\ 0.2 & 0.2 & 0.2 & 0.1 & 0.1 & 0.2 \\ 0.1 & 0.2 & 0.2 & 0.1 & 0.1 & 0.1 \end{Bmatrix} \quad (3)$$

### 3. Results and discussion

Calculations were conducted using the SPSSPRO software, with the algorithm being the fuzzy comprehensive evaluation. The variables are: {V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub>, V<sub>4</sub>, V<sub>5</sub>}; variable weights were determined using the entropy method; fuzzy operators: {weighted average type M(\*,+)}. After calculation, the evaluation results of the residents' satisfaction with social governance in Area A were obtained, Table 4.

Table 4

| Calculation of Indicator Weights Using the Entropy Weight Method |        |                           |                           |            |
|------------------------------------------------------------------|--------|---------------------------|---------------------------|------------|
| Entropy Weight Method                                            |        |                           |                           |            |
| Indicator                                                        | Weight | Information Entropy Value | Information Utility Value | Weight (%) |
| Public Satisfaction with the Government                          | 0.2    | 0.658                     | 0.342                     | 17.009     |
| Residents' Sense of Fairness                                     | 0.1    | 0.829                     | 0.171                     | 8.505      |
| Residents' Sense of Happiness                                    | 0.2    | 0.593                     | 0.407                     | 20.234     |
| Residents' Sense of Participation                                | 0.2    | 0.658                     | 0.342                     | 17.009     |
| Residents' Sense of Security                                     | 0.1    | 0.658                     | 0.342                     | 17.009     |
| Residents' Future Expectations                                   | 0.2    | 0.593                     | 0.407                     | 20.234     |

Source:prepared by authors.

The weight calculation results of the entropy weight method show that the weight of public satisfaction with the government at 0.2 is 17.009%, the weight of residents' sense of fairness at 0.1 is 8.505%, the weight of residents' sense of happiness at 0.2 is 20.234%, the weight of residents' sense of participation at 0.2 is 17.009%, the weight of residents' sense of security at 0.1 is 17.009%, and the weight of residents' future expectations at 0.2 is 20.234%. Among these, the highest weight is for residents' sense of happiness at 0.2 (20.234%), and the lowest is for residents' sense of fairness at 0.1 (8.505%).

Table 5

### Calculation Results of the Membership Degree Matrix

|                                          | V <sub>1</sub> | V <sub>2</sub> | V <sub>3</sub> | V <sub>4</sub> | V <sub>5</sub> |
|------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Membership Degree                        | 0.3234591049   | 0.2307931669   | 0.1510272633   | 0.1659818244   | 0.1287386402   |
|                                          | 4              | 9              | 6              | 2              | 6              |
| Membership Degree Normalization [Weight] | 0.323          | 0.231          | 0.151          | 0.166          | 0.129          |

**Note:** V-Comment set. Membership degree is a number between 0 and 1, used to indicate the degree of belonging of the Evaluation object to the comment set V. Normalization of membership degree is the result of normalizing membership degree. Unlike membership degree, the sum of all comments normalized by membership degree is 1. *Source: prepared by authors.*

From Table 5, a fuzzy comprehensive evaluation is conducted for 6 indicators (0.2, 0.1, 0.2, 0.2, 0.1, 0.2) against 5 comments (V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub>, V<sub>4</sub>, V<sub>5</sub>), utilizing the weighted average type M(\*,+) operator for the study. Initially, the weight vector A for evaluation indicators (obtained through the entropy weight method) is used to construct a 6×5 weight judgment matrix R. Subsequent analysis yields membership degrees for the 5 comment sets at 0.323, 0.231, 0.151, 0.166, and 0.129, respectively. Therefore, it can be determined that the comment set "Neutral" has the highest weight. Applying the maximum membership degree rule, the final comprehensive evaluation result is "V<sub>1</sub>".

After calculations with SPSSPRO, the evaluation result for the residents' satisfaction with social governance in Area A is obtained:

$$W=(0.323 \ 0.231 \ 0.151 \ 0.166 \ 0.129)$$

Building on this evaluation, it's possible to assign values to each comment, further scoring each comment, i.e., giving score C<sub>j</sub> to V<sub>j</sub>. This method provides more intuitive results and has greater practical value. Assign 100 points to V<sub>1</sub>, 80 points to V<sub>2</sub>, 60 points to V<sub>3</sub>, 40 points to V<sub>4</sub>, and 20 points to V<sub>5</sub>. Utilize the following formula:

$$w = \sum_{j=1}^m c_j \times w_j \quad (4)$$

After performing the calculations, the final evaluation result for the residents' satisfaction with social governance in Area A is:

$$W=0.323 \times 100 + 0.231 \times 80 + 0.151 \times 60 + 0.166 \times 40 + 0.129 \times 20 = 69.085 \quad (5)$$

The final score of 69.085 represents the evaluation result for the residents' satisfaction with social governance in Area A, Table 6.



Table 6

| Composite Score     |             |            |
|---------------------|-------------|------------|
| Variable            | Coefficient | Assignment |
| V <sub>1</sub>      | 0.323       | 100        |
| V <sub>2</sub>      | 0.231       | 80         |
| V <sub>3</sub>      | 0.151       | 60         |
| V <sub>4</sub>      | 0.166       | 40         |
| V <sub>5</sub>      | 0.129       | 20         |
| Evaluation Result W |             | 69.085     |

Source:prepared by authors.

#### 4. Case Study

Following this method, an evaluation of public satisfaction with social governance was conducted across 12 communities in Y Street, C City, S Region. The evaluation results served as a basis for assessing the effectiveness of social governance in these 12 communities. The communities were assigned codes as follows: Community A, Community B, Community C, Community D, Community E, Community F, Community G, Community H, Community I, Community J, Community K, and Community L. Two experts in the field of social governance, two staff members from the Y Street office, and a total of 12 residents from the communities (one randomly selected from each of the 12 communities) were hired to form the evaluation expert group.

Initially, the evaluation method, purpose, precautions, a simulated demonstration of the evaluation process, and information on the scoring method and workflow were introduced to the members of the expert group and the participating community residents. The evaluation ensured all participants were informed and prepared, with an expert scoreboard created and a specific assessment time set.

Subsequently, the five evaluation indicators proposed in this article were used to score the current state of social governance in the 12 communities by the experts, constructing the evaluation factor set. Objective scores were given based on the communities' social governance performance, and the first round of scoring results was compiled. Through multiple feedback rounds using the Delphi method, the initial evaluation results for each community were formed, constructing the comment set for the effectiveness of community social governance. With the factor set and comment set established, and referring to the weight coefficients (determined through a back-to-back approach by the expert group), an evaluation was conducted for each community. After consulting with the expert group, statistics for each community's single evaluation factors were compiled, with Community A's single-factor evaluation vectors in this evaluation round being:

|                                         |                                      |
|-----------------------------------------|--------------------------------------|
| Public Satisfaction with the Government | (0.19, 0.12, 0.17, 0.21, 0.16, 0.15) |
| Residents' Sense of Fairness            | (0.21, 0.09, 0.18, 0.24, 0.17, 0.11) |
| Residents' Sense of Happiness           | (0.18, 0.19, 0.15, 0.19, 0.21, 0.08) |
| Residents' Sense of Participation       | (0.11, 0.17, 0.12, 0.18, 0.22, 0.20) |
| Residents' Sense of Security            | (0.19, 0.16, 0.20, 0.14, 0.19, 0.12) |
| Residents' Future Expectations          | (0.13, 0.14, 0.16, 0.19, 0.15, 0.23) |

Constructing the Evaluation Matrix, Table 7:

Table 7

**Evaluation Matrix for Public Satisfaction with  
Social Governance in Community A**

|             |   | V              | Weight | V <sub>1</sub> | V <sub>2</sub> | V <sub>3</sub> | V <sub>4</sub> | V <sub>5</sub> |
|-------------|---|----------------|--------|----------------|----------------|----------------|----------------|----------------|
| Community A | U | U <sub>1</sub> | 0.2    | 0.19           | 0.21           | 0.18           | 0.11           | 0.19           |
|             |   | U <sub>2</sub> | 0.1    | 0.12           | 0.09           | 0.19           | 0.17           | 0.16           |
|             |   | U <sub>3</sub> | 0.2    | 0.17           | 0.18           | 0.15           | 0.12           | 0.20           |
|             |   | U <sub>4</sub> | 0.2    | 0.21           | 0.24           | 0.19           | 0.18           | 0.14           |
|             |   | U <sub>5</sub> | 0.1    | 0.16           | 0.17           | 0.21           | 0.22           | 0.19           |
|             |   | U <sub>6</sub> | 0.2    | 0.15           | 0.11           | 0.08           | 0.20           | 0.12           |

*Source: prepared by authors.*

Through the judgment matrix R, the fuzzy vector X on factor set U is transformed into a fuzzy set on comment set V using the "weighted average type operator." The result W = (0.198, 0.196, 0.199, 0.208, 0.199) is obtained. Assigning scores to each comment, with V<sub>1</sub> receiving 100 points, V<sub>2</sub> receiving 80 points, V<sub>3</sub> receiving 60 points, V<sub>4</sub> receiving 40 points, and V<sub>5</sub> receiving 20 points. After calculation, the final evaluation result for public satisfaction with social governance is 59.74.

After the entire evaluation process, the final ranking of public satisfaction with social governance across the 12 communities is as follows: Community L, Community B, Community F, Community D, Community J, Community I, Community E, Community G, Community A, Community C, Community K, Community H. The evaluation results transition from the initial qualitative comments: Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied, to the final quantitative evaluation outcomes. This transition highlights the scientific nature of the evaluation process, as well as the accuracy and definitiveness of the final results.

## 5. Discussion

With the development of society and the increasing diversification of public demands, the level and effectiveness of social governance have attracted widespread attention. Public satisfaction, as an important indicator to measure the quality of social governance, highlights the significance of the scientific and accurate evaluation methods. This article utilizes the fuzzy comprehensive evaluation method to assess public satisfaction with social governance and delves into a discussion on the evaluation results. In the evaluation of public satisfaction with social governance, due to many factors that are difficult to quantify or have fuzzy boundaries, this method demonstrates unique advantages. By constructing factor sets, weight sets, and evaluation sets, the fuzzy comprehensive evaluation method can comprehensively and accurately reflect public satisfaction with social governance.

Based on current research, the application scope of the fuzzy comprehensive evaluation method is quite broad. This evaluation method, based on fuzzy mathematics, is suitable for evaluation problems involving fuzziness, uncertainty, or incompleteness. The academic community has applied this method in multiple fields, resulting in a wealth of research conclusions, mainly involving classroom teaching for civic lessons [19], investment in renewable energy [20], evaluation of flight performance for trainee pilots [21], evaluation of university students' learning [22], issues of electricity consumption [23], safety evaluation of pipelines in permafrost regions [24], cloud manufacturing service assessment [25], safety evaluation of commercial vehicle driving behavior [26], and measurement of information environment changes [27]. From the existing research on the application fields of the fuzzy comprehensive evaluation method, there is a scarcity of studies applying this method in the

field of social governance. This research, to some extent, expands the application scope of the method, presenting a novel perspective with significant inspirational and important value.

Additionally, this study observes that the theoretical research on public satisfaction with social governance is limited, with most studies employing qualitative research and empirical analysis, and fewer applying the fuzzy comprehensive evaluation method. The main methods include surveys and interviews [28], third-party evaluations [29], qualitative research methods, literature review [30], descriptive and inferential statistical methods [31], focusing on the introduction of "soft" indicators into good governance indicators [32], optimal scale regression model analysis [33], investigating conflicts of interest [34], and establishing hypothesis models with verification analysis using AMOS software [35]. Existing research on satisfaction evaluation in governance reveals a scarcity of studies applying the fuzzy comprehensive evaluation method to social governance satisfaction evaluations. This research explores evaluation methods for public satisfaction with social governance, most importantly, discovering that satisfaction, a qualitative measurement indicator, can be quantitatively measured, offering a new approach to other research aspects of social governance.

Therefore, this study believes that transforming satisfaction from qualitative to quantitative research holds significant value and meaning. Building on the theoretical foundation of social governance satisfaction research, presenting it in a quantified manner further emphasizes the scientific nature of the evaluation. This study, under the perspective of social governance, employs the fuzzy comprehensive evaluation method to evaluate and research public satisfaction with governance, further exploring its application scope. The use of the fuzzy comprehensive evaluation method in studying public satisfaction with social governance plays an important role, enriching the theoretical research on public satisfaction with social governance to some extent and potentially aiding the current stage in strengthening and improving evaluations of public satisfaction with social governance.

The application of the fuzzy comprehensive evaluation method in evaluating public satisfaction with social governance across 12 communities in Y Street, C City, S Region, has demonstrated effective evaluation performance, providing scientific and quantified evaluation results for the entire street's social governance. According to the calculations of the fuzzy comprehensive evaluation method, overall public satisfaction with social governance is high, but there is still room for improvement in specific aspects. The specific evaluation results can serve as an assessment of community governance performance, and the issues exposed during the evaluation process are relatively clear. Addressing these issues specifically in the subsequent social governance work can lead to targeted improvements. Evaluating public satisfaction with the government, residents' sense of fairness, happiness, participation, security, and future expectations can better reflect community residents' views on the social governance effectiveness of their grassroots self-governing organizations. Meanwhile, different levels of resident satisfaction reflected in different dimensions across communities indicate that communities with better performance can showcase their governance practices within Y Street, helping other communities to improve, further enhancing resident satisfaction with social governance in their community.

## **6. Conclusion**

This study has scientifically selected six indicators that affect public satisfaction with

social governance and established an objective and reasonable set of comments. By utilizing the fuzzy comprehensive evaluation method, a scientific and reasonable evaluation of public satisfaction with social governance has been conducted. Evaluating public satisfaction with social governance has always been a challenging issue in assessing the performance of social governance. The application of the fuzzy comprehensive evaluation method provides a more scientific and reasonable approach for conducting evaluation research. The evaluation results possess certain scientific validity and practicality. These results can be used to carry out other aspects of work, promoting the improvement of social governance capabilities and the involvement of community residents in social governance to form a development trend of co-construction, co-governance, and sharing.

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## PARTICIPANTS' PERCEPTIONS OF THE CONTRIBUTION OF THE EXPANDED PUBLIC WORKS PROGRAMME TO SUSTAINABLE LIVELIHOODS

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**Abstract.** Public Employment Programmes (PEPs), which include the South African Expanded Public Works Programme (EPWP), are widely recognised as important social protection tools that address the challenges of persistent unemployment and dire poverty. PEPs offer a 'win-win' policy option by creating jobs while simultaneously generating assets and delivering services. In South Africa, the impact of PEPs has primarily been evaluated based on employment opportunities, thus creating a gap in the comprehensive assessment of their contribution to the broader livelihood of participants beyond job creation. To address this gap, a qualitative research method was employed, utilising a snowball sampling strategy and the Sustainable Livelihoods Framework as the theoretical foundation for the investigation. The findings of this study underscore the positive contribution of the EPWP to the livelihoods of its participants. However, the study also uncovered various challenges confronting the programme, such as non-compliance with program regulations, such as payment below minimum wage rates and difficulties in meeting youth employment targets amidst escalating youth unemployment rates in South Africa. The research recommends introducing a national EPWP policy with enforcement mechanisms and youth-focused programmes while strengthening local institutions to provide services and processes to enhance the impact of these programs and create a conducive environment for beneficiaries to improve their livelihoods and escape poverty.

**Keywords:** *Public Works Programme, Public Employment Programmes, Sustainable Livelihoods, Youth Unemployment South Africa.*

**Abstract.** Programele publice de angajare (PEP), care includ Programul extins de lucrări publice din Africa de Sud (EPWP), sunt recunoscute pe scară largă ca instrumente importante de protecție socială care abordează provocările șomajului persistent și sărăciei extreme. PEP-urile oferă o opțiune de politică „câștig-câștig” prin crearea de locuri de muncă și, în același timp, generarea de active și furnizarea de servicii. În Africa de Sud, impactul PEP a fost evaluat în primul rând pe baza oportunităților de angajare, creând astfel un decalaj în evaluarea cuprinzătoare a contribuției acestora la mijloacele de trai mai largi ale participanților dincolo

de crearea de locuri de muncă. Pentru a aborda acest decalaj, a fost folosită o metodă de cercetare calitativă, utilizând o strategie de eşantionare "snowball" şi Cadrul pentru mijloacele de trai durabile ca bază teoretică pentru investigaţie. Concluziile acestui studiu subliniază contribuţia pozitivă a EPWP la mijloacele de trai ale participanţilor săi. Cu toate acestea, studiul a dezvăluit diferite provocări cu care se confruntă programul, cum ar fi nerespectarea regulamentelor programului, plata salariului sub minim şi dificultăţile în îndeplinirea obiectivelor de ocupare a forţei de muncă pentru tineri, pe fondul creşterii ratei şomajului în rândul tinerilor din Africa de Sud. Cercetarea recomandă introducerea unei politici naţionale de EPWP cu mecanisme de aplicare şi programe axate pe tineri, consolidând în acelaşi timp instituţiile locale pentru a furniza servicii şi procese, menite de a spori impactul acestor programe şi crearea unui mediu propice pentru ca beneficiarii să-şi îmbunătăţească mijloacele de trai şi să scape de sărăcie.

**Cuvinte cheie:** *program de lucrări publice, programe de angajare publică, mijloace de trai durabile, şomaj în rândul tinerilor din Africa de Sud.*

## 1. Introduction

Public works or public employment programmes (PWP or PEPs) have long been recognised as a crucial means of contributing to social protection and addressing the challenges of poverty and unemployment [1, p. 38]. Additionally, it is affirmed that PEPs are regarded as a significant and widespread social protection tool during periods of persistent unemployment and dire poverty, providing a 'win-win' policy option through job creation, while ensuring that assets are created and services are delivered to communities [2]. For this inquiry, the terms "public works" and "public employment" programmes are used interchangeably to indicate the same type of job creation interventions. In South Africa, similar to other PEPs globally, the government implements the Expanded Public Works Programme (EPWP), intending to provide work opportunities and income support to poor and unemployed individuals through labour-intensive delivery of public and community assets and services, thereby contributing to development [3]. The EPWP, in its current form, was adopted during the 2003 Growth and Development Summit (GDS) convened by the government with its social partners (business, labor, and civil society). The objectives of the GDS, among other things, included "accelerated investment, job creation, improved efficiency and a fairer distribution of economic opportunities and rewards" [4, p. 3].

South Africa's Expanded Public Works Programme (EPWP) comprises four distinct sectors, each coordinated by different governmental departments. These sectors include the Infrastructure Sector, the largest sector in the programme concerning work opportunity targets. The Department of Public Works (DPW) is responsible for leading and coordinating all activities within this sector. The key objective of this sector is to promote the use of labour-based approaches in all infrastructure projects where it is economically and practically feasible. The Social Sector, on the other hand, has the least opportunity targets when compared to all other sectors, and is led and coordinated by the Department of Social Development (DSD). This sector focuses on early childhood development programmes and home community-based care initiatives.

The Non-State Sector (NSS) is the second largest sector regarding work opportunity targets within the EPWP. This sector is divided into two main programmes: the Non-Profit Organisation (NPO) Programme, which is coordinated by the DPW, and the Community Work Programme (CWP), which is led by the Department of Cooperative Governance (DCoG). Lastly,

the Environment and Culture Sector (E&C) is the third largest sector in the EPWP concerning work opportunity targets. It is led and coordinated by the Department of Environmental Affairs (DEA). The focus of the E&C sector is centred around programmes aimed at protecting the environment, with key initiatives including sustainable energy, parks and beautification, and waste management, among others.

### **1.1. Statement of the problem and objective of the study**

The existing body of literature indicates that the research conducted on Public Employment Programmes (PEPs) in general and the Expanded Public Works Programme (EPWP) in particular, tends to concentrate on the inward-looking and internal effect paradigms of the PEPs for the participants. The inward-looking and internal effect paradigms of PEPs studies focus on the surface-level aspects of the programme that are found in the objectives of the 2004 founding Logical Framework for the EPWP Phase I. The EPWP is designed to achieve the triple objectives of job creation, income transfer, and asset creation for service delivery. The primary objective of studies on the EPWP is to evaluate the programme's impact on these three areas. According to [5], most research on the effect of PEPs in South Africa has concentrated on their contributions to employment or job creation. However, there is a gap in the literature regarding the qualitative results on the programme's impact on the participants and their livelihoods in the outward-looking and external effect paradigm of the EPWP. This research seeks to fill this gap by examining the programme's broader impact that extends beyond the narrow view of the programme assessment and evaluation, which solely focuses on number-counting, such as the number of jobs created, kilometres of roads constructed, or the number of bridges built. This study aims to investigate the programme's impact on the Expanded Public Works Programme (EPWP) beneficiaries in terms of their livelihoods.

### **1.2. Literature review**

Over the course of the past three decades, there has been a steady escalation in research conducted on public works programmes (PWP), including the Employment Promotion Programme (EPP). These studies have explored various facets of the Programme, such as its impact on job creation and the rise in female participation, among other factors. In South Africa (SA), Abedian and Standish [6, p. 87] carried out research on PWPs, with a specific focus on the "merits and demerits" of the programmes in the country. The authors highlighted that, by the mid-1980s, PWPs represented a "new phenomenon" in contemporary SA and, as such, their study aimed to establish guidelines for the implementation of PWPs in the country by drawing on global experiences of PWP implementation in other countries. The study by [6] presented different scenarios to explain why PWPs can fail, while also underscoring why PWPs are important. The authors concluded that the systematic implementation of PWPs as job creation programmes is the only pragmatic option that policymakers can pursue, given the significance and impact of PWPs for the poor and unemployed. It is noteworthy that, even though this study was conducted over 30 years ago, capacity building and skills development remain essential components of the programme.

Since the attainment of democracy in South Africa in 1994, research has been presented to organisations such as the UN Development Programme (UNDP), the HSRC, and the Development Bank of Southern Africa (DBSA), providing an overview of the EPWP and its rationale in the context of unemployment. In contrast to the study by [6], which examines PWPs prior to 1994 when the country was under apartheid, Phillips describes the progression



of PWP in SA [7]. According to [7, p. 32], the implementation of infrastructure projects through the Gundo Lashu Labour-Intensive Roads Maintenance Programme in Limpopo in 2003/2004 resulted in a “600% increase in job creation compared to similar road works projects” that used conventional machine-intensive methods. These results are impressive achievements of the PWP. However, the study did not evaluate the quality outputs of these methods comparably.

The study conducted on assessing Public Works Programmes (PWPs) as a social protection tool, aimed to identify the social protection factors contributing to the success of PWPs as a safety net programme [8]. Their study involved cross-country reviews of PWPs, focusing on their design factors, implementation models, and monitoring and evaluation methods. The authors argued that PWPs serve various objectives, primarily providing poor households with temporary work opportunities to increase their income. This is crucial in achieving individual and family objectives, such as alleviating poverty and covariate and idiosyncratic shocks and serving as a bridge to more stable employment. The authors also highlighted that PWPs indirectly benefit the community, such as creating local assets and infrastructure.

The research conducted by [8] demonstrates that approximately 38% of the 37 Public Works Programmes (PWPs) assessed were established to counteract the negative influence of single covariate shocks, such as natural disasters or macroeconomic crises. In addition, around 27% of the programmes served as an instrument to combat poverty, while 16% were implemented to mitigate seasonal unemployment. The remaining percentage of PWPs had unclear objectives. The authors of the study identified four key design characteristics of PWPs that should be taken into account, including the wage rate, targeting method, funding mechanism, and quality and maintenance. The wage rate is often kept low to deter individuals who are already employed from competing with those who are unemployed and participating in the PWP, as concurred by Mitchell [9]. Self or community targeting is the most widely used method for PWPs, where individuals or households participate based on their personal circumstances or poverty levels. The government, donors can do the funding of PWPs, or a combination of both, such as in the case of Ethiopia’s PSNP. Finally, the provision of high-quality public goods and services in a cost-effective manner should be the principal objective of PWPs, as recommended by [7], to address the issue of inadequate maintenance and quality.

In 2013, a study was conducted in the eThekweni Metropolitan Municipality, which is the third-largest city in South Africa, with a population of over 3.5 million people, to evaluate the effectiveness of a job creation program and the extent to which program participants were able to secure decent employment after completing the program [10]. The study’s objectives align with the 2004 Logical Framework for EPWP Phase I, which seeks to reduce unemployment for at least 1 million individuals, deliver labour-intensive public goods and services at acceptable levels, and improve program beneficiaries’ chances of obtaining sustainable employment through skills development and access to information on local employment and SMME development opportunities.

The EPWP policy implemented by the eThekweni Metropolitan aimed to integrate the programme within the broader policy framework of the Municipality rather than implementing it in isolation. The policy objectives statement reflected this approach, using language that highlights the approval of the Expanded Public Works Programme as a strategy for socio-economic development and the incorporation of the EPWP as a methodology in the implementation of the IDP. The study by [10] revealed that the eThekweni Metropolitan’s

implementation strategy centered on reorienting the municipal line budget function, including capital and maintenance projects, to maximise job creation in accordance with EPWP guidelines. As a result of these initiatives, a labor-intensive methodology is being employed metro-wide, with a focus on providing training and other skills development opportunities, including small business development through accredited learnerships, to unemployed people in communities within the eThekweni Metropolitan.

Employment Promotion Programme (EPWP) has successfully provided employment opportunities to some of its participants, including those who found work within the eThekweni Municipality [10]. However, the study also highlights a notable concern regarding the programme's degeneration into a mere temporary solution for employment. This is an interesting finding, particularly in light of the perspectives presented by [6] and [7], who suggest that public employment programmes (PEPs) can provide short-term employment opportunities and promote socio-economic development in communities. Acknowledging that PEPs alone cannot address the structural issues of unemployment in South Africa, it was emphasized that they should be viewed as one of many short-to-medium term measures aimed at reducing poverty associated with unemployment [7].

### **1.3. Theoretical framework**

This investigation has employed the Sustainable Livelihoods Framework (SLF) to evaluate the impact of the EPWP's livelihoods on its participants. The concept of SLF, which dates back to the Brundtland Commission on Environment and Development in 1983, has been defined by various scholars worldwide and continues to be refined. According to [11], sustainable livelihoods are defined as "The capabilities, assets (stores, resources, claims and access) and activities required for a means of living: A livelihood is sustainable if it can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets, and provide sustainable livelihoods for the next generation and which contributes net benefit to other livelihoods at local and global levels and in the short and long term." The SLF has become a widely used framework in community development, primarily to assist in organising the factors that limit or improve livelihood prospects of the poor and vulnerable, as it outlines how these factors are linked to one another. A critical aspect of this framework is recognising that households do not have equal access to livelihood assets, which means they need to make choices and trade-offs. In this study, the focus will be on the livelihood assets (financial capital, human capital, natural capital, physical capital, and social capital), and how the EPWP contributes to sustainable livelihoods of the program participants by examining these five livelihood assets and how the livelihood outcomes are achieved.

## **2. Materials and Methods**

The research methodology employed for evaluating the impact of PEP on rural livelihoods and service delivery necessitated an extensive engagement with research participants within their natural setting and without any intervention or manipulation of variables. By immersing oneself in the group under observation and observing them in their true state, the investigator was able to gain a deeper understanding of their culture, beliefs, and experiences. This qualitative research approach provided a holistic perspective beyond mere quantitative analysis and hypothesis testing. Instead, it delved into the crucial aspects of the study, particularly the social dynamics involved and how the programme impacted the lives of the people involved. Through this approach, the study was able to provide valuable

insights into the human angle of the matter at hand, including the emotions, behaviours, and relationships of the participants.

This investigation was executed during one of the most challenging periods in global history, amid the coronavirus (COVID-19) outbreak declared a global emergency by the World Health Organization on 3 January 2020. The COVID-19 pandemic had a profound impact on both health systems and the worldwide economy, causing nations around the globe to search for solutions to mitigate the disease's disruptive effects on their healthcare and financial systems [12, p. 2].

To curb the spread of the virus in South Africa, the government implemented various crucial and extreme measures, including a nationwide lockdown that began on 26 March 2020. The government continuously reviewed the lockdown levels based on the virus transmission and infection rate. Ethical clearance was obtained in compliance with COVID-19 regulations and adherence to the University of KwaZulu-Natal research guidelines. In an effort to prevent the spread of the infection and comply with government health protocols and regulations regarding the Covid-19 pandemic, telephone interviews were conducted with all research participants.

The question asked aimed to determine the contribution of the EPWP to the livelihoods of the participants/workers, specifically: "In what way were the livelihoods of the programme participants and beneficiaries affected by the implementation of the EPWP?" This inquiry examined the five livelihood assets discussed above.

### **2.1. Study Site and the population**

For this study, two key programmes from the EPWP Infrastructure Sector (Zibambele Road Maintenance Programme and Welisizwe Rural Bridges Programme) were due to their rural-focused. In this study, the population was divided into three categories. The first category was the EPWP workers (generally referred to as EPWP participants, and in this study these terms were used interchangeably) employed in the Programme from the 2019/20 financial year until 2020/21 across all the three targeted provinces: KwaZulu-Natal (KZN), the Eastern Cape (EC), and the Free State (FS) through the eight district municipalities. In KZN, the following district municipalities were selected: Harry Gwala, Ugu, iLembe and King Cetshwayo Municipalities (previously reported or referred to as uThungulu).

These districts were chosen because of the spatial distribution of EPWP projects and the number of work opportunities reported under each district. The EC selected the following districts: Amathole, OR Tambo and Chris Hani District Municipalities. The selection also considered where the bridges and infrastructure were built. The same is true for the FS. Thabo Mofutsanyane District Municipality was selected because this is where the Monatsa Project was implemented.

### **2.2. Sampling Strategy and Sample Size**

For one to be able to generalise findings, significant consideration must be given in choosing a sampling approach and method. Various factors, as noted by [13] were considered when calculating this sample size.

They included the availability of resources to cover the sample, time and cost to cover the sampled population. As a result, the following boundaries and features of the sample applied, Table 1.

Table 1

**Sampling Types and Respondent Categories in the Study of EPWP Implementation**

| Sampling type |                                     | Type of respondents                                                                                                                           | Number     |
|---------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Category 1    | Purposive, non-probability sampling | Officials and managers responsible for the coordination and/or implementation                                                                 | 30         |
| Category 2    | Purposive, non-probability sampling | EPWP Coordinators and Champions are officials at municipal levels                                                                             | 32         |
| Category 3    | Purposive sampling                  | Community informants comprised local ward councillors, school principals, church leaders, local business leaders, and other prominent persons | 15         |
| Category 3    | Snowball sampling                   | EPWP participants (also referred to as EPWP workers) who were employed or currently working in the programme                                  | 25         |
| <b>Total</b>  |                                     |                                                                                                                                               | <b>102</b> |

**2.3. Data collection and analysis**

Various approaches to data collection depend on the nature of a study and the chosen research methodology. According to [14], questionnaires are commonly used in surveys and can be administered in as self-completion questionnaires, direct interviews and phone interviews, where questions are asked over the phone and answers are recorded.

This study took place during the Covid-19 pandemic, requiring adherence to regulations and protocols. Two methods were used to collect data from different participant categories. Firstly, virtual online interactions strategy was applied to officials including managers, coordinators, and EPWP champions (categories 1 and 2). This strategy engaged respondents through the Zoom and Microsoft Teams platform. Secondly, one-on-one interviews were scheduled for EPWP workers (category 1), community informants (category 3), and category 2 members who couldn't participate in focus group discussions for various reasons.

Before collecting data, a formal request was made to the relevant departments and municipalities involved in the study, in accordance with the University's ethical protocols. They were asked to provide a database of potential research participants from the sample. This database served two purposes: keeping records and helping the researcher track progress. After compiling the database, appointments were scheduled to initiate phone contact with the potential participants. The researcher introduced themselves, explained the research project, and invited them to join a virtual focus group discussion. If participants agreed, consent forms and the meeting link were sent via email.

A pilot study was conducted to improve the reliability and validity of data collection instruments and enhance the overall quality of the study. The pilot study involved nine (9) participants chosen based on their proximity to the researcher and their roles in the Programme. Two (2) officials from the National DPWI participated in face-to-face interviews at the Head Office, which adhered to Covid-19 health protocols and social distancing measures. These interviews were recorded for future reference. Two (2) additional participants were interviewed via the online platform Zoom, one from a municipality in KZN and the other from the Provincial DPWI which coordinates the EPWP in the Free State

Province. The third group consisted of three (3) EPWP workers from each targeted province. For participants who were more comfortable with isiZulu, Sotho, or isiXhosa, translations were provided to ensure clarity. The final group included two (2) key informants, a ward councillor from the Free State and a local businessperson from the Eastern Cape Province.

## **2.4 Data Analysis**

Data analysis is defined as the interpretation of the raw research data to make sense and provide meaning to that data in relation to the aim of the study [15, p. 34]. This study used a qualitative research method and followed six phases of thematic analysis to evaluate and compare data, using inductive analyses to integrate qualitative data. Answers were sorted, coded, and classified by emerging themes, which were later assessed, matched, and reviewed. The importance of assigning meaning to qualitative data was emphasized by [16] who highlight the essential role it plays in uncovering insights, understanding phenomena, and informing research findings.

## **3. Results and Discussion**

The primary aim of this study was to critically examine and evaluate the contribution of the EPWP to the livelihoods of the programme participants, under this broad research question “In what way are the livelihoods of the beneficiaries or employees of the EPWP affected by the Programme?” Responding to this study question using the Sustainable Livelihood Framework, five livelihood assets were assessed and discussed below, starting with study demographic information and rate of pay.

### **3.1 Demographics Information and Rate of Pay**

Out of the sample of 25 workers who are involved in the Extended Public Works Programme (EPWP), a majority of 72% (18 individuals) were found to be female, while 28% (7 individuals) were male. Additionally, 44% (11 individuals) of the workers were identified as youths between 18 to 35 years old. These findings indicate that the Programme has exceeded its target for female representation, which was established at 55% as stipulated by [17]. However, the same cannot be said for the Programme’s youth target, as only 44% of the participants were identified as youths. This outcome is particularly worrisome given the current youth unemployment rate in the country, which has been reported by StatsSA (2021) as 63.3% using the expanded definition and 43.6% using the narrow definition. In regard to the rate of pay, 80% of the workers who were interviewed were found to be receiving wages that were below the regulated minimum wage, as stipulated by the Ministerial Determination 4: EPWP 2012 [18] and the 2018 NMW Act, as amended [19]. Furthermore, these workers also experienced a delay in receiving their wages, with payments being received between 3 to 6 weeks after the end of the month.

The non-compliance of the Programme with government regulations pertaining to minimum wage and timely compensation is an issue of concern, particularly when considering the Programme’s objectives of addressing poverty and promoting development. One respondent expressed that ‘the remuneration received from the Programme was inadequate and had remained unchanged for two years’ [P1]. The same individual further requested that the Department increase the wage rate and ensure timely payment to cope with the rise in food prices. Another participant shared their gratitude for the financial support received but appealed to the Department to consider augmenting the wages. As a diabetic individual, the respondent had to make arduous decisions regarding prioritising between

groceries and medication. All of these aspects held significant importance for the participant. Choosing one over the other was not a matter since these items could not be substituted [P2].

The next session discusses the five livelihood assets assessed from the programme participants' point of view.

*Financial Capital: Wages and Stipends.* All participants interviewed for the study reported a positive improvement in their income levels as a result of the programme, which was particularly significant given that they were all unemployed with no income prior to joining. The programme's objectives include income support, which offers stability and predictability to enable individuals to plan and commit to longer-term financial obligations to enhance their well-being. This was exemplified by participants who were able to make use of lay-by and bank loans to purchase items for their homes and gardens. Access to stable income is important for sustainable livelihoods, as it allows individuals to cope with the stresses and shocks of poverty and bounce back from them. However, it is concerning that most participants were paid less than the regulated minimum wage, which contradicts the programme's objectives of poverty alleviation and development. These findings support previous research that emphasises the importance of sustainable livelihoods that are resilient and able to withstand environmental pressures.

*Human Capital: Further Education and Training Attained*

The workers interviewed for this study noted that education and training were among the key accomplishments that the Programme contributed to their livelihoods. The Programme's contribution to education was evident at two levels: first, where a participant was directly able to attain education from or through the Programme;

*I was able to register for [a] public management short course and paid for my transport costs from the stipend I received. [P3]*

and second, where parents or siblings used the money received from the Programme to pay for education.

One participant benefited directly from the Programme by registering for a public management short course and paying for transport costs from the stipend received. Another participant saved part of their wage for their education and planned to use it for registration fees at Durban University of Technology.

*Part of the wage that I am receiving, I am saving it for my education. My contract is ending in July 2021. I will be having sufficient registration fee to Durban University of Technology. I am planning to start in the next semester. [P4]*

While some participants did not directly attain education through the Programme, they used the money for their children's or siblings' education.

*Today, my children are in Grade 12 [and] supported by the money I receive from the programme. I am a single parent with six children and four grandchildren. [P5]*

*My two daughters are at university. Even though they get NSFAS to support them, but every month, I am able to share with them the little that I receive from the Programme. It makes me feel very good that I do provide for my kids, little as it may be, but I know it goes a long way [for] my children. [P6]*

As noted by [20, p.12], a sustainable livelihood is largely dependent on “the availability of assets/livelihood capital”, which are “human capital, natural capital, financial capital and physical capital”. These results indicate that workers or their family members improved their education and skills, enhancing their human capital assets and contributing to their sustainable livelihoods.

### **3.2. Natural Capital: Land**

Natural capital, which refers to the natural assets such as land, plants and other living things, was the subject of discussion during the interviews. It was observed that none of the participants were able to acquire or attain natural capital through income from the EPWP. However, there are instances where participants invested in chicken and animal stock, which also contributes as natural capital.

The reason behind this is mainly attributed to the inadequacy of their income, which is insufficient to cater to other needs beyond the basic necessities. This raises the question of whether asset contributions can actually lead to the development of long-term intergenerational financial security. However, it is worth noting that the majority of the participants hail from villages and reside in communal land under a tribal authority, where land is not freehold.

### **3.3. Physical Capital: Shelter, Home Renovations, Home Appliances and Electronics**

Physical capital, including shelter, home renovations, home appliances, and electronics, plays a crucial role in improving livelihood outcomes. According to [11], any program aiming to improve livelihoods must focus on enhancing means of living. The Program under review helped over 70% of the participants to improve their shelter in various ways such as constructing new structures, renovating, and repairing their homes. For instance, one of the participants noted that they used to buy a bag of cement every month to make bricks, but now, they have completed building a three-roomed house with the income from the Program.

*I used to buy a bag of cement every month to make bricks. I have now completed my three-roomed, fully built [house] with the income from the Programme. I now have dignity, as we used to share the same room with my children and others [who] are now old. [P7]*

Such improvements provide dignity, particularly for those who previously shared a single room with their children and others. Additionally, participants used the funds to buy fences to protect their gardens from neighbouring livestock.

*Through this money, I bought [a] fence and fenced my house and my garden to ensure that livestock from the neighbours do not destroy my garden and produce. I used to lay by the fence and pay monthly until it was fully paid. [P8]*

Predictable income from the program allowed some participants to apply for bank loans to buy building materials.

*I applied for the bank loan because I had predictable income and bought building material. I am now repaying the bank and staying in my house because I used to stay in a shack with my kids. [P9]*

Based on the feedback given by the participants, acquiring housing was a crucial step in enhancing their livelihood outcomes and means of subsistence. This assertion is corroborated by authors who confirm that Public Employment Programmes (PEPs) are deemed to be a viable strategy for achieving livelihood outcomes, and they further observed that “improving well-being involves diverse factors such as minimising the vulnerability of impoverished households” [20, p. 25, 11]. The Expanded Public Works Programme (EPWP) is an integral component of the Sustainable Livelihood Framework and is implemented by the government to alleviate poverty and joblessness. This initiative generates employment opportunities, transfers income, and provides the workers with the means to construct or enhance their dwellings. This constitutes an important physical asset acquired through the Programme, which enhances the means of subsistence and livelihood outcomes of the EPWP participants. Although the majority (70%) of the interviewees expended a significant proportion of their earnings on constructing and remodelling their homes, acquiring household appliances, furniture, and other personal effects, aside from food, was another key area that all the participants responded positively to, regardless of their age group. Some of the interviewees reported:

*Previously, I never had my own bed, but through the earnings I received from the Programme, I was able to purchase a bed for myself, as well as a radio and electric kettle for my family. I also bought a fridge and bed for my family. [P10]*

The majority of young people, accounting for over 80%, use a portion of their income to purchase cell phones for personal use, a phenomenon that is not new. It has been previously noted that cellphone technology is important for bringing people together through its ability to facilitate communication and interaction, including calling, texting, and internet connectivity via social media and other platforms. The use of cellphones and smartphones is particularly prevalent among individuals aged 15 to 25 [21]. Furthermore, these devices are essential tools for communication in today's society, with participants in the study revealing that they are used to submit job applications and CVs, communicate with potential clients, and engage with social networks. One participant noted that cell phones a crucial point of contact for clients and potential clients. It is, therefore not surprising that both young and old individuals working in the EPWP program are also investing in these devices for various reasons.

### **3.4. Social Capital: Improved Social Networks and Support**

Social capital refers to assets that extend beyond natural or biological features like water and land, according to [22]. These assets encompass social components, including family, social networks, participation, and human capital, such as knowledge and talents. All participants interviewed credited the Programme with enhancing their social networks and support, which manifested in different forms. For instance, 44% reported establishing social clubs, while the remaining 56% built stronger bonds and relationships with colleagues. Another participant said,

*I have started paying my lobola [bride price] for my fiancée I met in the Programme. [P11]*

As a result of the programme, participants could interact as humans, share personal experiences and ideas, and discuss various topics of interest, including household matters, men's issues, social events, country affairs, and health issues related to the COVID-19



pandemic. One participant expressed appreciation for the chance to connect with like-minded individuals and engage in intellectually stimulating conversations.

The research participants in the Programme have established their own community and support systems to enhance their social well-being. These social networks assist them in dealing with life shocks and stresses, providing them with a sense of belonging and validation. As noted by [23] human beings by nature crave connection and the feeling of being accepted and cared for. Furthermore, studies have shown that social networks can protect their members against mental and physical health issues, leading to increased happiness and longer lifespans. The results of this study support the notion that social capital is a key sustainable livelihood asset in enhancing the well-being of EPWP participants. The study findings also affirm previous research [23] that social networks can act as shock absorbers for their members during times of distress and anxiety, contributing to their overall well-being and livelihoods.

Further, the study noted the programme's built-in shock absorbers when it comes to the vulnerability context of the project participants, especially, since the study was conducted during the period of covid-19, as participants indicated that they received their stipend during lock-down period. As part of the transforming structures, government issued a directive that the workers of the EPWP be paid during lock-down period to improve their livelihood security and minimise the negative effects of the vulnerability context, in a short to medium term. However, the long term effect of this decision and its sustainability was questioned by many from the policy perspective.

#### *Vulnerability context*

The COVID-19 pandemic posed challenges of an unprecedented nature, resulting in the temporary cessation of numerous EPWP projects and the suspension of income due to lockdown regulations. This pandemic has highlighted the weakness of the EPWP initiative against unforeseen disruptions, such as extreme climatic conditions, societal unrest, and pandemics. Such events can disrupt the routine operations of public works programs, rendering it arduous to generate employment opportunities during these times of crisis. Therefore, it is crucial to establish effective measures that enable individuals to cope with unexpected events when the EPWP and other public work programs cannot provide jobs. These measures may comprise social safety nets, emergency funds, skills development programs, and alternative income-generating opportunities. The implementation of these measures by governments can aid in alleviating the detrimental impacts of unforeseen shocks on the employment and income support of those who rely on public works programs.

#### *Transforming structures and processes.*

Appropriate transforming structures and processes can maximise their impact of EPWPs on the livelihoods of the participating beneficiaries. Government, especially local government, can provide essential support to beneficiaries of public works programs by enhancing essential services and infrastructure. For example, investing in reliable and efficient transport facilities can improve beneficiaries' access to job opportunities and enable them to commute with ease. Land reform initiatives can also play a significant role by providing secure land tenure and enabling EPWP beneficiaries to engage in agricultural activities for sustenance and income generation. Furthermore, by providing clean water sources and proper sanitation facilities, governments can enhance the overall well-being and health of the beneficiaries. Access to education and healthcare services is equally vital, as it

can help break the cycle of poverty and provide opportunities for skill development and upward mobility. Beneficiaries with access to reliable public services and infrastructure can better allocate their meagre funds from the EPWP towards savings and investments, rather than solely relying on meeting their day-to-day basic needs. This progressive approach can ultimately help lift people out of poverty and create a pathway towards sustainable livelihoods.

#### **4. Conclusions**

In conclusion, this investigation aimed to assess the EPWP's contribution to the livelihoods of its participants. Employing a qualitative research approach, with the Sustainable Livelihoods Framework as the theoretical backdrop, the study revealed that the EPWP positively impacted the workers, who were the principal beneficiaries of the Programme. This was manifested in the form of income transfer, through wages earned from the Programme, and the enhancement of their skills, which they leveraged within their communities to obtain local employment and augment their income. Moreover, the research showed that the workers were able to improve their food security and acquire critical assets for themselves and their families, such as constructing houses and purchasing useful household appliances, thanks to the wages received through the EPWP. The programme was also shown to enhance the participants' social networks, and some even established social and savings clubs, which provided support during difficult times. These are all crucial sustainable livelihood assets that the EPWP was able to foster through its initiatives. Despite the positive outcomes and impact of the programme on the participants, the study also revealed certain challenges, particularly with respect to the duration of the jobs created by the programme, some of the projects had shorter duration even though you sometimes get re-employed but it is always in a new contract with new terms. Another challenge raised by some participants was that they are paid less than the minimum stipulated wage rate and are forced to take the job because if they are not accepted, one will remain unemployed.

This research has shown that public works programs can face vulnerabilities during unexpected events, such as the COVID-19 pandemic. It is essential to address these vulnerabilities and support the programs effectively, as it will ensure maximum impact on the livelihoods of beneficiaries.

Transforming structures, including local and other levels of government, play a crucial role in supporting public works programs. Governments, particularly at the local level, can provide support by improving essential services and infrastructure. This can include investing in transport facilities, land reform, water and sanitation, and other public services. By addressing these transforming structures, beneficiaries can allocate funds from the EPWP towards saving and progressively lifting themselves out of poverty.

In conclusion, this study presents several propositions and suggestions to confront the challenges encountered by the Expanded Public Works Programme (EPWP) and to augment its present accomplishments.

- Establishing a comprehensive national policy for EPWP with accompanying enforcement mechanisms is imperative. This policy will address non-compliance issues and further enhance the program's effectiveness.
- To address the issue of high youth unemployment rates, it is recommended that existing programs within EPWP be restructured and new initiatives specifically designed to improve youth participation and create job opportunities for young

individuals be introduced.

- The development of capacity for effective coordination and implementation of EPWP is crucial to ensure that the program can expand its job creation endeavours, especially during the period of high unemployment rates in the country.
- It is suggested that consideration be given to implementing a dedicated payment system for EPWP participants. This system would streamline internal reporting processes within departments, eliminating delays in disbursing beneficiary stipends and ensuring timely payment.
- By investing in infrastructure, services, and processes, governments can enhance the impact of these programs and create a conducive environment for beneficiaries to improve their livelihoods and escape poverty.
- Incorporate, with EPWPs, measures to mitigate the negative impacts of unexpected shocks on the livelihoods of individuals who depend on public works programs for employment and income support.

Overall, the study makes a theoretical contribution to the understanding of public works programs as mechanisms for poverty alleviation, livelihood enhancement, and resilience-building, while also providing practical policy recommendations for program improvement and adaptation to changing socio-economic contexts.

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## MODERN CHALLENGES TO THE MANAGEMENT OF INNOVATION AND COMPETITIVENESS OF ORGANIZATIONS IN THE FIELD OF MEDICAL SERVICES

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**Abstract.** The latest realities of development of the medical services sector have highlighted the effectiveness of innovation management as an important factor in the competitiveness of a medical organization. The authors hypothesized that at this stage certain challenges have emerged that have identified a number of problems for managing innovation in the field of medical services. So, they create threats to the competitiveness of organizations that cannot find reliable approaches to managing innovation in real-world conditions. A study of the flow of innovations in the medical field in recent years has confirmed this situation. The main challenges and problems of innovation management at the present stage were formulated at the work and were put forward proposals for their possible solutions.

**Keywords:** *innovation management, management of innovations, competitiveness of medical organizations.*

**Rezumat.** Cele mai recente realități de dezvoltare a sectorului serviciilor medicale au evidențiat eficacitatea managementului inovației ca un factor important în competitivitatea unei organizații medicale. Autorii au emis ipoteza că în acest stadiu au apărut anumite provocări care au identificat o serie de probleme pentru gestionarea inovației în domeniul serviciilor medicale. Deci, ele creează amenințări la adresa competitivității organizațiilor care nu pot găsi abordări fiabile pentru gestionarea inovației în condiții reale. Un studiu al fluxului de inovații în domeniul medical din ultimii ani a confirmat această situație. Principalele provocări și probleme ale managementului inovării în stadiul actual au fost formulate la locul de muncă și au fost prezentate propuneri pentru posibilele soluții.

**Cuvinte cheie:** *managementul inovației, managementul inovațiilor, competitivitatea organizațiilor medicale.*

### 1. Introduction

The relevance of management of innovations in the field of medical services is due to the fact that all over the world the requirements for public health systems are constantly being updated. Developed countries face the challenge of providing a wide range of health

services to an aging population with changing health care needs. At the same time, countries with developing health systems are looking for ways and means to ensure maximum access to healthcare for their populations. To solve all these problems, innovative thinking and innovation management based on it are necessary. According to J. Barlow [1], innovations are both the cause and the cure for many health problems - the industry needs them, but they are difficult to manage, in addition, the introduction of new technologies can lead to increased costs.

This aspect, successful innovation management, has acquired particular relevance at the present stage after the avalanche-like appearance and introduction of innovations during the pandemic. Moreover, many innovations are not medical, but are related, for example, to the organization and information support of medical institutions. The period 2020-2023 has taken shape into an absolutely new stage in the development of innovation management, which has not yet been sufficiently understood and highlighted by researchers. The main works on this topic were presented in the period up to 2020.

Accordingly, it was hypothesized that at this stage certain challenges have formed, which have identified a number of problems for innovation management in the field of medical services and pose threats to the competitiveness of organizations that will not be able to find the right approaches to innovation management in real conditions. The study of this aspect, taking into account the latest publications, made it possible to clearly identify, systematize and characterize the challenges and problems of innovation management in the field of medical services at the present stage.

## **2. Materials and Methods**

Methods of scientific research - analysis, synthesis, observation, hypothesis formulation, hypothesis verification, etc.

## **3. Results**

The main problems of innovation management at the present stage of development are identified. Based on the formulated extended classification of innovations in the medical industry, the problems are discussed, the solution of which will ensure an increase in the competitiveness of medical institutions.

### **3.1 The evolution of types of innovations in the field of medical services**

Effective understanding and management of healthcare innovations is important both from the point of view of governments responsible for health policy formation, as well as organizations providing medical services and meeting competing requirements, as well as from the point of view of partner industries that supply medicines, tools, devices and other technologies. The concept of innovation used is based primarily on the definition of researchers A.V. Surin and O.P. Molchanova, formulated taking into account the terminology of international standards, according to which "innovation is the result of the implementation of new ideas and knowledge in order to use them in practice to meet certain consumer needs" [2, p. 9].

Researchers at MSU [3, pp. 222-223] have interpreted the concept of "innovations in healthcare". Innovations in the medical industry are defined as "the promotion of new ideas, concepts, services, processes and products aimed at qualitative changes in diagnosis, treatment, education and training, social support, as well as disease prevention and research in this area with long-term goals of improving quality, safety, effectiveness and efficiency."

According to J. Barlow [1], innovation is always associated with the successful commercial application of knowledge. This knowledge can be created locally, or it can be new to the whole world. However, the import of technology new to the market from abroad or the introduction of a new organizational model in a company that mimics existing management models of companies with established reputations are also considered innovations.

Researcher Flessa S. from the National Center for Biotechnology Information, USA, emphasizes that innovation is not the same as discovery or invention, since "the innovation as the more comprehensive process starting with the generation of ideas and ending with the successful acceptance by potential users (adoption)" [4].

In recent decades, the typology of innovation in health services has gradually evolved. Recent years have significantly accelerated this process. Thus, in accordance with the classification of the United Nations Cultural and Educational Organization (UNESCO), an innovative medical service may involve the use of various types of innovations, which are classified into four groups:

- innovations in the creation of products and services (grocery);
- process (technological) innovations;
- marketing innovations;
- organizational (organizational and managerial) innovations associated with the introduction of new methods into the work of institutions, building internal and external relations in the structure of activities [5].

From the perspective of innovation management, T. A. Siburina identifies the following types of innovations in the field of healthcare [6]:

**1. medical technological innovations** related to new methods (methods) and/or protocols for prevention, diagnosis and treatment using known drugs/instruments/equipment or their new combinations;

**2. organizational innovations**, including effective restructuring of the health care system, improvement of labor organization, as well as improvement of the organizational structure of management.

**3. economic innovations** that implement new methods of planning, financing, stimulating and analyzing the economic and financial activities of medical institutions;

**4. information technology innovations** aimed at automating the processes of collecting, processing, and analyzing information flows in the industry or medical institution;

**5. medical-pharmaceutical, medical-technical innovations**, as a kind of medical technological innovations, they involve the use of new medicines, tools, devices, technical systems that are competitive in price and medical efficiency.

E. Rozhkova adds marketing innovations to this classification, taking into account the UNESCO classification, which include an unusual place of service provision: remote doctor consultations; home health care; increased comfort of stay in a medical institution; inclusion of additional services in the medical service [5]. According to the authors, marketing innovations in the field of medical services can also include research of the target audience before introducing an innovation and the use of various methods for promoting innovations, including PR activities.

Researcher S. Ellerbeck, a representative of the Center for Health and Healthcare, summarizes information on five global innovations in medicine in the last decade that have revolutionary implications for global health. These include - Artificial Intelligence, 3D

printing, Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) gene-editing technology can potentially transform how diseases are treated, the VR and AR (augmented reality) market is booming worldwide, and both technologies are being used increasingly in healthcare applications. Smart bandage that uses sensors to monitor wound healing [7].

In turn, researcher S. Flessa proposes to classify innovations in medical services by levels - micro-level (at the level of interaction between doctor and patient), meso-level (interaction of medical institutions with various partner organizations, for example, manufacturers of equipment or information support) and mega-level (innovations, globally influencing the medicine) [4].

In the healthcare system, the central link, according to E. V. Rozhkova, should be considered innovations in the field of medical services. On the other hand, not every innovative medical service involves the use of high technology. We can talk, for example, about increased comfort in the provision of medical services - in this case, innovation will be achieved through organizational and marketing innovations [5].

Based on these classifications, we can conclude that innovations in the field of medical services is a broader concept than purely medical innovation, which is important for managing innovation activities in order to increase the competitiveness of medical institutions.

Based on these classifications, we can conclude that innovations in the field of medical services is a broader concept than purely medical innovation, which is important for managing innovation activities in order to increase the competitiveness of medical institutions.

### **3.2 Implementation of innovations as an important factor of competitiveness**

In accordance with laws and global trends in the development of the medical services market, competition among medical institutions strictly moves from the area of economic or pricing policy to the area of quality of services provided, their uniqueness, conditions of provision, and service support [8].

In countries in the post-Soviet space, with a monopoly state healthcare system, the problem of competition between medical institutions was practically absent. With the transition to a market economy, the emergence of private medical institutions, as well as the development of legislative support for paid medicine, the problem of competition between institutions providing medical services emerged, and in recent decades it has already become quite acute [6]. Although in general the concepts of competition and competitiveness of enterprises and organizations have been considered by scientists for more than two centuries, according to researchers [8, p.12], the problems of competition in medical institutions began to be actively studied only at the beginning of the 21<sup>st</sup> century.

The competitiveness of the organization, according to Yu.B. Vinslavand V.V. Pekhtereva [9, p.36] and a number of others, is defined as "a property consisting in the ability to withstand competition and compete; produce products with consumer and price parameters that satisfy market consumers and are not inferior to market analogues of other organizations." In turn, A.V. Volnukhin clarifies that "the competitiveness of a medical organization is the ability to provide medical services that are not inferior in price and non-price parameters to other medical organizations occupying the same market segment" [8, p.15].



From the point of view of E.Yu. Kuznetsova, innovation is becoming one of the key factors in ensuring the competitiveness of enterprises and the country's economy as a whole. In other words, innovation is a powerful competitive tool that gives a chance to get ahead of competitors through the development of effective technologies or the release of new products [10].

For medical institutions in market conditions, stable positions in both price and non-price competition are important, one of the competitive advantages of which is the use of innovation. To date, according to A.V. Volnukhin, targeted research on the formation and improvement of the competitiveness of medical organizations through non-price mechanisms is not enough [8, p.12].

There are not enough studies on improving the competitiveness of medical organizations in the medical services market. They are either carried out within the framework of economic aspects and are devoted to marketing and economic issues, or the emphasis is shifted to the area of price competition and material resource management. The following have been poorly studied: 1) aspects of innovation management, human resources and other types of non-price competition, 2) ways to increase the competitiveness of medical institutions, 3) development of mechanisms for increasing competitive advantages [8, p.14].

According to V.Yu. Pashkus and other researchers, after the pandemic, not only the role of innovation in the activities of medical institutions has increased many times, but also the ability of medical organizations to implement innovative developments, effectively apply them and, based on them, improve the level of quality of treatment. Activity in innovation significantly increases the competitive position of a medical institution. The researchers emphasize that the innovation factor must be added to the list of criteria for the competitiveness of organizations providing medical services [11].

However, this criterion is not singled out as a separate one, but is included in the Uniqueness criterion and is formulated as "The uniqueness of the resource potential of a medical institution and the profile of activities it implements, the level of innovative potential and the ability to carry out innovative activities," which, in the authors' opinion, does not fully reflect the role of innovative activity in modern medical services sector.

However, in the work of V.Yu. Pashkus and others emphasize that during the 2020-2021 pandemic. The public has clearly observed that the greatest success is achieved by those medical organizations that actively implement innovations of various types - from medical to information. Therefore, the focus of perception of competitiveness in the field of medical services has now clearly shifted towards the active implementation of innovations [11].

### **3.3 Features of the current stage of development of innovation management in the medical industry**

2020 was marked by a number of shocking events that modified not only processes in the medical field, but also the business processes of many companies and directly affected the lives of ordinary people. To date, analysts from various companies have made attempts to summarize innovations in various socio-economic areas, including in the medical industry, which literally poured in during the pandemic crisis under the pressure of prevailing external circumstances [12- 15]. Based on these studies and taking into account the classifications presented above, the following groups of innovations in the medical industry were identified by authors, the emergence of which is typical for the period 2020-2022, Table 1.

Table 1

**Characteristics of innovations in medical services in the period 2020-2022**

| <b>Innovation Group</b>                           | <b>Brief description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Global Innovations                                | <b>5 types</b> including:<br>Artificial Intelligence, 3D printing, Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) gene-editing technology, VR and AR (augmented reality). Smart bandage that uses sensors to monitor wound healing.                                                                                                                                                                                                                           |
| Technological innovations                         | <b>9 types</b> including:<br>COVID-19 treatment protocols; digital service News-2; AI-based pneumonia calculators; system for preventing dangerous proximity to COVID-19 carriers; mobile monitoring of COVID-19 outbreaks; disinfection terminals, tunnels and closed-type disinfectors; disinfection robots; rapid testing in public places.                                                                                                                                    |
| Organizational Innovations                        | <b>9 types</b> including:<br>unified laboratory service; CT centers for diagnosing COVID-19; technologies for deploying reserve hospitals; technologies for creating telemedicine centers; telemedicine; video conferencing services; video analytics and institutional monitoring systems; VR systems for employee training; electronic queue management.                                                                                                                        |
| Economic Innovation                               | <b>1 type</b> - electronic document management systems                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Information technology innovations                | <b>16 types</b> including:<br>a unified digital healthcare platform; digital vaccination; recognition of people without protective masks; contactless interactive interfaces; video consultation services; virtual reality services; building communications between employees; neural networks; IVR systems; smart speakers; service and interface chat bots; interactive assistants; mobile audit; recommender systems; Digitalization (digitalization) of sales in pharmacies. |
| Product innovation - pharmaceutical and technical | <b>6 types</b> including:<br>new types of anti-Covid vaccines; mRNA technologies for creating vaccines; modernization of protective masks; contactless parcel terminals; 3D printing of personal protective equipment; antibacterial protective films.                                                                                                                                                                                                                            |
| Marketing Innovation                              | <b>5 types</b> including:<br>target audience research; research; PEST and SWOT analyses; promotion of services on social networks; creating communities on the Internet.                                                                                                                                                                                                                                                                                                          |

*Source: Developed by authors based on [12-15].*

These data from Table 1 confirm the hypothesis about an avalanche of innovations, namely more than 50 areas that have poured into the activities of medical organizations in recent years, as a result of which the industry urgently needs effective management of the processes of their implementation in everyday practice.

### 3.4 Challenges and problems of innovation management at the present stage

In the post-Covid period, science still lacks a sufficient number of detailed studies that reveal effective mechanisms for managing innovation in medical institutions in the context of the large-scale emergence of innovations of various types, which negatively affects the quality of decisions made and medical services provided.

According to experts, effective algorithms and tools for managing innovation in medical institutions in conditions of limited resources, inflationary processes and risks have not been developed on a scientific and methodological basis. Also, the problems of self-organization of control systems of individual medical institutions have not been sufficiently studied. At the present stage, it is necessary to search for new approaches to organizing and managing innovation in organizations and institutions of the healthcare system. On the one hand, the expansion of the global health architecture has brought significant benefits in recent years, with promising new opportunities emerging for countries in the form of innovative health and digital technology products and approaches that can change the way health data is collected and used [16]. But on the other hand, a whole series of challenges have emerged that have given rise to problems of innovation management. Authors made an attempt to classify modern challenges to innovation management, emerging problems and their possible solutions, Table 2.

Table 2

**Modern challenges and problems of innovation management  
and possible ways to solve them**

| Challenges            | Problems                                                                                                                                                                                                     | Possible solutions                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Informational</b>  | Lack of information about innovations.<br>Insufficient information about management tools for innovation management.                                                                                         | Formation of a unified information system about innovations.<br>Training managers in innovation management.                                           |
| <b>Organizational</b> | Insufficient elaboration of mechanisms/algorithms for the innovation management process in a medical institution.<br>Lack of time for managers to independently manage innovations in a high-quality manner. | Development and proposal of mechanisms/algorithms for managing innovations in medical institutions.<br>Organizing time management training for staff. |
| <b>Personnel</b>      | Lack of developed innovation management skills.                                                                                                                                                              | Organization of special trainings for personnel.                                                                                                      |
| <b>Marketing</b>      | Lack of sufficient knowledge in the field of marketing.<br>Lack of marketing skills.                                                                                                                         | Inviting external consultants or training in-house specialists                                                                                        |

*Source: Developed by authors.*

For all these reasons the authors consider that the main challenges to innovation management in the medical services industry are aimed at the following areas: information,

organizational, personnel and marketing. When trying to effectively manage innovation, healthcare organizations will definitely face such problems:

- insufficient information about innovations;
- insufficient development of mechanisms/algorithms for the innovation management process in a medical institution;
- insufficient information about managerial tools for managing innovation;
- lack of developed innovation management skills;
- lack of time for managers to independently manage innovations in a high-quality manner.

In addition to problems directly related to innovation management, the present time is characterized by the emergence of other management problems that indirectly also affect the effectiveness of innovation management.

According to expert practitioners, in the current world of VUCA (volatility, uncertainty, complexity and ambiguity - instability, uncertainty, complexity and ambiguity), known and familiar management models no longer work.

Reasons for this situation:

- ultra-high rates of change,
- digital transformations,
- new patterns of employee behavior,
- involvement in the work of new generations of employees, significantly different from previous generations [17].

Experts A. Kulik and S. Sychev note that the current situation requires managers to seriously rethink possible approaches to management, since new universal solutions are only just being formed, and the old ones are no longer suitable [17].

The following problems are already beginning to appear in the work of modern managers.

1. Features of working with subordinates from generations Y (millennials) and Z (zoomers). After all, by 2025 they will make up to 70 % of the labor force. At the same time, representatives of these generations have completely different expectations from a career, profession, leader and their own set of values, different from the mentality of leaders.

Therefore, a particularly important aspect is the manager's ability to build constructive communications with employees belonging to these generations. After all, the effectiveness of implementing management decisions, including the introduction of innovations, will subsequently depend on their efforts.

An additional difficulty is establishing communications between representatives of these generations, since their mentalities are also different. In particular, it has been found that managers belonging to the millennial generation often ignore the potential of zoomers, their tendency to experiment, do not devote enough time to explanations and feedback, and impose a rigid style of relationships.

2. The difficulty of managing remote teams and hybrid forms of work. This problem appeared during the pandemic crisis and has remained until now, as this nature of work has developed into a current trend in personnel work. In this situation, the manager needs to ensure constant effective communications between teams, as well as maintain high employee engagement and productivity, despite the remote location. Additionally, there is the problem of a lack of personal communication, which becomes significant for many employees and is aggravated by the lack of skills in written communication, argumentation

and presentation of thoughts and facts. In itself, this method of communication can be innovative for many team members.

3. The problem of constant time pressure for making management decisions. Experts emphasize that it is now impossible to solve one problem for months. The time for making management decisions is often reduced to several days, or even hours. This is caused by the VUCA characteristics that have entered our reality. To remain competitive, businesses are forced to constantly experiment, transform operating models and product lines, and introduce innovations [17].

All these problems need to be resolved in the coming years, because despite progress in many areas of health, according to WHO experts, most tasks related to public health are not being achieved at an insufficient pace, and the pandemic has made progress even more difficult. This explains the need to accelerate the mass adoption of innovations. Through discussion, the authors proposed possible ways to solve the problems that arose, Table 2. As well as according to researchers, the healthcare system of each country needs to revise the criteria for the competitiveness of medical institutions, including taking into account innovative activities [11].

In the field of management, it is assumed that the classic "superior-subordinate" chain should be replaced by a model of distributed, self-organizing teams of employees united by a common goal, vision and values. The leader in such an organization inspires by personal example, puts forward ambitious goals, and creates an environment for the free circulation of opinions and the promotion of ideas. Employees of the organization feel personally responsible for the result and are inspired by a common goal. It is these organizations that will be able to demonstrate high speed of adaptability to changes, innovation and competitiveness in difficult market conditions.

The avalanche-like flow of innovation at the present stage, incomparable quantitatively and qualitatively with previous periods, necessitates the formation of an effective algorithm and tools for managing innovation in medical institutions.

#### **4. Conclusions**

The authors hypothesize that recent decades have created a number of significant challenges to the development of the healthcare sector and medical services. Issues of competitiveness of medical organizations and institutions in the emerging industry market have come to the fore. Innovative activity - offering innovations and effectively managing them - is becoming an important competitive advantage of medical institutions.

The latest stage in the development of medicine - the pandemic crisis of 2020 literally brought down an avalanche of innovations in the global healthcare system. The entire world of medicine is faced with the urgent problem of successful and effective innovation management. Even in the post-Covid period, the stable position of a medical institution depends on this. Taking into account the fact that scientific developments in this aspect - innovation management in the field of medical services - were presented mainly before the pandemic, the current circumstances in the global medical system create an urgent need for the formation and justification of an effective algorithm and tools for managing innovation in medical institutions.

The authors specify the main challenges and problems of the current stage of development of innovation management. Ways to solve emerging problems are proposed through discussion.

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## THE EFFECT OF PANDEMICS AND EPIDEMICS ON SOCIO-ECONOMIC RIGHTS AND SUSTAINABLE DEVELOPMENT: LESSONS AND RECOMMENDATIONS FOR AFRICA

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**Abstract.** The recent COVID-19 pandemic highlighted the importance of socio-economic rights and sustainable development not only in Africa but globally. This article discusses the relationship between socio-economic rights and sustainable development. This is followed by a discussion on the impact of pandemics and epidemics on socio-economic rights and the significant effect they can have on the realisation and enjoyment of such rights. Focusing on Africa, the discussion turns to the impact of pandemics and epidemics on sustainable development before looking at the lessons learned from such pandemics and epidemics. Because the recommendations flow from the lessons, these are discussed together. The main recommendation is that a human rights-based approach should be adopted not only in sustainable development but also in any post-pandemic recovery efforts and programmes. Other recommendations include building resilient health systems, addressing the root causes of poverty and inequality, prioritising investment in digital technologies and improving social protection systems, among others.

**Keywords:** *Socio-economic rights, sustainable development, pandemics, epidemics, Africa, lessons, recommendations.*

**Rezumat.** Pandemia recentă de COVID-19 a evidențiat importanța drepturilor socio-economice și a dezvoltării durabile nu numai în Africa, dar și la nivel global. Acest articol analizează relația dintre drepturile socio-economice și dezvoltarea durabilă, urmată de o discuție privind impactul pandemiilor și epidemiilor asupra drepturilor socio-economice, precum și efectul semnificativ pe care acestea îl pot avea asupra realizării și exercitării acestor drepturi. Concentrându-se pe Africa, discuția se îndreaptă către impactul pandemiilor și epidemiilor asupra dezvoltării durabile înainte de a analiza lecțiile învățate din astfel de pandemii și epidemii. Deoarece recomandările decurg din lecții, acestea sunt discutate împreună. Principala recomandare este că o abordare bazată pe drepturile omului să fie adoptată nu numai în dezvoltarea durabilă, ci și în orice eforturi și programe de redresare post-pandemie. Alte recomandări includ construirea unor sisteme de sănătate reziliente,



abordarea cauzelor fundamentale ale sărăciei și inegalității, acordarea de prioritate investițiilor în tehnologii digitale și îmbunătățirea sistemelor de protecție socială.

**Cuvinte cheie:** *Drepturi socio-economice, dezvoltare durabilă, pandemii, epidemii, Africa, lecții, recomandări.*

## 1. Introduction

Pandemics and epidemics, throughout history, have disrupted societies, economies, and livelihoods, reshaping the very fabric of human existence. Paradoxically, they have also often “cleared the way for innovations and advances in sciences (including medicine and public health), economy, and political systems” [1]. Although the recent COVID-19 pandemic was the most devastating, other pandemics and epidemics have had a significant impact on Africa throughout history. The HIV/AIDS epidemic, for example, emerged in the late 20<sup>th</sup> century and spread rapidly across the continent, particularly in sub-Saharan Africa. Millions of people were infected with HIV, and millions more have died from AIDS-related illnesses. The epidemic has had far-reaching social, economic, and health consequences for African countries. Influenza pandemics have periodically occurred in Africa, although they have often received less attention compared to other regions. The most notable influenza pandemic was the 1918 Spanish flu pandemic, which also affected Africa, albeit to varying degrees in different regions. Subsequent influenza pandemics, such as the Asian flu in 1957 and the H1N1 pandemic in 2009, also had impacts on the continent. Several cholera epidemics and Ebola outbreaks have periodically occurred in several parts of Africa causing significant loss of life and economic disruption.

The recent COVID-19 pandemic exposed the vulnerabilities of African societies and had a significant impact on the socio-economic development of African countries. It disrupted economies, disorganised education systems and undermined health systems. African countries were particularly hard hit due to their weak health systems and limited resources. The pandemic also exposed the deep-rooted inequalities in African societies, particularly with regards to access to basic social services such as healthcare, education, and housing. These were worsened by social and economic challenges that were already prevalent on the continent.

As the world grapples with the aftermath of the COVID-19 pandemic, it becomes increasingly evident that the impact extends beyond immediate health outcomes, profoundly affecting socio-economic rights and sustainable development goals. In the African context, where socio-economic disparities are already pronounced, the consequences of pandemics and epidemics are particularly acute. The intersectionality of health vulnerabilities, economic fragility, and social inequalities creates a complex landscape for understanding and addressing the aftermath of pandemics and epidemics. Consequently, there arises an urgent need to examine how pandemics and epidemics disrupt progress towards the realisation of socio-economic rights and the achievement of sustainable development in Africa, and to identify lessons learned and recommendations for building resilience in the face of future crises.

## 2. Materials and Methods

This article explores the intricate dynamics between pandemics and epidemics, socio-economic rights, and sustainable development, with a focus on Africa. It explores the lessons that should have been learned from past pandemics and epidemics particularly with regards to socio-economic rights and sustainable development. The article argues that pandemics

and epidemics provide an opportunity for African governments to re-examine the important relationship between socio-economic rights and sustainable development and to prioritize the promotion of socio-economic rights and sustainable development in their policies and programmes. The article also argues that pandemics and epidemics provide an opportunity for African countries to address the deep-rooted inequalities in their societies and to invest in the promotion of socio-economic rights and sustainable development. African countries can use the lessons learned from pandemics and epidemics to strengthen their health systems, education systems, and social protection programmes, among other things.

To achieve its objectives, the article uses, firstly, a doctrinal research methodology. This is a “methodology that primarily involves analysing, interpreting, and synthesising sources to answer legal questions or develop legal theories” [2]. Doctrinal research is regarded as a conventional research approach that occurs in a library to locate authoritative decisions, applicable legislation, and any other secondary sources of information [3]. Related to the doctrinal methodology, the article mainly employs desktop and library-based research. This involves obtaining information from both primary and secondary sources. In this article, primary sources included international instruments, national laws, and case law. Secondary resources included books, articles, and online scholarly publications.

Drawing on literature from a range of disciplines, this article begins with a discussion on the relationship between socio-economic rights and sustainable development. This is followed by a discussion on the impact of pandemics and epidemics on socio-economic rights and the significant effect they can have on the realisation and enjoyment of such rights in Africa. The impact of pandemics and epidemics on sustainable development in Africa is also discussed before focusing on the lessons to be learned from such pandemics and epidemics. Because the recommendations flow from the lessons, these are discussed together.

### **3. Results and Discussion**

#### **3.1 Relationship between Socio-economic Rights and Sustainable Development**

Socio-economic rights have been broadly defined as “rights which entitle people to the material goods necessary for them to live in conditions consistent with human dignity and reach their full potential” [4]. In other words, they are basic human rights that enable individuals to live with dignity and access basic social services. As such, socio-economic rights encompass a broad range of rights, including the rights to health, education, sufficient food and water, adequate housing, and social security. In addition to rights enabling access to basic social services, socio-economic rights also include the right to a clean and healthy environment, rights dealing with labour relations, property rights and the right to development. Because of their nature, these rights “have important social and economic dimensions as they reflect areas of basic needs or delivery of particular goods and services” [5].

Sustainable development, on the other hand, has been broadly defined as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” [6]. Several interpretations have been ascribed to this concept, but at the core of these interpretations is “an approach to development that looks to balance different, and often competing, needs against an awareness of the environmental, social and economic limitations we face as a society” [7]. What this means is that sustainable development entails the ideal that humans should sustain themselves by meeting their basic needs, while also ensuring that future generations will be able to do the same. In other words, it is an approach to organizing society in a way that

allows it to endure for a long time without diminishing the resources available to future generations. Ensuring the conservation of the environment and natural resources, alongside fostering social and economic equity, is imperative for achieving sustainable development.

There is a strong mutually reinforcing relationship between socio-economic rights and sustainable development. Sustainable development can help to promote the realization of socio-economic rights by ensuring that economic, social, and environmental policies are designed in a way that promotes equitable access to resources and services, and that takes into account the needs of vulnerable and marginalized groups. For example, sustainable development policies may prioritize investment in public infrastructure, such as public transportation, that makes it easier for people to access jobs, education, and healthcare.

Socio-economic rights, on the other hand, are fundamental to achieving sustainable development, as they ensure that individuals and communities have access to the basic resources and services necessary for a decent standard of living. Access to education, healthcare, housing, and social security, for example, can help to reduce poverty and inequality, promote social cohesion, and improve overall well-being. These are all critical elements of sustainable development.

The relationship between socio-economic rights and sustainable development is also clearly reflected through the Sustainable Development Goals (SDGs) [8]. Achieving SDGs requires a certain level of realisation of socio-economic rights. Conversely, realising socio-economic rights requires a certain level of achievement of SDGs. Most human basic needs and resources (e.g., food, water, healthcare, housing) as well as an environment that is not harmful to people's health or well-being, are key to the achievement of SDGs. Many of the SDGs and associated targets aim to contribute to the enjoyment and realisation of socio-economic rights. They have the potential to raise support for the realisation of socio-economic rights, as much as socio-economic rights themselves can increase support for the SDGs. Accordingly, both the SDGs and socio-economic rights should be seen as complementary and mutually reinforcing.

A closer look at the Sustainable Development Goals shows that at least six of the seventeen SDGs speak directly to socio-economic rights. These include SDG1 which aims "to eliminate severe poverty and reduce inequality", SDG2 which aims to guarantee food security and foster sustainable agriculture, while SDG3 strives for universal access to healthcare services. Additionally, SDG4 aims for "inclusive and equitable quality education and the promotion of lifelong learning opportunities." SDG6 targets the "availability and sustainable management of water and sanitation for all." SDG8 seeks to "foster sustained, inclusive, and sustainable economic growth, along with full and productive employment, and decent work for everyone." Several other SDGs indirectly address socio-economic rights. These encompass SDG10's goal of "reducing income inequality and promoting social, economic, and political inclusion for all individuals"; SDG11's objective of ensuring access to affordable and safe housing and basic services, as well as promoting sustainable urbanization; and SDG16's aim to cultivate "peaceful and inclusive societies for sustainable development, ensure access to justice for all, and establish effective, accountable, and inclusive institutions across all levels."

Achieving these goals requires that socio-economic rights are protected and enjoyed by all people regardless of their socio-economic status, race, gender, or any other factor. SDGs serve as a roadmap for governments, international organizations, civil society, and other stakeholders to work towards ensuring that socio-economic rights are respected, protected, and fulfilled. Therefore, both socio-economic rights and sustainable development are critical

for the well-being and development of all people and all societies. It is in that context and against that background that the impact of pandemics and epidemics on the enjoyment/realisation of socio-economic rights in Africa is discussed, an aspect to which we now turn our attention.

### **3.2 Impact of pandemics on the Enjoyment/Realisation of Socio-economic Rights in Africa**

Although post-independence constitutions of some African countries such as Namibia and Ghana contained a few socioeconomic rights, such rights were generally not included in many African constitutions, until the Constitutional Court of South Africa interpreted the socio-economic provisions of the South African Constitution and held that such rights are “to some extent, justiciable [and] ...at the very minimum...can be negatively protected from improper invasion” (*First Certification Judgment* (also cited as *Ex parte Chairperson of the Constitutional Assembly: In re Certification of the Constitution of the Republic of South Africa*, 1996) 1996 (4) SA 744 (CC)). Today many African countries include socio-economic rights in their constitutions in some form or other. Whereas some countries include them as part of their constitutions or Bills of Rights, others only include them in their Directive Principles of State Policy which means they provide guidance to the government in formulating policies and programs, but they are not justiciable or enforceable through the courts.

At the best of times, socio-economic rights are difficult to realise. This is partly because the protection of these rights relies on resource availability. Consequently, certain African nations contend that guaranteeing these rights is pointless without the resources to ensure their protection [9]. The inevitable impact of a pandemic or an epidemic on the realisation of rights that were already inherently difficult to protect goes without saying.

It should be remembered that whereas many African countries provide for socio-economic rights in their constitutions in one form or another, the over-arching human rights instrument in Africa is the African Charter on Human and People’s Rights (African Charter). It provides for certain socio-economic rights and all African countries are party to it. These rights ought to be taken into account in discussing the impact of pandemics and epidemics.

Many African constitutions provide for the right to health. Under the African Charter it is contained in Article 16 which reads as follows:

- “1. Every individual shall have the right to enjoy the best attainable state of physical and mental health.
2. State Parties to the present Charter shall take the necessary measures to protect the health of their people and to ensure that they receive medical attention when they are sick.”

There is no doubt that pandemics and epidemics put immense pressure on healthcare systems across Africa. The constrained healthcare infrastructure, deficits in medical supplies and personnel, and insufficient funding put a strain on the countries’ ability to respond effectively put a strain on the countries’ ability to respond effectively. Many countries’ hospitals and clinics get overwhelmed, leading to a reduced capacity to provide essential health services. Non-pandemic healthcare, such as routine immunizations and maternal care, suffers as resources are diverted. Pandemics and epidemics also disproportionately affect vulnerable populations, including those with pre-existing health conditions and limited access to healthcare. For example, during the recent COVID-19 pandemic, one of the main consequences of restricted movement due to lockdowns was in regard to people requiring increased access to healthcare, such as expectant mothers and young children. Their health

care rights were inevitably violated. As will be seen further below, the impact of pandemics and epidemics on the right to health has a direct correlation with their impact on SDG3 (Good health & well-being).

The right to education is another socio-economic provided for by the African Charter (Article 17(1)) and found in constitutions of several African countries. This right is usually severely impacted by pandemics and epidemics. Indeed, “one of the most serious consequences of the COVID-19 pandemic was the disruption of children’s education worldwide with the closure of schools for public health reasons” [10]. Such closures and disruptions to education have a severe impact on children’s right to education. As countries implemented nationwide closures, leaving millions of students without access to learning opportunities, some efforts are usually made to provide remote learning. However, challenges such as limited internet connectivity, lack of devices, and inadequate infrastructure are likely to hinder effective education delivery. Students from disadvantaged backgrounds, including those in rural areas and low-income families, face additional barriers to accessing education during pandemics. This is obviously more prevalent in African countries than in their European, American and Asian counterparts due to the low levels of technology, poverty and lack of resources, among other factors.

Research conducted by Human Rights Watch during the recent COVID-19 pandemic showed that “school closures caused by the pandemic exacerbated previously existing inequalities, and that children who were already most at risk of being excluded from a quality education were most affected” [11]. The same research revealed that there were serious mental consequences and that girls were disproportionately negatively affected. Children residing in rural areas, those with disabilities, those living in severe poverty, and those in nations plagued by armed conflict and instability faced similar challenges. Rurality, poverty and armed conflict are important defining characteristics of several African countries. The impact of pandemics on the right to education in Africa is therefore all too obvious. The implications for sustainable development are also obvious, particularly for SDG4 whose aim is “to ensure inclusive and equitable quality education and promote lifelong learning opportunities” as was mentioned earlier.

The right to food is another relevant socio-economic right whose importance cannot be overemphasised. This is because the right to food “is essential for a dignified life and is vital for the realisation of many other rights, such as the rights to health and life” [12]. Indeed food “is important not just for survival, but also for the full development of one’s physical and mental capabilities” [12]. According to Dobbert, “...since physical survival of man has at all times been dependent on food, one would assume that this right should have been recognised as soon as man began to indulge in the luxury of philosophical thought and reflections on law” [13].

Constitutions of some African countries provide for the right to sufficient food. Although the African Charter does not expressly recognise the right to food, the African Commission on Human and People’s Rights has held in *Social and Economic Rights Action Centre and the Centre for Economic and Social Rights vs Nigeria (SERAC)* (Communication No. 155/96), that “the right to food is implicitly recognised in such provisions as the right to life, the right to health and the right to economic, social and cultural development, which are expressly recognised under the Charter” [14]. According to the Commission, the right to food “is inseparably linked to the dignity of human beings and is therefore essential for the

enjoyment and fulfilment of such other rights as health, education, work and political participation” [14].

The most significant impact of pandemics and epidemics on the right to food in Africa is the way they exacerbate food insecurity on the continent. Disruptions in agricultural production, supply chains, and trade restrictions contribute to reduced food availability and increased prices. Lockdown measures and economic downturns also lead to income losses and unemployment, further hindering people’s ability to access adequate food. Vulnerable populations, such as those living in poverty and informal settlements, are disproportionately affected, leading to an increase in malnutrition rates, especially among children. The implications for sustainable development are, again, quite obvious as there is a direct impact on the realisation of SDG2 which aims to ensure food security and promote sustainable agriculture.

Also significantly impacted by pandemics and epidemics is the right to housing. Pandemics highlight existing housing challenges in Africa, particularly in urban areas. Overcrowded living conditions, inadequate access to clean water and sanitation, and the lack of affordable housing make it difficult to implement effective public health measures. Informal settlements and slums, where a significant portion of the population resides, face heightened risks of disease transmission due to the lack of basic amenities and overcrowding. According to a UN report “the impact of COVID-19, including on housing, has been very unequally distributed and is reflecting pre-existing hierarchies and inequalities along racial, gender and other lines” [15]. The report goes on to say that forced evictions continued, if not accelerated, during the pandemic. The worst affected were “homeless persons, persons who live in informal settlements, migrant workers and many other vulnerable groups are facing worsening conditions, with a heightened risk of infection, community spread of the virus and mortality” [15].

There are significant implications of the impact of pandemics and epidemics on the right to housing in the context of sustainable development. This is because housing is “an important component of the 2030 Agenda for Sustainable Development and an essential driver for achieving many of the Sustainable Development Goals” [16]. Indeed, housing is an integral part of several SDGs particularly SDG11.1 which aims to “ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums [by 2030]”.

The right to social security is another socio-economic right that can be significantly impacted by the pandemics and epidemics in Africa. It should be mentioned that although the African Charter does not explicitly provide for the right to social security, it is recognised in the Principles and Guidelines for the Implementation of Economic, Social and Cultural Rights in the African Charter which was developed by the African Commission on Human and Peoples’ Rights in 2011. Moreover, several African countries have included it in their constitutions. Mention was made earlier of the fact that lockdowns and other measures implemented to contain the spread of pandemics lead to job losses and economic hardships. This inevitably results in reduced incomes and increased poverty rates. Informal and vulnerable workers, who constitute a large portion of the workforce in Africa, are more disproportionately affected. During pandemics, many countries adopt social protection measures like cash transfers and food assistance programs to alleviate the effects. However, the coverage and effectiveness of these measures are usually varied, leaving many individuals and families without adequate support. Commenting on the recent COVID-19 pandemic, one commentator said:

“Many governments faced challenges to their attempts to deliver on their obligations under international, regional and national laws to ensure a consistent, universal and effective social security system that met the demands of its people during the COVID-19 pandemic. This was evident during periods of lockdown when vulnerable populations were not working and, therefore, did not have any means of providing for their upkeep” [17].

That said, some have argued, though, that despite the fact that the “pandemic brought about an escalation in demand for social protection benefits and services..., it [also] led to an unprecedented political commitment to social protection, culminating with the introduction or expansion of social assistance programmes, triggering situational adjustments of contributory social security schemes” [18]. It may well be argued therefore, that pandemics have both negative and positive impacts on the right to social security in Africa. That would also be the case with the implications of such impacts in the context of sustainable development. Like other socio-economic rights discussed above, the impact of pandemics on the right to social security has implications for several SDGs particularly SDG1.3 which aims to “implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.”

The length and depth of this article do not lend themselves to a detailed discussion of the impact of pandemics and epidemics on each and every socio-economic right in Africa. Suffice to say that other socio-economic rights that are impacted include rights dealing with labour relations, property rights and the right to a clean and healthy environment. The impact on these rights would also have implications for sustainable development. This has to be seen in the context of the impact of pandemics on sustainable development itself, a discussion of which now follows.

### **3.3 Impact of Pandemics on Sustainable Development in Africa**

The impact of pandemics on sustainable development in Africa can be observed and evaluated in terms of specific sustainable development goals (SDGs). Regarding SDG1 (which seeks to eradicate extreme poverty and reduce inequality), there is no doubt that pandemics contribute to an increase in poverty, which is exacerbated by economic lockdowns and job losses. Any pandemic has the ability to trigger a severe economic downturn, with disruptions in global supply chains, trade restrictions, reduced tourism, and decline in commodity prices. This leads to job losses, reduced income, and increased poverty levels, impacting progress towards achieving economic sustainability and poverty eradication goals. This, in turn, leads to increased relative and absolute poverty driving more people into extreme poverty.

Regarding SDG2 (which aims to ensure food security and promote sustainable agriculture), it is common knowledge that the reduction in global food supplies and trade, as a consequence of the recent COVID-19 pandemic, led to food insecurity and hunger in Africa. This increased the number of people experiencing starvation and food insecurity. In 2020, for instance, one in five persons in Africa faced hunger. This represents approximately 46 million more persons who faced hunger than in 2019 [19]. The pandemic also disrupted agricultural activities, including production, distribution, and access to markets. Movement restrictions and lockdowns hindered farmers’ ability to cultivate crops and sell their produce, resulting in food shortages and increased food prices. This posed a threat to achieving food security and nutrition goals, particularly in vulnerable populations.

In Africa, pandemics and epidemics most likely have the greatest negative impact on SDG3 (which aims to ensure universal access to health care services). This impact is

characterized by, among other things, higher disease incidence and mortality from the pandemic or epidemic and other causes, overburdened hospital systems, increases in mental health cases as a result of the pandemic or epidemic, and domestic violence-related injuries as a result of lockdowns. During pandemics, the primary focus of governments and healthcare systems shift to addressing the immediate health crisis caused by the pandemic. This diverts resources, attention, and funding away from other vital health concerns including maternal and child health, infectious diseases, and the availability of healthcare services.

Pandemics also severely impact SDG4, which focuses on education and lifelong learning. School closures and limitations on in-person learning significantly disrupt education systems. Many students face challenges accessing online learning resources, leading to learning loss and exacerbating existing educational inequalities. The disruption in education can have long-term implications for human capital development and the achievement of sustainable development. In addition to affecting human capital development, the school closures and economic downturn caused by pandemics lead to millions of children in Africa falling below the minimum reading proficiency threshold.

Similarly, pandemics and epidemics negatively impact the achievement of gender equality and the empowerment of all women and girls, as advocated by SDG5. During pandemics, women and girls face increased vulnerabilities to gender-based violence, restricted opportunities for healthcare and education, and loss of livelihoods. The disruption in support systems and services hinder progress towards achieving gender equality and empowerment goals.

Other SDGs are negatively impacted by pandemics in similar and comparable ways. Additional examples of this impact include limited access to clean water (impact on SDG6), an increase in the number of people without access to electricity (impact on SDG7), an increase in urban poverty, exposure to high vulnerability, and ineffective waste management (impact on SDG8), and a lack of focus on mitigating climate action (impact on SDG13).

It should be noted that in the context of Africa, a number of factors combine to compound the impact of the pandemic on sustainable development. These include, but are not limited to, poor health facilities, pre-existing socioeconomic challenges, poverty, low testing levels, poor communication, poor infrastructure, poor governance, ongoing civil strife in many areas, and low levels of education. These are the same factors that negatively impact the enjoyment and realization of the socio-economic rights discussed earlier. Indeed, almost all examples discussed above relating to the impact of pandemics on sustainable development resonate with the examples on the impact of pandemics on the realisation of socio-economic rights discussed earlier.

#### **4. Lessons and Recommendations**

There are several lessons to be learnt from pandemics and epidemics in the context of socio-economic rights and sustainable development. Because the recommendations invariably tend to flow from the lessons, these are discussed together here. One such lesson is the need for greater investment in health systems and social safety nets to support vulnerable populations. As mentioned earlier, pandemics put immense pressure on healthcare systems and expose the weaknesses in those systems. Many African countries lack sufficient healthcare infrastructure, medical personnel, and resources to effectively respond to health crises such as pandemics. This highlights the need for increased investment in healthcare systems to ensure better preparedness for future health emergencies.



The important lesson here is the need to build resilient health systems. This requires firstly, a “government approach that incorporates all sectors, engages relevant actors across all levels, including community and local authorities...” [20]. Secondly it requires “appropriate financing, not only to prepare for new pandemics, but also to ensure that at all times, all people have access to the health services they need, when and where they need them, without financial hardship, regardless of ability to pay” [20]. Thirdly, it requires “improving both the quantity and quality of health workers to better prepare for and respond to future pandemics” [20]. Other requirements include strong and well-funded primary care and innovative digital technologies, among other things. Building resilient health systems is, therefore, an important recommendation.

It was also mentioned earlier that pandemics disproportionately affect vulnerable populations, including those with pre-existing health conditions and limited access to healthcare. In that regard, pandemics have the effect of exacerbating existing social and economic inequalities. Vulnerable populations, such as informal workers, women, and marginalized communities, are disproportionately affected. I have argued elsewhere that the COVID-19 pandemic, for example, “not only disproportionately affected vulnerable groups such as the poor, but also impacted negatively on their human rights” [21]. Pandemics, therefore, emphasise the importance of addressing poverty and inequality and ensuring the protection of vulnerable groups in social and economic policies.

The importance of digital technology in facilitating access to services and resources during times of crisis is another important lesson. Pandemics highlight the significance of digital infrastructure and connectivity for economic and social development. Access to reliable internet connectivity and digital tools became essential for remote work, education, healthcare, and business continuity. Governments need to prioritize investment in digital infrastructure to bridge the digital divide and ensure inclusivity.

There are many ways through which healthcare systems can benefit from the technologies adopted during pandemics in Africa. According to Adyasha Maharana et al, “technology developed in response to the pandemic can be adopted for future outbreaks” [22]. They also argue that “technology can drive local community action and can be combined with community engagement to drive population response” [22]. Moreover, investing in scientific education and embracing “homegrown” technologies will help preserve gains in science and technology promotion, as well as its ability to alleviate local health problems. Remote learning platforms, partnerships on both national and global scales, and the accessibility of public health information are examples of the ways in which technology can enhance research capabilities and infrastructural development. [22]. Accordingly, enhancing and investing in digital technologies is another important recommendation.

The other lesson relates to sustainable development and pandemic recovery. As African countries recover from the pandemics, they should take advantage of opportunities to prioritize sustainable development initiatives that address the root causes of inequality and poverty. This includes investing in renewable energy, sustainable agriculture, and promoting inclusive economic growth. According to the UN Deputy Secretary-General Amina Mohammed, “...recovering better requires drawing lessons from the current pandemic to support and bolster the SDGs. These lessons call for investing in African green transition, including smart agriculture, renewable energy, and sustainable infrastructure, to bounce back better from the current socio-economic crisis, but also to prepare for the threats posed by climate change” [23].

Another important lesson relates to the role of international cooperation. Pandemic demonstrate the importance of regional and international collaboration in responding to global health emergencies. Strengthening regional and international cooperation can enhance preparedness and response mechanisms. To their credit, African countries usually work together through institutions like the African Union and regional economic communities to coordinate responses, share resources and leverage collective expertise. Pandemics also demonstrate that achieving sustainable development and realizing socio-economic rights in Africa requires international cooperation and support. Such support includes debt relief, increased development assistance, and greater access to technology and knowledge-sharing.

As mentioned earlier, during pandemics, many people lose their livelihoods and face economic hardships without adequate safety nets. Pandemic not only expose the gaps in social protection systems across Africa, but they also reinforce the importance of the robustness of such systems, including unemployment benefits, cash transfers, and health insurance, to provide a safety net during times of crisis. Accordingly, there are many lessons to be learnt in the context of the right to social security and social protection. Referring to the varied social protection responses to COVID-19 in Africa, Stephen Devereux stated that: “Wealthier countries with long-running social protection schemes, like South Africa, were well placed to implement scale-ups of their existing programmes, to introduce new social assistance schemes” [24].

Indeed, due to its long-established and well-administered social protection system, South Africa was well-positioned to respond promptly and generously to the social impacts of COVID-19 [24]. This was not the case in many lower income countries across the continent.

According to Christopher Webb, there are four important lessons that African countries should have learnt from the COVID-19 pandemic on improving their social protection systems. First, there should be more interventions targeting informal workers [25]. Second, “social protection systems should not provide support to citizens only, excluding millions of migrants, refugees and asylum seekers” [25]. Third, “existing social protection systems are limited...in many countries [and they exclude] a significant number of people who may have no other source of income” [25]. Fourth, there is a need to change societal and cultural attitudes toward social protection as they “play a critical role in the design and coverage of social protection systems” [25]. These lessons are, indeed, applicable and relevant to any future pandemic.

In the specific context of sustainable economic development, an important lesson is the need for economic diversification. Countries heavily reliant on a few sectors, such as tourism or commodities, suffer severe economic shocks due to pandemics. This underscores the importance of diversifying economies to reduce vulnerability and build resilience. Investing in sectors like agriculture, technology, and manufacturing can contribute to sustainable and inclusive growth. Commenting on the challenges low-income countries faced as they emerged from the COVID-19 crisis, Dirk Willem te Velde pointed out that:

“Different countries and economic activities will be affected in different ways. How diversified a country’s value chains and production systems are as the global economy comes out of this crisis, alongside their adoption of digital technologies, will be important” [26].

Commenting on the need for economic diversification post-COVID-19, Njuguna Ndung’u pointed out that “Africa’s low level of economic diversification is a leading factor in the continent’s economic fragility” [27]. Consequently, in the aftermath of COVID-19,

“countries, especially those most at risk, must implement evidence-based policies and strategies that promote economic diversity” [27]. The importance of this recommendation cannot be overemphasised as it is applicable and relevant to any future pandemics.

There are many other lessons and recommendations that can be highlighted such as putting in place policies that promote good governance, accountability and transparency, investing in public institutions, strengthening civil society, and promoting the rule of law. However, of all the lessons and recommendations from pandemics and epidemics in the context of socio-economic rights and sustainable development in Africa, the most important is perhaps the need for a human rights-based approach (HRBA).

Over the past twenty years or so, this concept of a HRBA has gained credibility and application. Due to its diverse applications, it has been defined and described in a number of different ways. The UN, for example, sees a human rights-based approach in the context of development and defines it as: “...a conceptual framework for the process of human development that is normatively based on international human rights standards and operationally directed to promoting and protecting human rights. It seeks to analyse inequalities which lie at the heart of development problems and redress discriminatory practices and unjust distributions of power that impede development progress” [28].

This definition is amplified by the OHCHR which states that: “A human rights-based approach (HRBA) aims to support better and more sustainable development outcomes by analysing and addressing the inequalities, discriminatory practices (*de jure* and *de facto*) and unjust power relations which are often at the heart of development problems” [29].

This statement is consistent with the HRBA's applicability to sustainable development, especially in the context of pandemics. In that regard the UN envisages that under a HRBA, “the plans, policies and processes of development [should be] anchored in a system of rights and corresponding obligations established by international law, including all civil, cultural, economic, political and social rights, and the right to development” [30]. One of the rationales given by the UN for a human rights-based approach is that it “leads to better and more sustainable human development outcomes” [30].

A human rights-based approach to sustainable development fundamentally transforms the primary goal of development from charity to the responsibility to respect, preserve, and fulfil human rights. It accomplishes this by incorporating human rights principles and values into every aspect of development. This contributes to the sustainability of development work by enabling individuals, particularly the most marginalized, to engage in shaping policies and ensuring those responsible are held to account. Indeed, the human rights-based approach places emphasis on those most marginalized, excluded, or discriminated against, making it suitable for sustainable development [30].

It should be noted that “a human rights-based approach is underpinned by five key human rights principles, [namely], participation; accountability and transparency; non-discrimination and equality; empowerment of rights holders; and legality” [31]. These are the same principles that have become universal features of international development organizations' programs in recent years, particularly in Africa. In fact, there appears to be a growing consensus within the international development community regarding the incorporation of these principles into every aspect of development programs.

Adopting a human rights-based approach to sustainable development in Africa would inevitably require that the 2030 Agenda for Sustainable Development and Africa's Agenda 2063 serve as the blueprints for attaining a sustainable recovery following pandemics.

Secondly, all African nations should develop national pandemic recovery plans to assist them accelerate their progress toward achieving human rights-based sustainable development. Thirdly, African leaders should recognize that pandemics do not alter or diminish their countries' human rights obligations. Instead, they should recognize that respect for human rights is essential for the post-pandemic recovery to succeed. In view of the relationship between socio-economic rights and sustainable development discussed earlier, the promotion and protection of socio-economic rights should be prioritised if any meaningful sustainable development is to be achieved following pandemics.

### **5. Conclusions**

Pandemics have the effect of magnifying the critical link between socio-economic rights and sustainable development in Africa. This article has highlighted the relationship between the two and examined the multifaceted impacts of pandemics and epidemics on the enjoyment/realisation of socio-economic rights in Africa on one hand and on sustainable development on the other. It has been seen that pandemics expose existing vulnerabilities in Africa's socio-economic landscape, with marginalized communities bearing the brunt of the crisis. Access to basic necessities such as healthcare, education, and clean water becomes even more precarious, exacerbating inequalities and hindering progress towards sustainable development. However, pandemics also highlight the resilience and adaptability of African countries and their communities. Governments, civil society organizations, and individuals demonstrate remarkable innovation and resourcefulness in addressing the socio-economic impacts of the crises.

Furthermore, pandemics underscore the necessity of integrating socio-economic rights into national development strategies. By prioritizing access to quality healthcare, education, social protection, and economic opportunities, African countries can build robust and inclusive systems that can withstand future crises. Strengthening social safety nets, investing in healthcare infrastructure, and promoting equitable economic growth are crucial steps towards realizing sustainable development goals.

Various lessons that should be learnt have been discussed and recommendations flowing from them have been suggested. These include building resilient health systems, addressing the root causes of poverty and inequality, prioritising investment in digital technologies and improving social protection systems. The need for economic diversification post-pandemics has also been highlighted particularly in the context of sustainable economic development. Additionally, it has been seen that international cooperation and partnerships are vital in the impact of pandemics in Africa. Pandemics highlight the need for increased collaboration, knowledge sharing, and support from the global community. Addressing the socio-economic challenges in Africa requires sustained commitment and engagement from international stakeholders, as well as innovative financing mechanisms that prioritize long-term development over short-term gains.

In conclusion, pandemics serve as a reminder for Africa to prioritize socio-economic rights and sustainable development. For that reason, the article concludes with a recommendation on the need for a human rights-based approach to sustainable development and the recovery from pandemics. By placing human rights at the center of development efforts, investing in social protection, and fostering international cooperation, Africa has a better chance of achieving sustainable development post pandemics. By leveraging the lessons learned from pandemics and epidemics, African nations have an opportunity to build more inclusive, resilient, and sustainable societies.

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## SCIENTOMETRIC APPROACH IN DETERMINING THE ROLE OF SCIENCE IN SOCIOECONOMIC DEVELOPMENT OF SOCIETY

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**Abstract.** This study investigates the relationship between scientific advancement and socioeconomic progress using a scientometric methodology. The research examines publication activity and the Science Development Index (SDI) in different countries, utilizing statistical methods to evaluate the reciprocal impact of science and socioeconomic metrics, namely the Human Development Index (HDI). The results demonstrate a significant, nonlinear association between SDI and HDI, emphasizing the essential role of international cooperation and funding in fostering scientific development. The study emphasizes the importance of scientometric indicators in informing policy-making and fostering sustainable socioeconomic progress.

**Keywords:** *scientometrics, correlation analysis, human development index, science development index, publication activity, R&D funding, international cooperation.*

**Rezumat.** Acest studiu investighează relația dintre progresul științific și dezvoltarea socioeconomică utilizând o metodologie scientometrică. Cercetarea examinează activitatea de publicare și indicele de dezvoltare științifică (SDI) în diferite țări, utilizând metode statistice pentru a evalua impactul reciproc al științei și al indicatorilor socioeconomi, și anume indicele de dezvoltare umană (HDI). Rezultatele demonstrează un nivel de corelare semnificativ și neliniar între SDI și HDI, subliniind rolul esențial al cooperării și finanțării internaționale în dezvoltarea științifică. Studiul subliniază importanța indicatorilor scientometrici în fundamentarea elaborării politicilor și în promovarea progresului socioeconomic durabil.

**Cuvinte-cheie:** *scientometrie, analiză de corelație, indicele dezvoltării umane, indicele dezvoltării științifice, activitatea de publicare, finanțarea cercetării și dezvoltării, cooperarea internațională.*

### 1. Introduction

The slogan “Science is the direct productive force of society” was popular in the Soviet Union, where its validity remained unquestioned due to the remarkable scientific and

technological advancements achieved by the nation. Following the dissolution of the USSR, the necessity to foster scientific and technological progress in the smaller ex-Soviet republics became less apparent and more challenging due to financial constraints. Consequently, there is a pressing need to establish methodologies for evaluating the significance of science for society and its influence on socioeconomic development. Addressing this issue is of paramount importance for governmental bodies and policymakers. Therefore, it is imperative to devise methods or frameworks for assessing the correlation between science and the socioeconomic status of a society.

The development of such methods has been made possible through the application of quantitative approaches to describe processes in science development, known as scientometrics. While some quantitative methods for describing patterns in science, as well as its structure and extent, were utilized earlier in the 20<sup>th</sup> century [1–4], the term ‘scientometrics’ (rus: наукометрия) was first introduced by Nalimov in 1966 [5]. The term gained recognition following the publication in 1969 by Nalimov & Mul’chenko of the renowned book titled *The Study of the Development of Science as an Information Process* [6]. In this book, scientometrics is defined as a branch of the Science of Science (rus: науковедение) that examines science using quantitative methods based on an information model. According to this model, science is a self-organizing system, the advancement of which is regulated by its information flows. Since these information flows are generated by scientific publications, which serve as sources of information, one can analyze the progress of science by tracking the increase in the number of scientific publications over time.

Another term for the quantitative approach to analyzing scientific publications is bibliometrics. Coined by Pritchard in 1969 [7], bibliometrics is defined as application of mathematical and statistical methods to books and other forms of communication. Bibliometrics encompasses various types of literature, not limited to academic works. Despite this, scientometrics and bibliometrics are frequently used interchangeably to denote the measurement of the quantity, impact, or quality of academic publications [8–10].

A quantitative analysis of the correlation between a society's level of socioeconomic development and its scientific advancement requires the utilization of quantitative indicators, preferably those that are comprehensive and relative, for various aspects of the system. One such indicator is the Science Development Index (SDI), introduced in 1999 for the first time [11]. The SDI is defined as the ratio of a country's contribution to the global information process to its share of the world's total population:

$$SDI = P_s / P_n, \quad (1)$$

Where  $P_s$  represents the share of the contribution of researchers from a specific country to the global information process (%), calculated on the basis of the number of publications indexed in the WoS or Scopus databases published over a defined period of time. While  $P_n$  represents the share of this country's population in the world's population (%).

The proposed indicator can be seen as an equivalent of GDP per capita, but in the realm of science. Essentially, SDI is a measure of the scientific publication output of researchers in a specific country per capita.

It was shown in [11–14] that there is a pronounced relationship between SDI and the level of socioeconomic development of society, with a fairly high correlation coefficient. This relationship, however, depends on the level of development of science in a particular country. Quantitatively, the integral indicator of the level of socioeconomic development in a specific



country is determined by the Human Development Index (HDI) published in the Human Development Reports [15]. HDI is calculated annually by a special UN Commission and takes into account the country's economy level (GNI per capita, considering purchasing power parity), the level of healthcare (life expectancy), and the education level (years of schooling). In the works [11–14], it has been emphasized that the observed dependence is non-linear, in the sense that science is characterized by positive feedback that leads to mutual influence or interdependence of SDI and HDI.

The study of the dynamics of analyzed relationships, as well as the assessment of various scientometric indicators, is important not only for obtaining purely scientific outputs but also for determining the trends of scientific development. These trends hold significant importance and priority for making appropriate managerial decisions.

It should be mentioned that SDI is not the only one indicator that describes the development of science, just as HDI is far from the only indicator for assessing the level of socioeconomic development of society.

Thus, this work aims to explore the feasibility of using various quantitative indicators (in contrast to SDI) to evaluate the level of scientific development in various countries based on publication activity (PA). It focuses on the number of academic works published annually in top journals per million inhabitants of a country. This metric serves as an equivalent to the indicator of innovation activity (IA).

Innovation activity indicator have been considered by several authors. Svensson's paper [16] examines different patent value indicators, such as citation frequency and patent family size, to assess their correlation with technological innovation.

Zoltan J. Acs and David B. Audretsch [17] explored the validity of using patents as an indicator of innovative output. Although they critically analyzed the relationship between patent counts and actual innovation, considering factors such as industry differences, firm size, and the quality versus quantity of patents, the authors concluded that patents can be a useful measure of innovative activity.

So, even if the comparison of PA and IA represents interest, what is more intriguing is to analyze the dynamics of PA. Therefore, another objective of this work is to determine the feasibility of using PA as a quantitative indicator to assess the interdependence between the level of scientific development and the level of socioeconomic development.

## **2. The methodology of the study**

The study utilized quantitative methods, such as statistical analysis, comparative analysis, and correlation analysis. As mentioned in [18], scientific publications need to adhere to professional standards to be truly informative and serve as a robust foundation for science and technology indicators. Therefore, the primary data for this study were sourced from the internationally recognized Scopus database [19]. Additional data were obtained from the World Bank's Databank (population) [20] and the UNDP Human Development Reports (HDI) [15].

The analysis focused on different groups of countries: the top 10 countries in the world based on the number of documents published across all subject areas in 2000 and 2023. The list of top countries varied between these years, reflecting the changing dynamics of countries' contributions to the global information process. The study also analyzed a group of Eastern European countries and conducted a special analysis on the ex-Soviet countries, which encompassed both Eastern European and Asian countries.

Two indicators were calculated: Science Development Index (SDI) and Publication Activity (PA). Despite the similarity of these indicators in terms of physical meaning, they differ significantly. SDI is a dimensionless value; moreover, it is the ratio of relative values, while PA is a relative value but a dimensional indicator (the number of publications per million inhabitants per year).

The level of socioeconomic development was collected from [15], as well as in earlier works [11–14]. The obtained ratios of PA to HDI were compared with those described for a previous period.

### 3. Results and Discussion

#### 3.1 The Dynamics of Publication Activity

Below there is some data for the top 10 countries on the number of documents (nPb) indexed in Scopus in 2000 (Table 1) and 2022 (Table 2) with at least one author from a specific country, along with two calculated indicators: PA and SDI. Table 2 also shows the ratios of PA in 2022 to PA in 2000 and SDI in 2022 to SDI in 2000. Several key points need to be highlighted: 1) The leader for nPb among the top 10 countries has changed. In 2000, the United States was the clear leader in the total number of documents (US researchers published over three times as many papers as the UK, the second-ranked country). However, in 2022, Chinese researchers have taken the lead. 2) The total number of publications (nPb) is increasing in all countries, but to varying degrees. If researchers from the USA and leading European countries published about two to three times more works in 2022 compared to 2000, then for Australia this ratio increased by 30 times, for China by almost 18 times, and for India by 8.5 times. 3) Additionally, at the beginning of the 21st century, 73% of all new knowledge was by the top 10 countries, which comprised 35% of the Earth's population. In 2022, 79% of new knowledge was "produced" by the top 10 countries, which now account for 46% of the world's population. This phenomenon is attributed to the significant growth of science in Asian countries and Australia.

Table 1

Scientometric indicators of leading countries, 2000

| No. | Country        | nPb·10 <sup>-3</sup> | PA·10 <sup>-3</sup> | SDI  |
|-----|----------------|----------------------|---------------------|------|
| 1.  | United States  | 376.4                | 1.33                | 6.23 |
| 2.  | United Kingdom | 108.5                | 1.84                | 8.61 |
| 3.  | Japan          | 105.3                | 0.83                | 3.88 |
| 4.  | Germany        | 90.7                 | 1.10                | 5.16 |
| 5.  | France         | 64.4                 | 1.06                | 4.94 |
| 6.  | China          | 51.9                 | 0.04                | 0.19 |
| 7.  | Canada         | 45.8                 | 1.49                | 6.97 |
| 8.  | Italy          | 44.8                 | 0.79                | 3.68 |
| 9.  | Russia         | 34.7                 | 0.24                | 1.11 |
| 10. | Spain          | 31.5                 | 0.78                | 3.63 |

**Data source:** nPb - [19]; PA, SDI calculated by authors based on [19,20]. nPb - number of publications; PA - Publication Activity; SDI - Science Development Index.

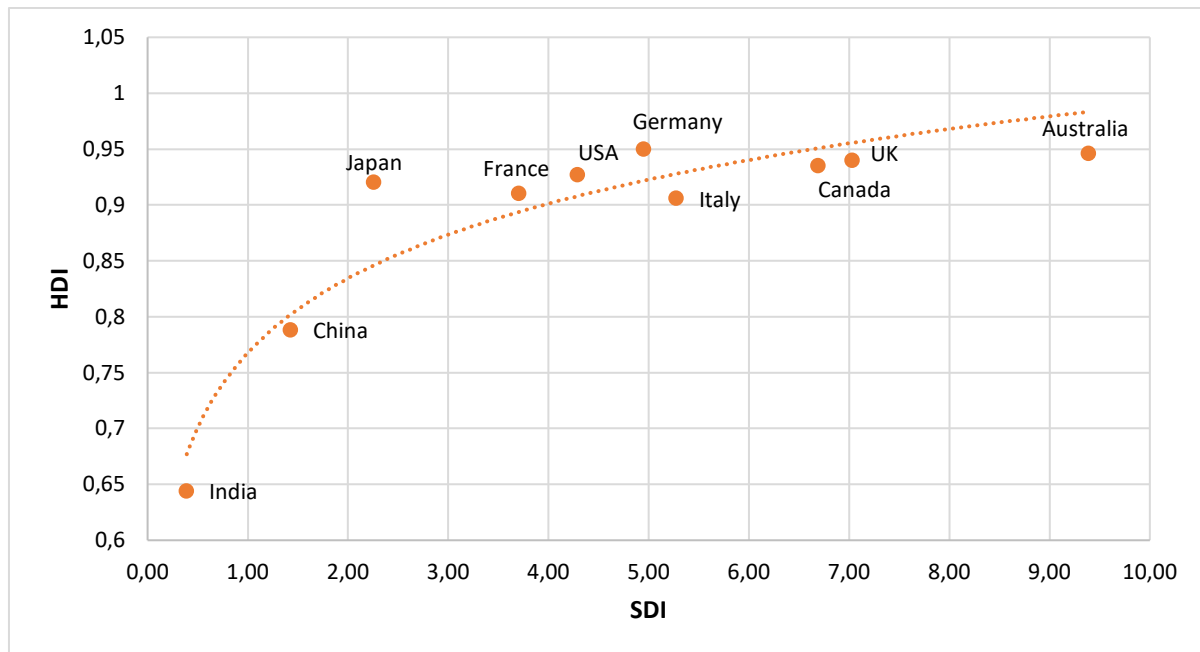
Table 2

**Scientometric indicators of leading countries, 2022 and some comparisons with 2022**

| No. | Country        | nPb·10 <sup>-3</sup> | PA·10 <sup>-3</sup> | SDI  | $\frac{PA_{2022}}{PA_{2000}}$ | $\frac{SDI_{2022}}{SDI_{2000}}$ |
|-----|----------------|----------------------|---------------------|------|-------------------------------|---------------------------------|
| 1.  | China          | 1041.5               | 0.74                | 1.43 | 17.9                          | 7.4                             |
| 2.  | United States  | 738.5                | 2.22                | 4.29 | 1.7                           | 0.7                             |
| 3.  | India          | 285.7                | 0.20                | 0.39 | 8.5                           | 3.5                             |
| 4.  | United Kingdom | 246.0                | 3.63                | 7.03 | 2.0                           | 0.8                             |
| 5.  | Germany        | 214.1                | 2.55                | 4.95 | 2.3                           | 1.0                             |
| 6.  | Italy          | 160.5                | 2.72                | 5.28 | 3.5                           | 1.4                             |
| 7.  | Japan          | 145.8                | 1.17                | 2.26 | 1.4                           | 0.6                             |
| 8.  | Canada         | 134.5                | 3.45                | 6.69 | 2.3                           | 1.0                             |
| 9.  | France         | 130.1                | 1.91                | 3.71 | 1.8                           | 0.8                             |
| 10. | Australia      | 126.1                | 4.85                | 9.39 | 30.1                          | 12.5                            |

**Data source:** nPb - [19]; PA, SDI calculated by authors based on [19,20]. nPb - number of publications; PA - Publication Activity; SDI - Science Development Index.

The group of countries studied above is characterized by the interdependence (mutual influence) of the level of development of science assessed by the SDI and the level of socio-economic development described by HDI (Figure 1).



**Figure 1.** Correlation between *SDI* and *HDI* for leading countries in science, 2022 (cumulative contribution to the global information process 79%).

SDI – Science Development Index; HDI – Human Development Index.

Quantitatively, the relationship between HDI and SDI is expressed by the Equation (2):

$$HDI = a \lg SDI + b, \quad (2)$$

Where: the correlation coefficient  $R = 0.94 \pm 0.12$ , coefficient  $a = 0.12 \pm 0.03$  and coefficient  $b = 0.76 \pm 0.02$ . It is worth mentioning two features: 1) The value of the correlation coefficient for 2022 is higher than for the earlier period (2013), however, not for the leading countries

in publishing, but for the EU states [14, 26]. At the same time, the correlation coefficient calculated and presented earlier in (Dikusar Alexandr and Cujba Rodica, 2015b) was the maximum ( $R = 0.86$ ) for different groups of countries. Its increase to a value of 0.94 should be considered as evidence of the growing over time of the degree of mutual influence of the considered quantitative indicators. 2) The value of HDI for Japan significantly exceeds the average for the studied group of countries, while the highest value of *SDI* is observed for Australia, Figure 1.

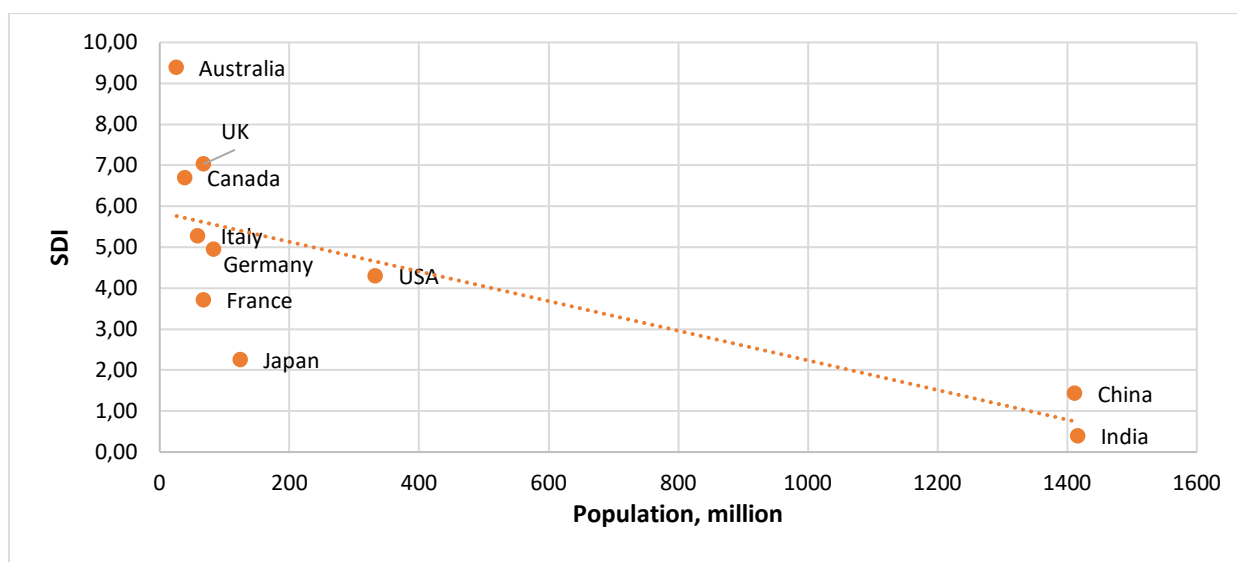
The replacement of SDI with PA in Equation (2) leads to the following relation:

$$HDI = 0.06 \lg PA + 0.74 \quad (3)$$

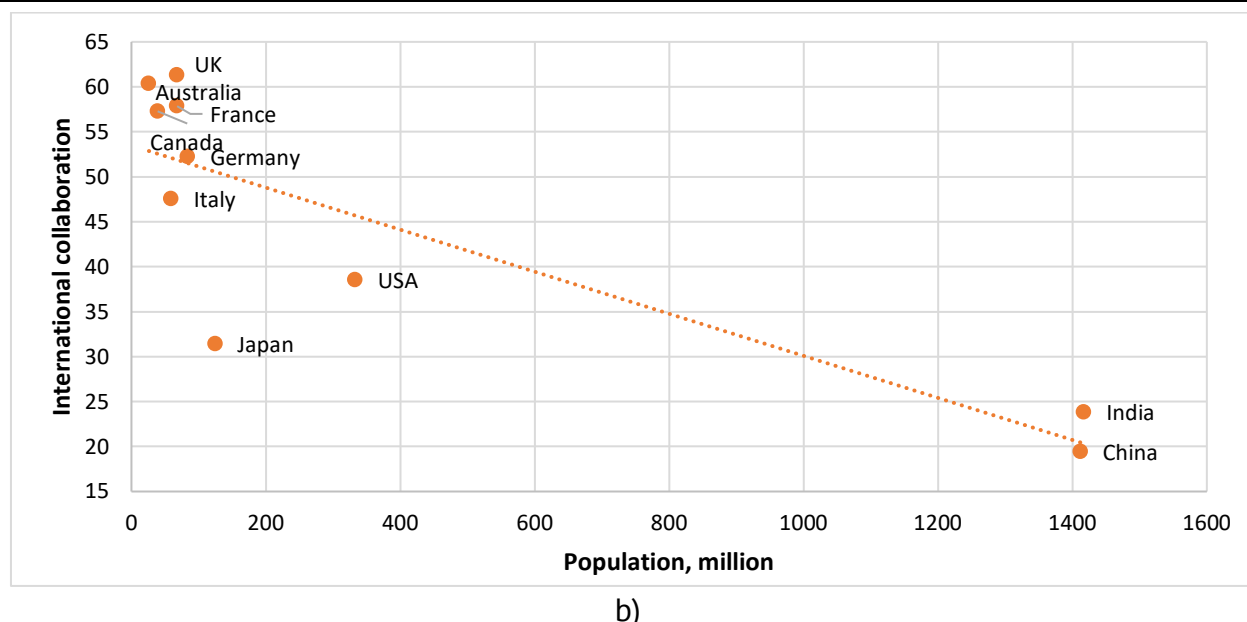
With the correlation coefficient  $R = 0.79 \pm 0.04$  and corresponding coefficients for  $a = 0.06 \pm 0.02$  and  $b = 0.74 \pm 0.02$ . These values can justify the applicability of SDI instead of PA for the quantitative analysis of the relationship. The main reason for this conclusion is that, unlike PA, SDI reflects the mutual influence of the components of the system (e.g., with the increase of the SDI value for one country, it can decrease in another (see Table 2). Therefore, PA is only suitable for systems with linear dependencies, not for the non-linear dependencies characteristic to system "science – socio-economic development".

### 3.2 The Role of International Cooperation

SDI, as a measure of the level of scientific development of the society, has an interesting feature: this value decreases with the growth of the population (Figure 2a). However, a similar dependence can be observed for the share of international cooperation (Figure 2b), collected for every examined country from [22]. The share of international collaboration is also related to publication activity because it represents the proportion of works published and presented in a specific database with international participation, i.e., when the same authors of works are affiliated with organizations from different countries. This indicator also shows an increasing trend over time in most countries. For example, from 2000 to 2022, it increased among Chinese researchers from 16% to 20%, United States researchers from 19% to 39%, researchers from the UK from 27% to 61%, German researchers from 31% to 52%, researchers from France from 34% to 58%, etc.



a)



**Figure 2.** Correlation of SDI (a) and international cooperation (b) with the number of population in leading countries by publishing research articles (2022). SDI – Science Development Index.

The observed dependence of the SDI on the population is clearly a result of the impact of the level of international cooperation on the effectiveness of scientific research. This, in turn, mirrors the extent of mutual influence among the components of the system “science development level – socio-economic development level”.

### 3.3 The role of funding R&D

The effects of the mutual influence of the level of development of science and the level of socio-economic development of society, as described earlier [11–14] and above, are certainly related to its financing. This can be clearly demonstrated using examples from Eastern European countries: EU member states, non-members, and post-Soviet countries. In [13] it was shown that *SDI* of post-Soviet countries is dependent on the level of science funding (as a percentage of GDP). On the other hand, it was also demonstrated that the degree of mutual influence of the *HDI* and *SDI* (the coefficient  $a$  in Equations (2) and (3)) significantly increased for EU countries after the adoption of the Lisbon Strategy in 2000. This strategy aimed to increase overall Research and Development (R&D) expenditures to 3% of GDP by 2010, with the goal of becoming “the most competitive and dynamic knowledge-based economy in the world” [23].

Table 3 presents scientometric indicators for some EU/Eastern European/post-Soviet countries. The data show that the maximum values of both *SDI* and *PA* are in the EU member states. The *SDI* ranges from around 2 (Romania) to 7.72 (Slovenia), with a mean *SDI* value of 4.2. In contrast, for Eastern European countries outside the EU (with significantly lower R&D funding levels), the *SDI* ranges from 0.76 (Macedonia) to around 3 (Serbia), with a mean value of 1.7.

For the post-Soviet countries, the *SDI* value varies from 0.4 (Azerbaijan) to the maximum value of *SDI* 1.57 (Russia) for this group of countries, with a mean value of 0.9. The *SDI* value for Russia is attributed, on one hand, to the maximum level of R&D funding among these countries (approximately 1.2% of GDP) and, on the other hand, to the relatively low level of international cooperation (23%), which explains the lower *SDI* value compared to, for instance, Serbia (52% of international cooperation). It seems obvious that the impact of the

level of funding and international cooperation is not unambiguous, but represents a certain trend (see Figure 2).

Another observation on the post-Soviet countries is that despite the very different levels of international cooperation between Russia (23%) and Moldova (62%), a significant difference in the level of funding for R&D (1.2% of GDP for Russia and 0.22% of GDP for Moldova) is one of the reasons for the significant disparity in *SDI* (1.57 and 0.43 respectively).

Table 3

**Scientometric indicators of some EU/Eastern-European/post-Soviet countries, 2022**

| No. | Country                | nPb*10 <sup>-3</sup> | PA*10 <sup>-3</sup> | SDI  |
|-----|------------------------|----------------------|---------------------|------|
| 1.  | Slovenia               | 8.4                  | 3.98                | 7.72 |
| 2.  | Estonia                | 4.6                  | 3.44                | 6.67 |
| 3.  | Croatia                | 10.5                 | 2.73                | 5.30 |
| 4.  | Czech Rep.             | 27.7                 | 2.60                | 5.03 |
| 5.  | Lithuania              | 5.7                  | 2.02                | 3.92 |
| 6.  | Slovakia               | 9.8                  | 1.81                | 3.50 |
| 7.  | Latvia                 | 3.3                  | 1.77                | 3.44 |
| 8.  | Poland                 | 61.4                 | 1.67                | 3.23 |
| 9.  | Hungary                | 15.7                 | 1.63                | 3.15 |
| 10. | Bulgaria               | 7.9                  | 1.23                | 2.38 |
| 11. | Romania                | 20.0                 | 1.05                | 2.04 |
| 12. | Serbia                 | 10.4                 | 1.56                | 3.03 |
| 13. | Montenegro             | 0.6                  | 0.99                | 1.91 |
| 14. | Bosnia and Herzegovina | 2.1                  | 0.66                | 1.27 |
| 15. | Albania                | 1.1                  | 0.39                | 0.76 |
| 16. | Macedonia              | 1.4                  | 0.78                | 0.76 |
| 17. | Russia                 | 117.0                | 0.81                | 1.57 |
| 18. | Georgia                | 2.4                  | 0.64                | 1.23 |
| 19. | Ukraine                | 21.3                 | 0.56                | 1.09 |
| 20. | Armenia                | 1.5                  | 0.55                | 1.07 |
| 21. | Belarus                | 2.9                  | 0.32                | 0.62 |
| 22. | Moldova                | 0.7                  | 0.22                | 0.43 |
| 23. | Azerbaijan             | 2.1                  | 0.21                | 0.40 |

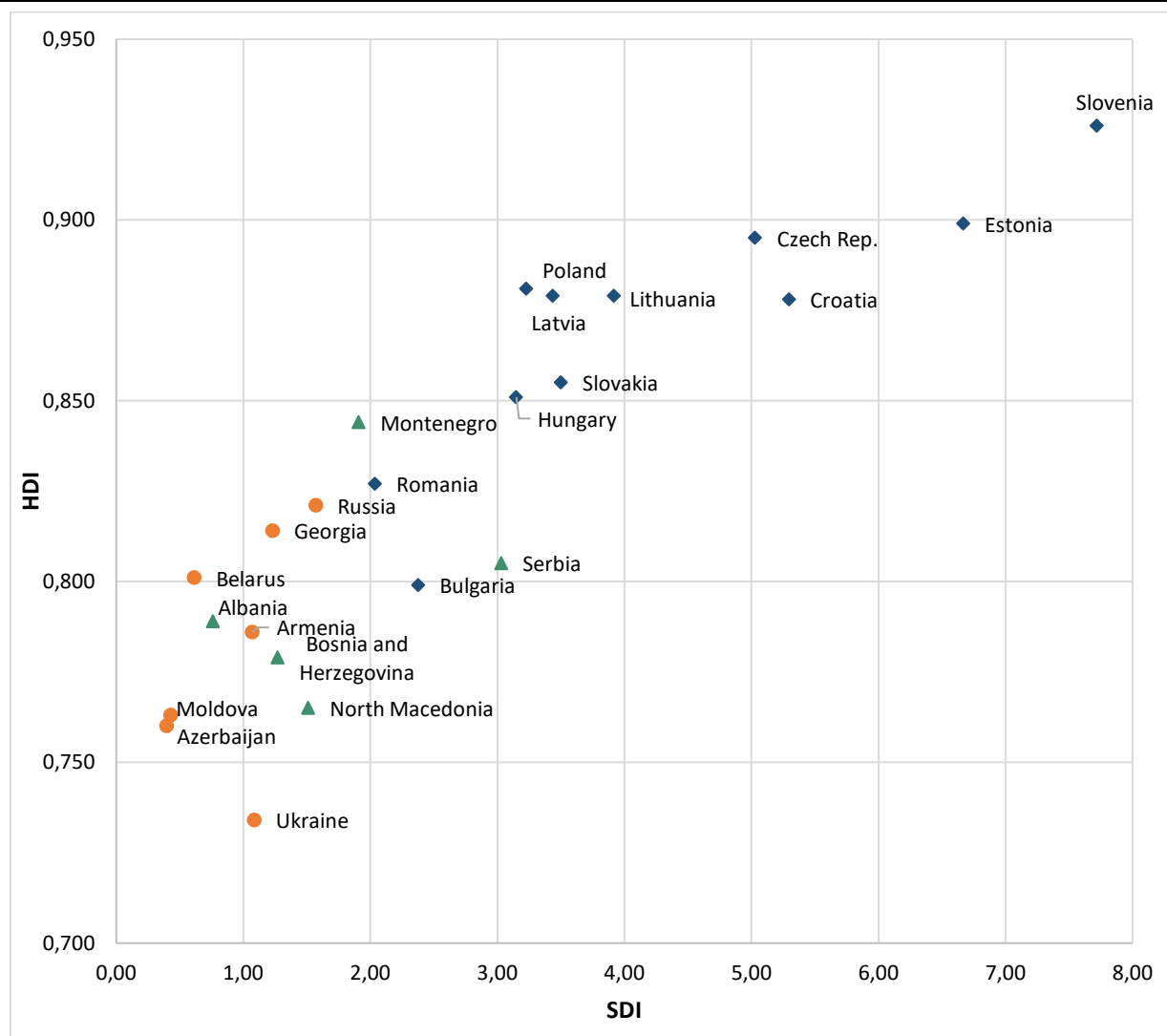
**Data source:** nPb - [19]; PA, SDI calculated by authors based on [19,20]. nPb - number of publications; PA - Publication Activity; SDI - Science Development Index

The combined effect of science funding and the level of international cooperation on publication activity leads to *SDI* values (Figure 3) that correlate with the level of socio-economic development, expressed through *HDI*. This relationship is observed not only in scientifically advanced countries (see Figure 1), but also in relatively small Eastern European countries that are members of the EU, as well as in the post-Soviet countries (Figure 3).

The corresponding quantitative relation for post-Soviet countries is described by Equation (4).

$$HDI = 0.11 \lg SDI + 0.80 \quad (4)$$

With the correlation coefficient  $R = 0.85 \pm 0.18$  and a coefficient of mutual influence of  $0.11 \pm 0.02$ .



**Figure 3.** Dependence between *SDI* and *HDI* for some EU/Eastern European/post-Soviet countries. *SDI* – Science Development Index, *HDI* – Human Development Index.

Equation (5) describes the relationship between *HDI* and *SDI* for EU member states from the Eastern European region.

$$HDI = 0.13 \lg SDI + 0.79 \quad (5)$$

This relationship is characterized by a correlation coefficient of  $R = 0.86 \pm 0.17$  and a coefficient of mutual influence of  $0.13 \pm 0.13$ .

Despite the similarity of the coefficients in equations (4) and (5), the higher average values of both *HDI* and *SDI* for the EU member states compared to post-Soviet countries indicate the significant role of financing, which currently corresponds to approximately 3% of GDP for the EU countries. Additionally, according to the data presented in Figure 3, post-Soviet countries with their own energy resources (or preferential access to them) exhibit higher *SDI* compared to countries without their own energy resources. Therefore, socio-economic development levels depend not only on the advancement of science.

The analysis of the obtained results allows us to conclude that there is a correlation between the level of scientific development and the socio-economic development of both scientifically leading countries and smaller ones (particularly ex-Soviet countries). The level of scientific development in a country is evidently influenced by its funding. Despite this, active international cooperation among researchers from less funded R&D systems can

notably enhance the level of scientific development. Consequently, with the presence of positive feedback, this can also boost the level of socio-economic development.

The high level of correlation between the components of the system: science development and level of socio-economic development, and the presence of non-linear, synergetic links in this system are determined by the very nature of science. Science is not only a self-organized system but also multifunctional, actively influencing various aspects of society.

#### 4. Conclusions

The analysis demonstrates a significant correlation between *SDI* and *HDI*, indicating that countries with higher scientific output tend to have better socioeconomic indicators. The study identifies a non-linear relationship between scientific development and socioeconomic progress, suggesting that the growth of scientific activity can lead to reciprocal advancements in societal development. The study finds significant differences in scientific development and socioeconomic progress among various countries and regions, with Eastern European and post-Soviet countries generally lagging behind their Western counterparts.

International collaboration in scientific research plays a vital role in enhancing a country's scientific output and, consequently, its socioeconomic development.

Adequate funding for R&D is crucial for the advancement of science. Countries that invest more in R&D tend to demonstrate better performance in both *SDI* and *HDI*.

Policymakers should prioritize increasing investments in R&D and promoting international collaborations to improve scientific output, which can subsequently stimulate socioeconomic development.

Further studies should explore additional scientometric indicators and their impact on socioeconomic variables to enhance the understanding of the science-society relationship.

**Conflict of interest:** The authors declare no conflict of interest.

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## REVIEW – A VALUABLE EDITORIAL APPEARANCE IN THE FIELD OF THE LOCAL LANDSCAPE: LANDSCAPE AESTHETICS IN FINE ARTS IN MOLDOVA

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**Abstract.** The monograph *Landscape Aesthetics in Fine Arts in Moldova*, Chișinău: CEP Publishing House, USM, 2024, second edition (first edition, 2021), is a work carried out within the Postdoctoral Program (2021-2022), Strategic Priority – Societal Challenges, with the theme: Morphological stylistics in interior design, architecture, fine arts in Moldova, with the project code 21.00208.0807.00/PD, authored by Angela Munteanu. The paper discusses the issue of the evolution and constitution of the landscape genre in the fine arts in Moldova. The monograph *Landscape Aesthetics in Fine Arts in Moldova* reflects the periods of evolution and development of the landscape genre through stylistic trends, representatives of different schools of painting, graphics, and decorative arts, and artistic currents, resulting in a truthful panorama of the artistic process in Moldova.

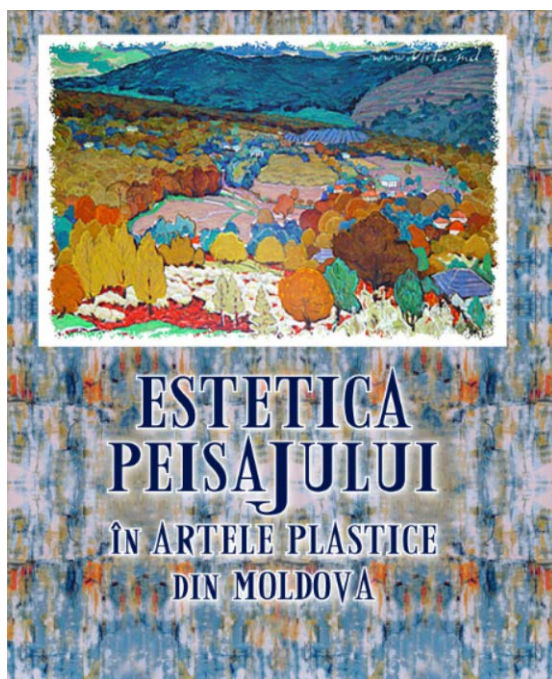
**Keywords:** *evolution, landscape, genre, artistic current, painting, graphics, stylistics, color range, plastic artists.*

**Rezumat.** Monografia *Estetica peisajului în artele plastice din Moldova*, Chișinău: Editura CEP, USM, 2024, ediția a II-a (ediția I, 2021), este o lucrare realizată în cadrul Programului de Postdoctorat (2021-2022), Prioritatea strategică – Provocări societale, cu tema: Stilistica morfologică în design interior, arhitectură, arte plastice din Moldova, cu cifrul proiectului 21.00208.0807.00/PD, autor Angela Munteanu. În lucrare se pune în discuție problema evoluției și constituirii genului peisajului în artele plastice din Moldova. Monografia *Estetica peisajului în artele plastice din Moldova* reflectă perioadele evoluției și dezvoltării genului peisager prin tendințe stilistice, reprezentanți ai diferitelor școli de pictură, grafică, arte decorative, curente artistice, rezultând într-o panoramă veridică a procesului artistic din Moldova.

**Cuvinte cheie:** *evoluție, peisaj, gen, curent artistic, pictură, grafică, stilistică, gamă coloristică, artiști plastici.*

În prezenta monografie, intitulată *Estetica peisajului în artele plastice din Moldova*, elaborată de Angela Munteanu, se valorifică istoria evoluției genului peisajului în artele plastice din Moldova (din stânga Prutului). Lucrarea abordează problema peisajului în arta autohtonă, descriind creația plasticienilor care au creat și preferă acest gen în etapa actuală. Publicația prezintă o noutate și originalitate în istoriografia națională, reliefând genul peisajului în artele plastice din Moldova, oglindit în creația artiștilor plastici autohtoni (pictură și grafică), contribuind astfel la aprecierea critică a patrimoniului cultural al țării. Totodată, în lucrare sunt cercetate surse documentare din arhive, biblioteci, galerii de artă, muzee, precum și izvoare care oglindesc situația genului peisager din țările limitrofe și din arta universală, fiind introduse în circuitul științific lucrările marilor peisagiști din spațiul investigat.

Prin intermediul monografiei *Estetica peisajului în artele plastice din Moldova*, realizată de autoarea Angela Munteanu în cadrul proiectului cu cifrul 21.00208.0807.00/PD, cu tema *Stilistica morfologică în design interior, arhitectură, arte plastice din Moldova*, din contextul Programului de Postdoctorat (2021-2022), Prioritatea strategică - Provocări societale, Chișinău: Editura CEP, USM, 2024, ediția a II-a (ediția I, 2021), sunt clasificate genurile peisajului și analizate stilistic lucrările artiștilor plastici. Lucrarea determină și descrie particularitățile estetice utilizate în crearea peisajului din Moldova în epoca medievală, modernă și contemporană (Figura 1).



**Figura 1.** Monografia *Estetica peisajului în artele plastice din Moldova*.

Structura monografiei este formată din următoarele compartimente: *Peisajul în istoria și estetica artelor plastice; Constituirea și evoluția peisajului în epoca premodernă și modernă din Basarabia; Peisajul contemporan în artele plastice din RSS Moldovenească și Republica Moldova (1945-2010)*. În aceste compartimente sunt evaluate atât tendințele genului peisager, cât și reprezentanții notorii, pictori și graficieni, care l-au practicat pe parcursul celor două secole. Primul capitol evidențiază un laborios efort de documentare asupra evoluției peisajului în artele plastice din Moldova (din stânga Prutului). Datorită faptului că lucrările științifice consacrate acestui gen s-au aflat pe o scară ierarhică minoră, au fost evaluate sursele bibliografice europene și din regiune.

În monografie sunt descrise într-o formă bine structurată interferențele peisajului cu alte genuri ale artelor plastice, semnate de pictori și graficieni în perioadele respective. De asemenea, este evidențiat aportul mișcărilor artistice europene asupra creațiilor artiștilor basarabeni desfășurate la sfârșitul secolului al XIX-lea și începutul secolului al XX-lea. Lucrarea are un caracter recuperator și tratează un gen întâlnit frecvent în pictura murală și de icoane, precum și în miniaturile din Moldova medievală, care a cunoscut peisajul ca o formulă de adresare către semenii prin interpretarea lumii văzute și a celei nevăzute, fundamentând o sursă de inspirație continuă pentru generațiile de artiști premoderni și moderni.

Operele de artă națională din această perioadă, semnate de reprezentanți precum V. Blinov, A. Climașevschi, V. Ocușco, P. Piscariov, P. Șilingovschi etc., au reflectat caracterul picturii basarabene ca punct de plecare, selectat riguros și transmis către fenomenul modernității. Demersul artistic a fost înregistrat în lucrările cercetătorilor autohtoni precum A. Zevin (Mansurova), M. Livșiț, K. Rodin, L. Cezza, T. Stăvilă, E. Barbas, C. I. Ciobanu, C. Spînu, L. Purice, V. Rocaciuc, precum și în lucrările fundamentale ale domeniului vizat, semnate de R. Assunto, A. Lhote, W. Hoffman, A. Wojciechowski, T. Vianu, A. Pleșu, P. Evdokimov, A. Wojciechowski etc.

Artele plastice basarabene au cuprins toate genurile artelor plastice, în care peisajul este valorificat de pictori, în concordanță cu tendințele stilistice și influența școlilor ce abordează tematici variate, de la cele rustice și urbane până la imagini pitorești ale ținutului moldav.

Ultimul compartiment al monografiei, intitulat *Peisajul contemporan în artele plastice din RSS Moldovenească și Republica Moldova (1945-2010)*, evaluează și descrie cele două etape de dezvoltare a genului peisajului, dirijate de ideologia politică în perioada sovietică și în cea a independenței Republicii Moldova, desfășurate prin libertatea de creație a artiștilor plastici. Repertoriul și tematica peisajului în perioada sovietică se aflau sub influența dogmei realismului sovietic și rigorilor sociale, care au impus metode de reprezentare a expresivităților genului peisajer în artele plastice din RSS Moldovenească. În perioada regimului sovietic au fost impuse comenzile de stat, fiind îmbinate cu noi standarde ale colectivismului, ale construcției socialismului, ale imaginii omului sovietic fericit și ale frunzașilor în muncă, unde peisajul avea un rol de fundal în compozițiile de gen. O mare parte dintre artiștii plastici și-au găsit refugiu în reprezentarea peisajului prin reflectarea directă a naturii, cu o tratare naivă, monumentală sau decorativistă, care a servit drept cale de creativitate și libertate a expresiei artistice inspirate din motivele folclorice tradiționale. Protagonistii notorii care au dezvoltat și motivat o nouă artă, considerată o cale de salvare spre libertatea artistică, au fost pictorii M. Grecu, V. Rusu-Ciobanu etc. Astfel, genul peisajului reflectă generos aspecte camerale și panoramice ale naturii moldave, dezvoltând tematica și stilistica peisajelor rustice, urbane, forestiere și industriale ale localităților, fiind zugrăvite în tehnici picturale și grafice de artiști plastici precum M. Gamburd, E. Gamburd, A. Zevin, A. Vasiliev, B. Nesvedov, S. Ciokolov, L. Grigorașenco, I. Vieru, M. Grecu, V. Rusu-Ciobanu, I. Jumati, E. Gamburd, M. Petric, A. David, E. Romanescu, A. Sârbu etc.

Odată cu proclamarea independenței Republicii Moldova, artele plastice autohtone au cunoscut o libertate de exprimare creativă, care, după „dezghețul cultural”, a contribuit la configurarea unor noi direcții ale școlii naționale de arte. Genul peisajului înscrie un spectru larg de scheme compoziționale și stilistice structural-spațiale, utilizând simbolul, alegoria și

metafora ca mijloace plastice, tratate prin experimentarea tehnicilor și mijloacelor materiale variate.

La trecerea dintre secole, genul peisajului moștenește și se completează cu elemente artistice noi, orientându-se spre diverse stiluri și tendințe estetice. Acestea sunt reprezentate în lucrările de pictură ale artiștilor: D. Peicev, M. Statnii, T. Bătrânu, P. Jireghea, L. Țoncev, V. Movileanu, M. Jomir, M. Țăruș, A. Mudrea, A. Negură, Iu. Matei, A. Sârbu, Gh. Munteanu, V. Nașcu, I. Țăpin, V. Brâncoveanu, L. Țonceva, A. Macovei, L. Mudrac, M. Mungiu, V. Palamarciuc, A. Mocanu, T. Zbârnea, V. Moșanu, V. Cojocaru, I. Svernei ș.a.; în grafica de șevalet: V. Ivanov, Gr. Führer, B. Nesvedov, I. Bogdesco, Gh. Vrabie, V. Kuzmenko, G. Guzun, E. Childescu, S. Zamșa, E. Karacenteva, V. Herța, V. Sitari, A. Antoseac, T. Fabian, V. Jabinschi, E. Zavtur, V. Movileanu, V. Curtu etc.; în artele decorative: S. Vrânceanu, M. Saca-Răcilă, V. Kulicenco și A. Kulicenco, L. Goloseeva, O. Orihovscaia, A. Klimov etc.

Genul peisajului își extinde continuu arealul de acoperire, devenind un factor generalizator al artelor plastice contemporane din Moldova. Această ultimă etapă în evoluția peisajului contemporan constituie o mărturie elocventă a valorii artistice a genului și a particularităților sale specifice, incluzând în circuitul științific operele și personalitățile de vază în domeniul artelor plastice din Republica Moldova.

Structura monografiei corespunde rigorilor științifice, având o prezentare consecventă și argumentată a materialului cercetat, precum și o discuție detaliată a rezultatelor obținute. Totodată, monografia cuprinde o vastă listă bibliografică, utilă în diverse compartimente ale lucrării, reflectată prin argumentări, analize și sinteze ce acoperă un spectru larg de metode de cercetare. Lucrarea aduce o nouă perspectivă asupra subiectelor contemporane ale artiștilor, transmise prin peisajul autohton.

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