

Financial Studies



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FINANCIAL STUDIES



FINANCIAL STUDIES

Year XXVI- New series - Issue 4 (98)/2022

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ISSN 2066 - 6071

Issue 4/2022 (98, Year XXVI)

ISSN-L 2066 - 6071

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PROSPECTS FOR ACHIEVING ROMANIA'S EXTERNAL EQUILIBRIUM

Camelia MILEA, PhD*

Abstract

The COVID-19 pandemic, the health protection measures, and the policies meant to limit the economic effects of the disease have affected the world's economies on multiple levels, the international trade being one of the most seriously influenced domains. The paper¹ aims to highlight the effects of the pandemic on Romania's current account, as well as some directions of action aimed at improving the external deficit of our country. The methodology used in the article joins the empirical analysis of statistical data and their interpretation, with the identification of causalities. The analysis shows that the uncertainty regarding the evolution of COVID-19 and the measures adopted by the authorities to stop the spread of the coronavirus affected negatively, especially in 2020, the current account, and its way of financing. The paper highlights some elements that can hamper the decrease of the external deficit in the future (the large needs of external financing in the coming years, the dependence of the economy on imports, the unfavourable structure of Romanian exports and imports), as well as some directions of action intended to support the improvement of the external deficit of our country, including supporting the recovery of the economy, reducing the budget deficit, improving the domestic offer, and the research and innovation activity, etc.

Keywords: external deficit, foreign relations, external financing, vulnerabilities, COVID-19 crisis

JEL Classification: F32; F34; H63

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¹ The article is based on the research project "The issue of the external balance in the current international conditions. Requirements for Romania", C. Milea, "Victor Slävescu" Centre for Financial and Monetary Research, 2022.

1. Introduction

The world economy and trade have a strong impact on the states of the world, the participation of the countries to international economic and financial exchanges being a condition and an important source for achieving sustainable economic growth. The economic exchanges, regardless of the methods of accomplishment, are essential both for domestic balance and economic growth, as well as for economic development at regional or at the company level.

The equilibrium is an aspirational goal, being more a theoretical concept that may never occur in an economy because the conditions underlying supply and demand are often dynamic and uncertain. The situation of all economic variables is constantly changing. Thus, the economy pursues equilibrium without actually achieving it.

The COVID-19 pandemic, which has outburst in 2020, has been a major shock for the economies, and it has caused a sudden and deep recession both at the level of the European Union and at the world level, testing the health and social protection systems, the companies and the economies. The consequences drawn by the evolution of the pandemic, by the health protection measures and by the policies meant to limit the economic effects of the disease have negatively affected industrial production, services, consumer spending, trade, supply chains, investments and capital flows.

These developments exhibited at the domestic and international level support the topicality of the subject discussed, on the background of the displayed effects of the measures adopted to prevent the spread of COVID-19, but also of the challenges that our country must face in the perspective of joining the euro area.

In the article, the author aims to highlight the effects of the pandemic on Romania's current account, as well as some directions of action aimed at the improvement of the external deficit of our country. For this purpose, the paper is structured in three parts. In the first part, the evolution, characteristics, and way of financing of Romania's current account deficit are analysed, with an emphasis on the years 2020-2021. In the second part, the prospects, and obstacles in the way of achieving the external balance of our country are shown. The paper ends with conclusions where the most important results of the research are presented.

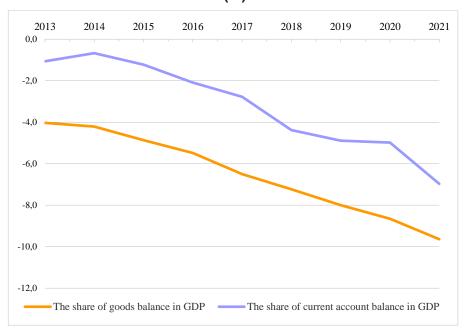
2. Romania's external account: trend, characteristics, financing

The uncertainty caused by the evolution of COVID-19, as well as by the measures adopted by the authorities at national and international level in order to prevent the spread of the coronavirus, has caused the temporary failure of production and of global supply chains; also, the decrease of domestic production and external demand, negatively affecting Romania's external balance, influencing exports to diminish (more than imports), the current account deficit to increase, as well as its financing in terms of sources and costs (by reducing foreign direct investment inflows and increasing costs), as a result of the risk aversion of investors.

Thus, Romania's current account deficit was large and slackened in 2020 and increased significantly in 2021 (by 53.5%) (continuing the upward trend started since 2004 - steep declines occurring only in 2009, 2013 and 2014). As a share of GDP, the current account deficit has reached 7% in 2021, from 1.2% in 2015 (4.9% in 2019) (see Figure 1). In the years before COVID-19, the current account balance has deteriorated due the increase in domestic demand, boosted by fiscal measures, with effects in a sharp increase in imports of consumer goods.

The trend of the current account balance in our country has been mainly due to the trend of the goods balance (increase from -4% in 2013 to -9.6% in GDP in 2021) (see figure no.1), supported by the high consumption demand from the period of significant GDP growth (2013-2019) (NBR, 2016-2021) (taking into account the fact that part of the demand surplus has been satisfied from imports, leading to their increase); and by the contraction of the global economy in 2020 and 2021 (which has caused the decrease of Romania's external demand).

Figure 1
The evolution of the share in GDP of the goods balance and the current account balance in Romania during the period 2013-2021 (%)



Source NBR data, author's calculation

The sharper drop in exports compared to imports in 2020, the first year of the pandemic, has led to the increase in the negative balance of the goods and current account.

The evolution of the exports structure in 2019 and 2020 (the increase in the share of exports of capital and consumer goods, and the decrease in the share of exports of intermediate goods) is positive for the current account balance, but it is necessary to continue this trend.

In contrast, the structure of imports and its evolution are of concern, given that from 2016 till present, imports of consumer goods have generally grown faster than imports of other goods. In 2020, imports of capital goods have also increased.

Romania's current account deficit has been financed after 1990 mainly through foreign direct investments, with a decreasing share

between 2015 and 2020, against the background of the sharp increase in the negative balance of the current account. The way of financing the external deficit has suffered a breaking point in 2020, namely foreign direct investment inflows have decreased, due to the risk aversion of investors amid the uncertainty generated by the effects of the measures adopted to stop the spread of the coronavirus and the uncertainty regarding the evolution of the disease. As a result, Romania had to resort to external loans and portfolio investments, with effects of increasing costs and the total external debt, and implicitly the risks related to the repayment and sustainability of the external debt.

Thus, in 2020, portfolio investments have been the main source of financing the current account deficit (with a significant annual increase (468%), representing the highest value of this indicator since 1990), in the structure being mostly long-term debt instruments.

In 2021 the situation has improved. Thus, the coverage of Romania's current account deficit through foreign direct investment inflows has increased compared to the previous year, almost reaching the value before the COVID-19 crisis (of 2019), which shows the decrease in investors' risk aversion and the improvement in foreigners' perception of our country.

Our country's current account deficit is largely brought about by the high budget deficit. The financing of the budget deficit generates public, internal and external debt. In both 2020 and 2021, the government managed to meet its external financing needs (aimed mainly to mitigate the impact of the COVID-19 shock and to facilitate the recovery), despite the increased uncertainty due to the effects of COVID-19 and of the measures adopted to end this disease, and to temporary tensions in financial markets amid greater risk aversion in global financial markets and capital flight. This has increased Romania's public indebtedness, but it should support medium-term adjustment.

Thus, the annual increase in medium and long-term external public debt from 2020 (46%) has been the most important since 1990, (exceeding the jump in medium and long-term public debt due to the economic-financial crisis of 2008, felt in Romania in 2009, 2010). More than a third of the debt obtained in 2020 has been used to refinance maturing external public debt.

Also, in 2020, against the background of the expenses entailed by the COVID-19 pandemic, the largest increase in the total external debt from 2009 til present is recorded (as an annual rate, 15.5%). In

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2020, the share of total external debt in GDP has increased from 49% in 2019 to 58%, the fastest increase recorded in the analyzed time frame, after that of 2009, when it increased from 52% of GDP in 2008 to 69%.

In 2021, the increase in total external debt and external public debt has been lower compared to the previous year, of 6.2% and 1.4%, respectively. direct external public debt reaching EUR 58 billion in December 2021. Among the components of long-term external debt, direct public debt has had the majority share since 2017, in 2021 representing 60%.

The increase in the costs of direct public external debt is also due to the replacement of the creditors' types - from multilateral institutions (60% in 2006), and government securities (35% of the amounts attracted), mainly to bonds (80.7% in 2021).

3. Prospects and impediments in achieving Romania's external equilibrium

After the decrease from 2020, in Romania, in 2021, the economic activity has had a recovery beyond expectations, which has also involved a slight upward correction of the cyclical component (GDP gap), and the investment process has been dynamic.

Maintaining the positive trend of economic growth in our country depends on the actual measures to support the economy, on the fructification of the increased budget of the European Union in the coming years, on the recovery of production and distribution chains in Europe and on the economic evolution of the European countries, our main trade partners.

Romania must calibrate its appropriate mix of macroeconomic policies, taking into account the vulnerabilities of the economy, including: large budget and current account deficits, significant degree of Euroization, high inflation. Economic policy measures should also focus on mitigating the impact of COVID-19 shocks and on facilitating the recovery of the economy. This involves adjusting the economy in the medium term through stronger economic fundamentals, but it generates the increase of the debt.

The measures for the economic rebound should rely on the mobilization of the funds necessary for the recovery of the economy. Investments are the engine of economic growth and job creation, with a multiplier effect and direct contribution to fix capital gross formation.

In situations of economic stagnation or crisis, the economic literature recommends large investment expenditures of the public sector. In addition, from 2021, Romania can take advantage of the availability of a large volume of European funds for economic recovery.

Thus, in the period 2021-2027, within the Cohesion policy for 2021-2027, Romania has been allocated European funds of 31.35 billion euros, and through the "Recovery and Resilience Mechanism" facility, it has an allocated budget of 30.4 billion Euros, funds that can be used in key areas, such as: infrastructure, education, health, agriculture, environment, or energy, as well as for the modernization of large public systems. Making investments in strategic areas leads to the modernization of these sectors with effects of improving the internal supply (namely increasing exports and decreasing imports), and therefore the external balance.

On the other hand, it must be taken into account that the prospects of the economic evolution and of the improvement of Romania's external balance are marked by uncertainties and risks, essentially generated by:

- the pursuit of the pandemic, situation that has a more significant and lasting impact on the economy (and which requires the health authorities to provide suitable treatments based on the experience from the last almost 3 years), then by
- the risk that the negative effects caused by the pandemic in the economy (such as bankruptcies, long-term unemployment and disruptions in supply) should be deeper and broader,
- the risk that the world economy and trade will not improve or that trade tensions will increase,
- the occurrence of pressures on financial markets, with negative effects on borrowing costs, in the context of investors' risk aversion and reduced liquidity.

Forecasts of large fiscal deficits in the next years (around 7.1% of GDP in 2022 according to the European Commission's spring (2021) forecast) imply high external financing needs in the coming years as well. Under these conditions, there will continue to be pressures both on the current account (to record a large deficit), as well as for having a high and even higher level of the external debt, which stood at 136.6 billion euros at the end of 2021. The elevated costs of the credits granted to our country on the international markets compared to those of the other countries in the European Union, in the context of the

assessment of Romania's sovereign debt in 2019-2020 at the lowest investment grade by the main rating agencies, causes concerns about the financing of a rising debt stock. Thus, financing external borrowing needs could become more uncertain and more costly.

The prospects of the public debt growth, and of financing a significant share of the debt further from abroad, in foreign currency, will contribute to the worsening of the external position of our country.

Under these conditions, we believe that measures should be adopted in order to reduce the budget deficit, and for fiscal consolidation. It is also necessary to set the priorities, to have prudence and moderation in making the budgetary fiscal policies for the build-up of fiscal space, which should be directed towards the financing of policies and expenditures with an impact on sustainable economic growth.

Romania has an economy dependent on imports. If private consumption recovers, imports will resume their upward trend (higher than that of exports) with effects in the direction of maintaining the current account deficit at a high level.

Thus, as a result of the sharp increase in the trade deficit in the first 8 months of 2022 (by 47% compared to the same period in 2021), the current account deficit has also increased (by 59%) (NBR, 2022).

In addition, the structure of imports and exports influences negatively the evolution of the external equilibrium in our country. Thus, exports consist mainly of intermediate goods, although in recent years the share of exports of capital and consumer goods has increased. Improving the structure of goods exports depends on supporting efficient activities, by attracting investments in sectors with high added value, respectively by increasing the ability of Romanian companies to adapt to the standards of foreign markets and to face possible unfavourable developments.

The evolution of the structure of imports is worrying, given that since 2016, imports of consumer goods have generally grown faster than imports of other goods.

Unlike many other member states of the European Union, in Romania, sectors less exposed to foreign competition (both in terms of exports and the penetration of imports) have grown more than tradable sectors in recent years, which can represent an impediment in the path of the development of some fields producing export goods.

As a result, in order to diminish the current account deficit, we consider it necessary to stimulate the improvement of the domestic

offer both quantitatively and qualitatively, offering quality products with a high degree of processing, which satisfy the needs of Romanian and foreign consumers.

To this end, we consider it useful to improve the research and innovation capacity of the economy, including by increasing the expenditures allocated to research-development-innovation, in order to support the growth of the production of high added value goods, which should incorporate high technology. This should favour the production of Romanian goods meant to meet both internal and external demand, as well as the improvement of the exports structure and of the trade balance of high-tech products.

Likewise, the correlation of the current account deficit with its sources of financing should be pursued, in order to stabilize and even increase the sources of financing not bearing interest (foreign direct investments and capital transfers).

The trend in recent years of covering the external deficit through portfolio investments concurs to the accrual of external debt, especially of public debt, as well as to the expansion of the current account deficit in the medium and long term due to increasing capital outflows through the account of Income from portfolio investments.

In addition, in order to support the improvement of our country's current account, we consider it necessary to reduce the dependence of the Romanian economy on energy imports, and to use the national energy resources, in order to diminish the deficit of the energy trade balance.

A possible degradation of external conditions, against the background of increased trade tensions, of an exacerbated risk aversion or of the slowdown in economic growth of Romania's main trading partners, could lead to further deterioration of the current account.

The adoption of the single currency may raise problems for our country's external equilibrium. The loss of the "exchange rate" tool and its lack of support to the competitiveness of Romanian goods may negatively affect Romania's exports, differentiated, however, for the trade with the countries within the European monetary area, for trade with member countries of the European Union (outside the euro zone) and, for the trade relations with countries outside the European Union. The intensity of the effects depends on the improvement in the exports structure in the sense of the increase of goods with a high degree of processing and high added value.

The prospects of lower wage growth will reduce the pressure on cost competitiveness, with effects in improving labour productivity and reducing the external imbalance, evolution also supported by the freezing of wages in the public sector and by a very limited increase in the minimum wage in 2021. However, non-cost factors (such as scarce infrastructure, especially in poorer regions; the difficult business environment favoured by political and legislative unpredictability; skills shortages and the high share of the low skilled workforce, in the context of the fast demographic decline, combined with deficiencies in the education and vocational training sector; the low capacity for innovation), allow only limited possibility of manoeuvre to counteract the evolution of cost competitiveness, continuing to represent a brake to the improvement of export competitiveness, and implicitly of the external disequilibrium.

Both in order to stimulate investments and competitiveness, measures should be taken to improve the infrastructure both qualitatively and quantitatively.

Also, the ongoing exhibition of legislative unpredictability represents threats to financial stability and to the inveigling of foreign investments; it affects the business environment, and it may influence negatively the confidence and the risk premium required by creditors and international investors with a negative impact on the external balance, in terms of the costs and instruments financing the external imbalance. Therefore, we believe that measures are needed to mitigate threats to financial stability and investments, as well as general legislative unpredictability, by implementing appropriate laws that are well-drafted and verified before they are adopted, so that there is no need for subsequent corrections, and which should support the sustainable development of the economy. We consider it useful to advise with the relevant stakeholders in policy making and the ex-ante impact assessment.

4. Conclusions

The uncertainty caused by the evolution of COVID-19, as well as by the measures adopted by the national authorities and commercial partners in order to stop the spread of the coronavirus, have caused a decrease in external demand, affecting negatively Romania's external balance, the decrease of exports (more than imports), the growth of the current account deficit, as well as its

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financing from the point of view of sources and costs (by reducing foreign direct investment inflows), as a result of the risk aversion of investors against the background of the uncertainty generated by the effects of these measures, and the increase in the share of debt-generating financing sources (foreign loans and portfolio investments). These developments represent a source of vulnerabilities and risks for Romania's external equilibrium, in terms of the repayment effort and of the external debt sustainability.

In addition, the evolution of the COVID-19 pandemic, the ability to recover and the possible structural implications of the crisis are still uncertain, which implies caution in forecasts in general, and in terms of the possibilities of achieving the external balance of Romania, in particular. Overall, policy actions over the past year have focused on mitigating the impact of the COVID-19's shock and on facilitating the recovery. This has increased Romania's public indebtedness but should support medium-term adjustment.

The structure of imports and exports influences negatively the evolution of the external deficit in Romania, the trend of the structure of imports being worrisome, considering the fact that since 2016, imports of consumer goods have generally grown faster than imports of other goods, evolution that is not favourable to long-term economic growth.

Considering that the prognoses show further increase of the external deficit and of the public debt and the financing of a significant share of the debt from abroad, in foreign currency, leading to the worsening of the external position of our country, political actions are necessary to address the vulnerabilities from the Romanian economy (including: large current account and budget deficits, fragile public budget, with low own revenues, high degree of Euroization of the economy). In particular, measures are needed to improve the structure of the domestic offer both quantitatively and qualitatively, offering quality products with a high degree of processing, which should satisfy the needs of Romanian and foreign consumers.

For Romania, which is a country dependent on imports, but also concerned with development and joining the euro area, achieving the external equilibrium as a medium and long-term trend is imperative in order to avoid the enhancement of internal imbalances when performing in the single currency area, alongside more developed countries and/or with smaller external deficits.

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References

- Brissimis, N.S., Hondroyiannis, G., Papazoglou, C., Tsaveas, N. T., Vasardani, M. (2012), Current account determinants and external sustainability in periods of structural change, Econ Change Restruct (2012), Dordrecht Vol. 45, Iss. 1-2, (Feb 2012): 71-95. DOI:10.1007/s10644-011-9107-y
- 2. European Commission (2016), Country Report Romania, 2016, http://ec.europa.eu/europe2020/pdf/csr2016/cr2016_romania_ro.pdf
- European Commission (2018), Convergence Report Economic and Financial Affairs, ISSN 2443-8014 (online), 2018, Institutional Paper 078, may 2018
- 4. European Commission (2018), Statistical Annex of Alert Mechanism Report 2019, Brussels, 21.11.2018 SWD (2018) 466 final
- 5. European Commission (2019), Country Report Romania, 2019, Brussels, 27.2.2019 SWD(2019) 1022 final
- 6. European Commission (2019), Statistical Annex of Alert Mechanism Report 2020, Strasbourg, 17.12.2019 SWD(2019) 630 final
- European Commission (2020), Convergence Report, ISSN 2443-8014 (online), 2018, Institutional Paper 129, June 2020, https://ec.europa.eu/info/sites/default/files/economyfinance/ip129_en.pdf
- 8. European Commission (2020), Report of the Commission toward the European Parliament, concerning the alert mechanism 2021, Brussels, 18.11.2020 COM(2020) 745 final
- 9. European Commission (2020), Statistical Annex of Alert Mechanism Report 2021, Strasbourg, 18.11.2020 SWD(2020) 275 final
- 10.European Commission (2020), Country Report Romania, 2020, Brussels, 26.2.2020 SWD(2020) 522 final
- 11. European Commission (2021), Debt Sustainability Monitor 2020, Institutional paper 143, February 2021, Directorate-General for Economic and Financial Affairs, https://ec.europa.eu/info/publications/debt-sustainability-monitor-2020 en, Luxembourg, ISBN 978-92-76-16332-9 ISSN 2443-8014
- 12. European Commission (2021), In-Depth Review for Romania, Brussels, 2.6.2021, SWD (2021) 411 final
- 13. European Commission (2021), Spring 2021 Economic Forecast, https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/spring-2021-economic-forecast-rolling-sleeves_en#:~:text=All%20in%20all%2C%20the%20EU,%2C%20in%20the%20euro%20area).

Financial Studies - 4/2022

- 14.National Bank of Romania, (2006-2021), Annual Report, 2005-2020, Bucharest
- 15. National Bank of Romania, (2008-2022), Monthly Bulletins: December 2007, December 2008, December 2010, January 2012, July 2012, January 2013, January 2014, June 2014, January 2016, December 2016, December 2017, January 2018, May 2019, August 2019, September 2021, October 2021, September 2022, Bucharest;
- 16.National Bank of Romania, (2018-2021), Romania's Balance of Payments and International Investment Position, Annual Reports 2017-2020, Bucharest;
- 17. National Bank of Romania, (2021), Inflation Report, November 2021, year XVII, no. 66, ISSN 1584-093X (online), Bucharest
- 18. National Bank of Romania, (2021), Financial stability Report, December 2021, year VI (XVI), no. 11 (21) new series, Bucharest
- 19.National Institute of Statistics (2019-2021), Statistical Bulletin of International Trade no.12/2018, no.12/2019, no.12/2020, ISSN 1843-049X. ISSN-L 1843-049X. Bucharest
- 20.Romania's Government, Ministry of Finance (2021), Report on the macroeconomic situation in 2021 and its projection for 2022-2024, Bucharest

Internet sources

- https://economy-finance.ec.europa.eu/economic-research-anddatabases/economic-databases/ameco-database_en
- https://mfinante.gov.ro/documents/35673/162114/nota_bgc_31102021 .pdf
- https://mfinante.gov.ro/domenii/bugetul-de-stat/informatii-executiebugetara
- https://tradingeconomics.com/country-list/rating
- https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates /long_term_interest_rates/html/index.en.html

ENHANCING FINANCIAL ACCOUNTABILITY IN SOUTH AFRICAN LOCAL MUNICIPALITIES: A CONSEQUENCE MANAGEMENT VIEWPOINT

Prince Chukwuneme ENWEREJI, PhD*

Abstract

Achieving clean audit reports has remained a difficult task for most local municipalities in South Africa due to financial misappropriation, mismanagement, and the inability to apply legal actions against the defaulters who misuse municipal financial resources. This study explored the meaning of financial accountability, the state of municipal accountability in South Africa, the techniques other international countries adopt to ensure municipal financial accountability, the meaning of consequence management, and the possible measures to uphold consequence management in the local municipal context. A qualitative research approach was adopted, and a traditional literature review was applied to find answers to the study problems. Findings from the study reveal that financial accountability is the process of holding role-players who handle financial resources answerable to finances entrusted to them. It was discovered that the state of municipal financial management is worsening as only 17.8% of the municipalities could achieve clean audit reports in the 2020/2021 financial year. Considering the techniques used by international countries to achieve accountability, it was highlighted that they institute a central monitoring and reporting body to oversee the municipal financial practices while the concept of oversight is held in high esteem. Furthermore, it was discovered that most municipalities in South Africa do not facilitate consequence management, which has invariably escalated financial misappropriations and other poor financial practices. The study conclude that municipalities can enhance their financial practices if the recommendations of this study would be competently applied.

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Keywords: municipal finance, clean audit reports, service provision, local municipalities, South Africa

JEL Classification: H70

1. Introduction

Local municipalities in South Africa must attain sound financial accountability to achieve dependable financial outcomes in an endeavour to provide equitable services to the residents as constitutionally stipulated (Municipal Finance Management Act (MFMA), 2003) Unfortunately, Mothupi, Lekunze and Musvoto (2022) affirm that most South African municipalities struggle to achieve clean audit reports due to poor financial management and this has invariably affected service delivery mandates. In South African local municipalities, resources are often mismanaged, and corruption keeps because of poor financial management (Enwereji & Uwizeyimana, 2021; Enwereji & Potgieter, 2022). Due to unethical behaviours in the municipal context, the Municipal Finance Management Act (MFMA) of 2003 was enacted to improve municipal financial management and to establish a strong financial foundation for the long-term provision of services. The MFMA further provides the basis of financial management, which includes overseeing several interconnected components, including planning and budgeting, income expenditure management, procurement practices, management, reporting and oversight. Each of these element help ensure that spending is productive, efficient, successful and hold municipalities accountable for their expenditures. Despite the legislative background in improving local municipal financial management, municipalities still struggle to achieve sound financial outcomes (Auditor General Report [AG], 2019; Brigham & Houston, 2021).

In view of Mothupi et al. (2022), consequence management is another crucial factor that should be established in South African municipalities to ensure accountability is attained. Consequence management refers to actions taken by the management to maintain or restore essential services and correct or mitigate errors occurring from performance (Sisi, 2019). The continuous emphasis on poor transparency and a low response to corruption in municipal leadership is a social menace in the South African municipal context (Auditor General Report, 2020). The National Treasury (2018) posits that there

is a need for local municipalities to be accountable to the provincial or national government to ensure residents receive the dividends of democracy. Various South African municipalities have not been successful in putting anti-corruption standards on the administrative and political leadership, despite the proliferation of institutions and anti-corruption frameworks (Safara & Odeku, 2021). This portrays how poorly the bureaucracy complies with certain criteria and how ineffective some legal, regulatory, and functional codes remain. In this regard, it is implicit that after several years of democratic governance in South Africa, local municipalities have not been successful in maintaining clear strategic and financial credibility in the municipal sphere (Auditor General Report, 2019).

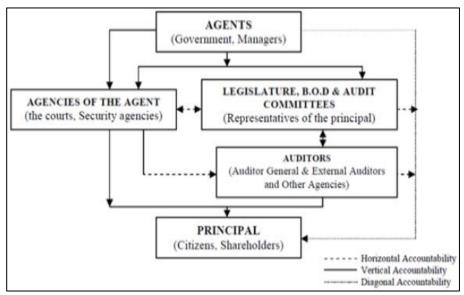
The Auditor General South Africa (AGSA) (AG, 2021) notes that not all municipalities adequately abide to the principles of accountability and the applicable municipal legislation for attaining sound financial accountability and this has increased irregular, unauthorised and wasteful expenditures. The AGSA confirmed in 2019 that only 5% of municipalities in South Africa achieved financial accountability while most of them are did not perform effectively because of poor leadership, weak institutional capability, poor financial management, corruption, and political instability. Additionally, the roleplayers are not always held responsible for their poor performance in the management and reporting requirements for performance information (Finkler et al., 2022), Concerning these issues surrounding various municipalities, this study set out to investigate the concepts of accountability and how to facilitate consequence management to achieve sound financial outcomes. The study investigated how accountability is achieved in the local municipalities of some international countries and the importance of consequence management in the municipal sphere. Furthermore, recommendations are made on how to manage municipal financial resources through the implementation of consequence management.

2. Agency Theory

The fundamental concept of Agency Theory is that policymakers and public officials do not hold the same social interests (Caers et al., 2006). Lopes (2012) as well as Mahaney and Lederer (2011) describe an agency as a person who oversees managing the resources owned by one person or a group of people known as the

principal. The principal in this case, refers to the owners of the business or estate that is managed by the agents (Akpanuko & Asugwa, 2013). Stewardship and transparency help to settle disputes when ownership varies from the management. The relationship of the agency is bound to a contract where one or more persons acting as directors employ another person acting as an agent to conduct certain tasks for the benefit of the principal (Zu & Kaynak, 2012). Implementing this function requires some decision-making powers to be assigned to the agent. The principal can restrict this differentiation of interest by monitoring the agent's activities to limit deviations and ensure that the agent's objectives are consistent with those of the principal (Lopes, 2012). According to Kivistö (2007), a challenge affecting the principal/agency relationship is that agencies do not submit, or in some cases, submit inaccurate information to the principals, resulting in objections and suspicions of fraud. This could also be the cause of governance and management flaws in South African municipalities and AG (2018) confirms that municipal governance has weakened, and municipal financial management has been unable to discharge their duties such as transparency and accountability.

Figure 1
Agency Theory



Source: Akpanuko & Asogwa (2013)

Figure 1 shows the relationship between the agents and the principal. It further portrays that that agents include government officials and managers, while the principal includes citizens and stakeholders. The application of this theory in the municipal setting helps establish a trustworthy relationship between the agents and the principal. To minimise the suspicion of corruption and unnecessary conflicts, the agents should make every effort to provide their obligations and services as agreed upon at the start of the contract.

There should be transparency and accountability by the agents (municipal financial workers in this case) to be effective in taking strategic decisions in an uncertain environment. The subsequent section expounds upon the research methodology of the study.

3. The concept of municipal financial accountability

The meaning of financial accountability can be better understood when the phenomenon of accountability is explained independently. According to Agbatogun (2019), accountability is an obligation to demonstrate that objectives have been obtained following agreed rules and standards. Accountability, according to Olu-Adeyemi and Obamuyi (2010) and Sambo (2021), is "the duty to truthfully and transparently do one's duty and the obligation to allow access to information by which the quality of such services can be evaluated and being responsible and answerable to someone for some action. Kim and Lim (2017) explain further that the concept of accountability is a two-level concept involving enforceability and answerability.

In the views of Agbatogun (2019), financial accountability is "the process of identifying, measuring and communicating economic information to permit informed and rational decisions to be made". As a result, financial accountability is concerned with ensuring that funds are spent as promised and by following applicable rules and regulations (Hall et al., 2017). Agwor and Akani (2017) indicate that financial accountability should be applied across all civil societies, institutions and organisations as rational practise that would ensure responsibility by individuals and institutions. Okpala (2019) and Agbatogun (2019) posit that financial accountability remains a crucial prerequisite to preventing the abuse of power and ensuring that power is directed towards efficiency, effectiveness, and transparency. Considering the afore-stated elaborations, financial accountability implies holding individuals to account for the financial transactions

entrusted to them in their jobs. Financial accountability, according to Hall et al. (2017) is a way of keeping residents up to date with a civil society's financial situation, performance, service effort, and accomplishments.

The South African National Treasury (National Treasury, 2019) aver that municipal financial accountability denotes assuming responsible stewardship by municipal officials in handling public funds. Municipal financial accountability, according to Woods and Mantzaris (2012), is the act of mobilising, allocating, and reporting municipal financial assets equitably. Municipal financial accountability is applied to guarantee that government officials abide by the municipal financial management principles, guidelines, and applicable regulations 2021; Madumo & Koma, 2019). (Nombembe, To improve government's fiscal control and financial management, competent financial reporting and accounting systems should be implemented (Enwereji & Uwizeyimana, 2019), and this will help to avoid unwanted, fruitless, and irregular expenditures. Municipalities are also expected to institute external audit systems to ensure follow-up action can be taken to address the reported miscreants and instances of fraud. misallocation, and misappropriation (Mantzaris, 2013).

Employees entrusted with the obligation to manage public funds must demonstrate that they are good stewards and can handle such funds (Gyüre, 2012; Woods & Mantzaris, 2012). However, there are laid down principles or legislation responsible for achieving financial accountability, but the public servants do not always obey these laws (Mantzaris, 2013). A well-defined framework of financial transparency serves as the basis for the implementation of efficient financial processes (Kanyane, 2011; Atrill & Laney, 2012). For all organisations and public entities, financial transparency and sound financial management are critical to achieving the expected objectives (Deloitte, 2012). The fact that financial records are required to be viewed by the public makes it necessary for public enterprises and government entities to be accountable (National Treasury, 2019). This is achieved through effective auditing, budgeting, reporting, and accounting.

Financial accountability cannot be achieved in municipalities when public officials do not apply ethical principles and guidelines in their duties (Kanyane, 2011). The application of ethical conduct by public officials in government offices is to ensure that public funds are channelled toward efficient service delivery and that citizens are

confident with the services provided by the municipalities (Mantzaris, 2013). There are always possibilities of fraud, corruption, irregular, wasteful and fruitless expenditure when ethical conduct and professionalism are neglected (Woods & Mantzaris, 2012). The MFMA condemns such corruption and irregularities that involve the municipal role-players such as councillors, municipal managers, and other administrative heads. Concerning this financial misappropriation, Van Rooyen (2017) affirms that there is always a lack of commitment by the municipality to rectify this situation. However, the National Treasury (2018) concurs that the continuation of sound financial management practices by a municipality is a function of long-term sustainability. In the same disposition, Woods and Mantzaris (2012) pinpoint that poor municipal financial accountability management results in resource mismanagement and underutilisation of public funds and raises the risk of corruption.

4. Research Methodology

This study investigated the financial accountability of South African local municipalities and how it can be enhanced through consequence management. A qualitative study was used to provide answers to the problem of the study. According to Creswell (2014), qualitative researchers immerse themselves in the study using inductive principles in an endeavour to find solutions to the phenomenon under investigation. The current study adopted a traditional literature review to answer the research objectives. Snyder (2019) and Booth et al. (2021) state that a traditional literature review provides valid and significant techniques to detect current trends and gaps by providing a thorough, critical, and objective appraisal of the current information on a specific topic. In this study, the literature review was tailored to explore the meaning of municipal financial accountability, the state of municipal accountability in South Africa, the techniques other international countries adopt to ensure municipal financial accountability, the meaning of consequence management, and the possible measures to uphold consequence management in the local municipal context. Thereafter the article discusses the findings obtained and ands with the conclusion and recommendations in an endeavour to enhance municipal financial accountability through consequence management.

5. State of municipal financial accountability in South Africa

Effective financial management procedures remain a prerequisite to attain transparency, accountability, and effective service delivery in municipalities throughout the world (Banerjee, 2015; Enwereji & Uwizeyimana, 2019). Fourie et al. (2011) confirm that financial accountability promotes economic, social as well as, infrastructural development, and aid in equitable service delivery. The Auditor General Report (2020) confirms that most municipalities do not comply with the financial management principles as stipulated by the MFMA and this has resulted in financial misconduct in the municipal context. Table 1 presents the summary of financial reports of South African municipalities from the 2016/2017 to the 2020/2021 financial years, while Table 2 presents the summary of irregular, fruitless and wasteful, and unauthorised expenditures of South African municipalities from the 2016/2017 to the 2019/2020 financial years.

Table 1
Summary of submitted municipal audit reports (2017–2021)
(Billion Rand)

-	Unqualified with		Qualified	Adverse	Disclaim	Out-	Total
Years	No findings	findings	with findings	with findings	ed with findings	standing audits	South Africa
2016/ 2017	33	114	72	6	32	0	257
2017/ 2018	20	94	93	6	39	5	257
2018/ 2019	32	96	87	7	33	2	257
2019/ 2020	41	100	30	2	10	4	257
2020/ 2021	46	143	51	2	10	2	257

Source: Auditor General Reports 2016/2017-2020/2021

Note: The accounting terms in this table are explained in Appendix

Table 1 presents a summary of submitted financial reports of 257 municipalities in South Africa from 2017–2021. It is evident that the performance of the municipalities is poor as most municipalities are unable to achieve clean audit reports. Although unqualified financial statements with no findings increased from 33 in 2017 to 46 in 2021, it

is evident from Table 1, that financial statements with unqualified opinions increased from 114 in 2017 to 143 in 2021.

Table 2 Summary of irregular, fruitless and wasteful, and unauthorized expenditure of municipalities (2017–2020) (Billion Rand)

Years	Irregular expenditures	Fruitless and wasteful expenditures	Unauthorized expenditures
2016/2017	29.73	4.24	12.60
2017/2018	24.46	1.30	13.40
2018/2019	32.55	2.07	22.00
2019/2020	26.00	1.96	20.45

Source: Auditor General Reports 2016/2017-2019/2020

In Table 2, a summary of irregular, fruitless and wasteful, and unauthorised expenditures of South African municipalities (2017–2020) are presented and it shows the poor performance of municipalities in their financial management practices. Regarding irregular, fruitless and wasteful, and unauthorised expenditure as reflected in Table 2, it is observable that billions of rand are lost due to the inability of municipalities to apply efficient financial management. The cumulative value of irregular expenditures for the 2016/2017 financial year amounts to R112.74 bn, the fruitless and wasteful expenditures to R9.57bn, and unauthorised expenditure stood at R68.45bn in the municipalities. The worsening state of local municipal financial management demands that the South African government should facilitate credible measures to halt the social menace and guarantee effective service delivery to the residents.

The Auditor General Report (2021) flayed on the poor financial management outcomes and advocated sound municipal financial accountability while highlighting that it serves as a basis to actualise an effective financial process. The report addressed the need for municipal role-players to focus their budgets on the welfare of citizens and the application of suitable internal control measures, training, and supervision. The report concurred that adequately trained employees should be positioned in the strategic positions of the municipalities to attain sound financial accountability. Considering this assertion, Dorn et al. (2021) reiterate that accountability could be attained in public service by investing in employee training and skill development. Training and skill development provide the groundwork for lifelong

learning to boost productivity and the general quality of work (Dorn et al., 2021). When employees receive training, their knowledge, skills, attitudes, and social behaviour change in ways that improve the performance of the organisation.

The Auditor General Report (2020) highlighted that municipal role-players should abide by the applicable municipal financial legislation to assure that expenditure and income avenues are competently met by administrative or political units and that there are consequences for mismanagement. This report further stressed that certain municipalities achieved clean audit reports among all odds, and these are objects of stable leadership, strong internal and external control systems, efficient governance, good monitoring and evaluation system, and strategic leadership. It is unfortunate that the widespread control and monitoring deficiencies obvious in many other South African municipalities also overshadow those few excellent practices. The effect is that the funds entrusted to their disposal are either misused or not properly accounted for, as specified by laws governing public financial management. The evidence of a lack of municipal accountability invariably results in the decay of infrastructure, unfinished projects, lack of road maintenance, unsupervised projects. and inability to provide adequate services to the citizens (Enwereji & Uwizeyimana, 2019).

6. Municipal financial accountability in other countries

Governments, lawmakers, and citizens require thorough financial reporting to fully comprehend the fiscal status of an organisation and provide an accurate account of how public funds have been used (Brigham & Daves, 2018). The national legal requirements for reporting financial accountability, such as norms, quality, and timeliness of data, vary among countries. Holding agents or other entities responsible for undertaking financial activities is a crucial control step in a financial transaction process, which results in financial accountability (Segal & Lehrer, 2012). Setting up efficient financial operations requires a clearly defined financial accountability structure (Zietlow et al., 2018). Financial experts concur that the "agent" and the "principal" must have a reciprocal relationship in which the agent is responsible to the principal for their activities (Akpanuko & Asogwa, 2013; Zu & Kaynak, 2012). Accountability may be directed upward (to a higher authority), downward (to citizens or a community), or sideways

depending on who the principal is (as part of a contract agreed for mutual benefit). Resource misallocation and corruption in the municipal context are results of poor financial management and Enwereji and Uwizeyimana (2019) affirm that municipal financial management entails controlling several interconnected elements, including planning and budgeting, income, cash and spending management, procurement, asset management, reporting, and oversight. Each element helps to guarantee that spending is efficient, effective, and developmental, and that municipalities may be held accountable. The subsequent section presents key mechanisms for strengthening municipal accountability.

6.1. Key mechanisms for strengthening municipal accountability

The laws governing local governments help provide several measures to enhance financial accountability (Stoker, 2017). A key mechanism to facilitate accountability entails outlining the obligations of the municipal political personnel such as the mayors, non-executive council members, executive council members and other officials (Khaile & Davids, 2020). This division between political and managerial responsibilities is essential for good governance (Gao & Yu, 2020). The executive mayor and executive committee must exercise political leadership by making policy recommendations, assisting in the compiling of budgets, and setting of performance goals, and supervising their execution by evaluating results through mid-year reports (Kolisang, 2019). They are prohibited from using their authority, privileges, or access to sensitive information improperly to advance another person's interests or for personal gain while performing their tasks (AG, 2019). In addition to other municipal employees such as senior managers, the municipal manager is legally responsible for financial management's implementation and results (AG, 2019). To act in the municipality's best interests, the municipal role-players must be faithful, honest and ethical (Nyalungu, 2022). As elected officials who represent the community, non-executive council members review and approve the proposed budgets and policies as well as debate them. Based on quarterly and annual reports, the executive mayor or the committee, as well as the representatives are held liable for their actions (Nyalungu, 2022).

Another mechanism to establish financial accountability is to develop a performance orientation process (Mahrani & Soewarno, 2018). Establishing service delivery priorities and plans are governed

by the legislative framework, which also includes procedures and regulations. In an endeavour to maintain effective financial management accountability to attain service delivery targets, it is important to ensure alignment between the plans, budgets, implementation strategies and reporting (Stoker, 2017). The final mechanism to enhance financial accountability in the local municipal sphere is to strengthen reporting and disclosure requirements (Mahrani & Soewarno, 2018). Management may be proactive in identifying and resolving issues as they emerge with the use of high-quality and timely management information. It also promotes a performance-oriented approach in local governance, the cycle of financial management and accountability, and how they should be integrated. However, depending on a country's history and governing structure, certain institutional expressions and responsibility hierarchy differ (Cane, 2016; Rose-Ackerman, Egidy & Fowkes, 2015), as well as the techniques used by the different political interests (Dowdle, 2006). Municipal financial accountability in the United States (US) and the United Kingdom (UK) is presented in the subsequent sections. These countries were chosen because they are very effective in upholding municipal financial accountability, as well as providing equitable services to the residents.

6.2 Municipal accountability in the United States

The US employs political, legal, bureaucratic, and social accountability in its mechanisms of ensuring financial accountability (Knudsen, 2018). In the US, Congress has established a system of rules, procedures, and informal practices that enable citizens and organized interest groups to examine administrative decisions, which is more like a collective bargain (Kagan, 2019). The Administrative Procedure Act of 1946 (APA) is a key example of legislation reflecting this model by empowering stakeholders to monitor and challenge administrative actions (Beermann, 2006). The Executive Order requires agencies to submit for review to the Director of the Office of Management and Budget (OMB) — Political Accountability; the APA also requests a modern system of judicial review, which demands legal accountability actions against public officials in state courts (Mashaw, 2012; Cane, 2016)

The US Government Accountability Office (GAO), also known as the "congressional watchdog," is a neutral, independent organisation that assists Congress in improving the way the

government operates (Psygkas, 2020). To help the government save money and operate more effectively, GAO evaluates how taxpayer's dollars are spent, and provides Congress and federal agencies with unbiased, information (GAO, 2019). The GAO provides Congress and federal agencies with legal advice and judgments about the use of and responsibility for public funds. To promote the efficiency and effectiveness of the use of funds, internal controls, financial audits, and other government audit measures are institutionalised (GAO, 2019). In the US system, social responsibility is accomplished by participation, openness, and justification (Psygkas, 2020). According to Section 553 of the APA, the agency must give notice of its financial proposal and a chance for affected parties to comment.

The Supreme Audit Institution (SAI) is also used in the US; typically, this takes the form of the Auditor General's office, an independent body that submits reports to the legislature. Periodic reports on the operations and financial statements of governmental bodies are submitted. As a State Board, the Municipal Accountability Review Board (MARB) was created by Section 367 of Public Act 17-2 to offer technical, financial, and other support, as well as accountability for towns going through different stages of financial hardship. independent auditors can upload audit reports Additionally, electronically using the Electronic Audit Report System (EARS) (Includes Municipal Audits), which is a website made available by the Municipal Finance Services Section of the Office of Policy and Management (OPM) and is used in the US state of Connecticut. This ensures that the public and state grantor organisations will have access to the reports posted on the website. These reports consist of the annual audit reports that municipalities must submit. As a final step in a continuous effort to shift the emphasis of budget decision-making away from inputs, the US municipalities also incorporate performance data into their budgeting and planning processes.

6.3 Municipal accountability in the United Kingdom

In the UK, public organisations that provide public services adhere to basic financial management principles. Honesty, objectivity, openness, accountability, accuracy, fairness, integrity, transparency, objectivity, reliability, adherence to high ethical standards and achieving value for money are just a few of the demanding standards expected of public service employees (Psygkas, 2017). Local governments have a governance structure that transmits, delegates,

implements and enforces decisions; also, they have reliable internal controls to safeguard, channel, and record resources as intended (Psygkas, 2017). Ferry and Eckersley (2015) state that they collaborate with partners in the public interest, and they operate with propriety and regularity in all their transactions, thus treating their customers and business counterparts fairly, honestly, and with integrity. They provide timely, transparent, and realistic accounts of their business; and they cooperate with other local government entities adequately (Ferry & Eckersley, 2022). In the UK, three acts make up budgeting and governance (Ferry & Eckersley, 2022). Act 1 represents the spending review, which lays out a framework for income and expenditure levels over the medium term; Act 2 represents the annual budget, which enables specific policy decisions with related financial effects and implications; Act 3 might provide for the accountability and transparency frameworks that enhance internal accounting and management practices (Hood, 2010; Ball, 2012; Ferry & Eckersley, 2022).

However, there are some differences on how extensive and independent these arrangements should be in practice, as well as how much information should be made available to the public (Radcliffe, 2011; Heald, 2012). Act 3 has been revisited because of the UK Central Government's modification of the accountability and transparency framework for local government in England. The National Audit Office, which previously focused on central government departments, has taken over the Audit Commission's financial auditing duties, and the local government performance framework has been replaced by requirements for municipalities to publish various datasets online for public review (Davies, 2021). In an endeavour to analyse whether municipalities provide services to a high degree, accountability systems for municipalities' operational performance have extended beyond accountants and the audit profession. While this continues, top-down oversight of financial conformity (ensuring that spending stays within approved budgets) has continued, with the Audit Commission's oversight of this shifting to the National Audit Office. Additionally, the UK follows the Westminster model of SAI (Supreme Audit Institutions), in which the parliament receives reports from the independent office of the Auditor General. It submits regular reports on the financial statements and operations of governmental entities (Prosser, 2014).

The Whole of Government Accounts (WGA) presents a detailed picture of the financial position of the UK. public sector, including information on revenue and spending, assets, and liabilities (His Majesty (HM) Treasury, 2022). This is done to promote transparency and the WGA's coverage of the flow of funds is equally thorough and includes a statement of revenue and expenditure that includes realised gains/losses of assets and liabilities. The WGA provides a comprehensive statement that shows the cash flows from operating, financing, and capital investment; a statement of comprehensive income and expenditure that includes information on unrealised asset revaluation and actuarial gains/losses related to the pension liability (HM Treasury, 2022). Lastly, the municipalities in the UK use performance data in budgeting and planning as part of an ongoing process that shifts the emphasis of decision-making in budgeting away from measurable results (outcomes) and towards inputs. This helped the UK to develop a more systematic approach in which each department develops three-year spending plans and public service agreements, which include performance targets negotiated with the public (HM Treasury, 2020).

7. Municipal consequence management

In South Africa, the Department of Cooperative Governance and Traditional Affairs (COGTA) (2018) in the state of the local municipal report, described transparency and internal control techniques in local municipalities as the main strategies to improve governance. The previous reports by the Auditor General (AG, 2019– 2022) have consistently portrayed that municipal compliance with legislation is very weak and that there is a lack of imposed penalties for corrupt leadership. There are severe legislative and other types of transgressions at the political and administrative levels, yet minimal consequence management has been implemented. COGTA (2018) confirmed that municipalities are the targets for transgressors who have confidence that the mechanisms of municipalities to manage consequences are poor, while their methodologies of detection are ineffective and can be exploited. To ensure the realisation of oversights and other control measures, SALGA has created the Certification and Accreditation (C&A) system for local implementation to be improved (SALGA, 2021). The lack of consequence management in local municipalities could be the cause of poor regulation or more corruption

and a product of a lack of enforcement mechanisms (AG, 2021). The C&A System was established to ensure that administrative and political leaders do not refrain from constituted legislative precedents while the consequences of mismanagement or corruption are applied (SALGA, 2019).

According to Enwereii and Uwizevimana (2019), adequate stakeholder engagement and openness are highly required to promote transparency in the municipal accountability system. Numerous existing legislative laws are comprehensive and in-depth, and they indicate the need for transparency in broader areas (Birskyte, 2019) and simple access to specific public information gives implications and transparency issues a real form (Enwereji, 2018). As a result, the suggested implications and transparency system aim to offer an open and descriptive framework for gaining access to pertinent information at any time (Matheus, Janssen & Janowski, 2021). Masuku and Jili (2019) assert that the promotion of compliance with the laws and due responsibility in the public sector is a key component of the South African government's intergovernmental relations policy. In this regard, monitoring and evaluation, as well as transparency of the local, provincial, and national governments is an established verdict in the South African Constitution (Sebola, 2021). This was emphasised in Chapter 3 of the Constitution of South Africa, which emphasised the effectiveness of intergovernmental ties. The constitution also establishes the duties and responsibilities of the national and provincial governments for overseeing municipalities.

In an endeavour to have jurisdiction over local municipalities. the provincial and national governments must enact relevant legislation that will govern them (Gumede, Byamukama & Dakora, 2019). They are also supposed to supervise and help municipalities, as well as intervene when they break the rules (Mathenjwa, 2018). This was established in Sections 155(6) and (7) of the Constitution, as well as Section 216(1), which provide for national and provincial powers to control, track and assist the local municipalities. Sections 139 and 216(2) of the Constitution also provide for an oversight process and a financial transfers without due process. mismanagement of local governments, according to the National Treasury (2018), results in a loss of financial resources, a loss of confidence in local governments, irregular, wasteful, and unauthorised expenditures, poor financial reports, and the inability to act against fraudsters. The cause of adverse effects, according to Pamungkas,

Ibtida and Adrian (2018) include lack of skills and capacity, inability to comply with legislative precedents, lack of follow-up on processes or procedures, and inability to appoint the disciplinary board on time. Also, the inability to report to the provincial treasury, lack of planning and strategic management, and inability to investigate financial misappropriation of administrators and political leaders (De Kadt & Lieberman, 2020).

The government of South Africa outlines adequate municipal legislations to guide the financial management of local municipalities, but the inability to follow these legal precepts has resulted in adverse mismanagement of public financial resources (Fourie & Malan, 2020). On the offences of municipal leaders, the Municipal Financial Management Act, Section 173 asserts that any financial offense committed by any administrator should be reported to South African Police Service immediately for investigation. In terms of punishments, Section 174 of the same MFMA states that a public officer is subject to imprisonment for a period not exceeding five years or an appropriate fine decided following applicable legislation upon conviction of an offence under section 173.

The Auditor General Report (2020) posits that consequence management is important in maintaining public sector accountability. Without consequence management, organisations are considered worthless and inefficient. Supporting this statement, Mathiba (2020) affirms that organisations are therefore required to create standards and educate teams to follow strict standards in an endeavour to achieve accountability. In the Auditor General Report (2018), accountability is achievable in the public space and servants are expected to clearly state their expectations, observe if their expectations are met, and enforce the consequences for any deviations. Additionally, Auditor General Report (2018) offered the Chartered Institute of Government Finance Audit and Risk Officers (CIGFARO) a methodology for effective public sector consequence management.

The consequence management concept depicts that public managers should plan, do, check, and act in an endeavour to apply consequences in the public sector (AG, 2018). For planning, managers should create goals that should be achievable by all units, and this should be clearly stated and communicated to all concerned. Concerning doing, managers are expected to position both internal and external control measures, information, and communication

technologies (ICT) and get basic financial management control in place. To check, these managers must check deviations that are not consequent to the standards set by the management. In a situation where there is a deviation from the set standards and available legal precedents, management must act by applying the content of the law against defaulters. This concept should be applied by all public sectors to impose accountability and order in all facets of public performance and administration (AG, 2018). The municipal leaders have not taken this factor seriously and this has resulted in the inability of municipalities to achieve sound financial accountability (Mothupi et al., 2022). The introduction of this study highlights the financial misconduct such as irregular expenditure, fruitless and wasteful, and unauthorised expenditures in the various municipalities, which have escalated to several billions of Rand. The cause of escalating poor financial accountability has been noted as the inability to promote consequence management in the concerned municipalities (Enwereii Uwizeyimana, 2019). This factor is therefore deemed necessary to be considered to ensure that accountability of the municipalities would be promoted.

8. Discussion of the results

The study perused the meaning of municipal financial accountability, and it was revealed that it refers to openness and being answerable to the management of municipal financial resources. In the view of Mantzaris (2013), municipal financial accountability can be viewed as the concept of notifying the public about the financial situation, operating results, and accomplishments of a municipality. Deloitte (2012) affirms that financial accountability should be facilitated in public organisations and business agencies to meet their goals. Beina financially accountable for public organisations governments is vital since financial records form a part of public records (National Treasury, 2019) and Kanyane (2011) upholds that effective auditing, budgeting, reporting, and accounting are needed to accountability. Concerning the state of municipal accountability in South Africa, the study discovered that few municipalities have been able to achieve clean audit reports. According to the Auditor General Report 2020/2021 financial year, only 46 municipalities could achieve clean audit reports out of 257 municipalities. The report further flayed on this dismal performance and

stated that role-players should uphold the contents of municipal financial laws, training of employees, monitoring and evaluation, and appropriate leadership cum management practices.

Concerning the techniques other international countries adopt to ensure municipal financial accountability, the practices in the US and the UK were reviewed and it was discovered that they uphold efficient financial management practices. In the US, municipal role-players maintain proper accountability by institutionalizing central independent bodies that ensure oversight and facilitate consequence management of transgressions (Mashaw, 2012; Cane, 2016). In the UK, the local municipal sphere collaborates with partners in the public interest, they operate with propriety and regularity in all their transactions and treat their customers and business counterparts fairly and with integrity (Ferry & Eckersley, 2015). Municipalities have a central governance structure that transmits, delegates, implements and enforces decisions. They appropriately interact with other local governmental entities and deliver timely, transparent, and honest accounts of their operations (Ferry & Eckersley, 2015).

Furthermore, consequence management involves the process of holding the role-players accountable in the management of financial resources and applying legal actions to deviations (Mathiba, 2020). In the view of Fourie and Malan (2020) as well as Masuku and Jili (2019). municipalities should set standards and compel employees to adhere to those standards strictly to attain accountability. The Auditor General further asserts that accountability is possible in public service, and public employees must set clear expectations, monitor whether those standards are being followed, and impose penalties when deviations occur. The Auditor General Report (2018) further indicates that an outstanding technique to achieve sound financial accountability is by facilitating consequence management in all spheres of municipal management. Consequence management could be achieved through the planning of activities, positioning of control measures, checking deviations against set targets, and taking legal actions against defaulters.

9. Conclusions and recommendations

This study explored financial accountability in South African local municipalities and measures to alleviate it through consequence management. A qualitative research approach was adopted using a

traditional literature review technique. To propose recommendations to alleviate financial mismanagement in the local municipalities, the study perused the meaning of municipal financial accountability, the state of municipal accountability in South Africa, the techniques other international countries adopt to ensure municipal financial accountability, the meaning of consequence management and the possible measures to attain consequence management in the local municipal context. The literature review revealed that most local municipalities in South Africa have been unable to achieve clean audit reports due to financial mismanagement. Although few municipalities have competently managed their financial resources appropriately and achieved clean audit reports, the study noted that the financial mismanagement of other municipalities has overshadowed their noble efforts. The study reviewed the municipal financial management in other countries and found that transparency, oversight, and training; also, the adoption of relevant municipal legislation, remain the key components to achieving accountability in the municipal sphere.

The study revealed that consequence management is highly needed in local municipalities to ensure that role-players who mismanage financial resources are held accountable for the misuse of public funds. The study suggests that consequent management is important in maintaining public sector accountability. Without consequence management, municipalities are considered as not leading but creating chaos. Municipalities are therefore, required to create standards, educate teams to follow strict standards in an endeavour to achieve accountability. The study confirms that accountability is achievable in the local municipalities and public servants are expected to clearly state their expectations, observe if their expectations are met and enforce consequences for any deviations. The study contributes that municipal role-players should plan, do, check, and act to ensure that consequence management are applied competently to achieve sound accountability. In conclusion, financial accountability can be achieved in local municipalities if the municipal role-players would adopt sound financial management practices and consequence management.

The present study recommends that local municipalities should facilitate effective financial management practices by ensuring that vacancies and key positions are filled with competent personnel and should not be influenced by nepotism. In this regard, key officials should be appropriately trained to acquire appropriate skills and

competencies for financial management and reporting to improve financial planning and record keeping. Municipal role-players should improve their reporting skills as servants and should take it as a serious and continuous practise. The municipalities should position proper systems to collate and report performance information and all the officials should understand and apply the performance management and reporting requirements. Poor monitoring should not be entertained, and review processes should be competently performed to eliminate errors. Municipal leaders should take recommendations and warnings of risks seriously, while developed action plans should be implemented adequately. The duties of the politicians should be separated from that of the municipal employees to eliminate infighting at the council level and interference in the administration to achieve sound financial management. Furthermore, the agent-principal relationship should be established in the municipalities where all the municipal employees and political leaders remain answerable to the public.

The local municipalities should facilitate consequence management through commitment by the governing bodies to the management of financial resources and resource allocations. There should be proper implementation of the programmes, which includes clear guidelines of key responsibilities and roles of officials, training needs and actions. Through the implementation of oversight functions, there should be proper monitoring and evaluation of the performance of municipal programmes and presenting the outcomes through transparent documentation practices. The municipalities should also engage in continuous improvement of programmes and financial engagement through regular assessments and reviews. The content of municipal financial legislation should be upheld by all role-players who handle municipal financial resources. Finally, legal actions should be taken against the municipal role-players who are involved in financial malpractice without fear or favour.

References

- Agbatogun, T.O. (2019). Financial Accountability, Transparency and Management of the Nigerian Public Sector. Accounting and Taxation Review, 3(1): 104-117
- 2. Agwor, T.C & Akani, F.N. (2017). Financial accountability and performance of local governments in Rivers State, Nigeria. International Journal of Economics, Commerce, and Management., 5(10):620-635

- 3. Akpanuko, E.E. & Asogwa, I. E. (2013). Accountability: A synthesis. International Journal of Finance and Accounting, 2(3):164-173.
- 4. Atrill, P. & Mc Laney, E. (2012). Accounting and finance for non-specialists. New York, NY: Pearson Education.
- 5. Auditor General Reports. (2016-2021). Consolidated general report on the local government audit reports. Pretoria: Government Printer.
- 6. Ball, I. (2012). Accounting, Transparency and Financial Stability", Speech at the International Federation of Accountants Global Seminar on the Sovereign Debt Crisis, Vienna: 19 20 March 2012. Available online: http://www.ifac.org/news-
- 7. Banerjee, B. (2015). Fundamentals of financial management. 2nd Edition. New Delhi: PHI Learning.
- 8. Beerman, J.M. 2006. Congressional administration. https://digital.sandiego.edu/sdlr/vol43/iss1/3/. Accessed on 20th Dec. 2022.
- 9. Birskyte, L. (2019). Determinants of budget transparency in Lithuanian municipalities. Public Performance & Management Review, 42(3):707-731.
- Booth, A., Sutton, A., Clowes, M. & Martyn-St James, M. (2021).
 Systematic approaches to a successful literature review. 3rd eds. CA: Sage Publications.
- 11. Brigham, E.F. & Houston, J.F. (2021). Fundamentals of financial management. Cengage Learning.
- 12. Brigham, E.F. & Daves, P.R. (2018). Intermediate financial management. Cengage Learning.
- 13. Caers, R., Du Bois, C., Jegers, M., De Gieter, S., Shepers, C. & Pepermans, R. (2006). Principal-agent relationships on the stewardship-agency axis. Non-profit Management & Leadership, 17(1):25-34.
- 14. Cane, P. (2016). Controlling Administrative Power: An Historical Comparison. Cambridge, UK: Cambridge University Press.
- Cooperative Governance and Traditional Affairs (COGTA). (2018).
 Policy on managing performance information. https://cogta.mpg.gov.za/policies /201819Policies/Mananging
 PerformanceInformance2018-19.pdf. Accessed on 12th Nov. 2022.
- 16. Creswell, J.W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 4th Edition. CA: Sage Publications.
- 17. Davies, G. (2021). The local government finance system in England: overview and challenges. National Audit Office. https://www.nao.org.uk/wp-content/uploads/2021/11/The-local-

- government-finance-system-in-England-overview-and-challenges.pdf. Accessed on 12th Nov. 2022.
- De Kadt, D. & Lieberman, E.S. (2020). Nuanced accountability: Voter responses to service delivery in southern Africa. British Journal of Political Science, 50(1):185-215.
- 19. Deloitte. (2012). How to stop corruption and improve service delivery in SA municipalities, 5 November. Johannesburg: Deloitte.
- 20. Dorn, F., Gaebler, S. and Roesel, F. (2021). Ineffective fiscal rules? The effect of public sector accounting standards on budgets, efficiency, and accountability. Public Choice, 186(3), pp.387-412.
- 21. Dowdle, M.W. (Ed.). (2006). Public accountability: conceptual, historical, and epistemic mappings. Public Accountability: Designs, Dilemmas and Experiences. Cambridge: Cambridge University Press.
- 22. Enwereji, P. & Potgieter, M. (2022). Strategic Leadership Qualities to Enhance the Payment Culture for Municipal Services within an African Context. International Review of Management and Marketing, 12(3):10-17.
- 23. Enwereji, P.C & Uwizeyimana, D. (2021). Managing strategy-culture dichotomies in South African Municipalities: a payment culture perspective. International Review of Management and Marketing, 11(6):30-37.
- 24. Enwereji, P.C. (2018). A payment culture framework for local municipalities in the North West province. Mafikeng- Doctoral thesis (North-West University).
- 25. Enwereji, P.C. & Potgieter, M. (2020). Factors to Enhance a Responsible Payment Culture for Municipal Services: A Qualitative Review. Gender and Behaviour, 18(1):14911-14925.
- 26. Enwereji, P.C. & Uwizeyimana, D. (2019). Exploring the key factors that can enhance municipal financial accountability in Africa: Experience from South Africa. African Renaissance, 16(3):143-165.
- 27. Eton, M., Moses, A., Abanis, T., Perpetua, A., Fabian, M. & Bernard, P.O. (2021). Financial accountability mechanisms in local governments in Uganda: a case of Kabale District Local Government.
- 28. Falola, H.O. Osibanjo, A.O & Ojo1, S.I. (2014). Effectiveness of training and development on employees' performance and organisation competitiveness in the Nigerian banking industry. Economic Sciences, 7(56):161-170.
- 29. Ferry, L. and Eckersley, P. (2022). Budgeting and governing for deficit reduction in the UK public sector: Act four—risk management arrangements. Public Money & Management, 42(6): 365-367.

- 30. Finkler, S.A., Calabrese, T.D. & Smith, D.L. (2022). Financial management for public, health, and not-for-profit organizations. CQ Press.
- 31. Fourie, D. & Malan, C. (2020). Public procurement in the South African economy: Addressing the systemic issues. Sustainability, 12(20):8692.
- 32. Fourie, M., Opperman, L., Scott, D. & Kumar, K. (2011). Municipal Finance and Accounting. 2nd Edition. SA: Van Shaik Publishers
- 33. Gabriel, A.G. (2017). Transparency and accountability in local government: levels of commitment of municipal councillors in Bongabon in the Philippines. Asia Pacific Journal of Public Administration, 39(3):217-223.
- 34. Gao, X. & Yu, J. (2020). Public governance mechanism in the prevention and control of the COVID-19: information, decision-making and execution. Journal of Chinese Governance, 5(2):178-197.
- 35. Government Accountability Office. (2019). Overview, available at https://www.gao.gov/ about/. Accessed on 12th Nov. 2022.
- 36. Gumede, N., Byamukama, J. & Dakora, E. (2019). Contemporary perspectives on fiscal decentralisation and new local government in South Africa. Ghana Journal of Development Studies, 16(2):52-69.
- 37. Gyüre, L. (2012). The role of systematic internal control and audit in reducing management risk at Hungarian Local municipalities. http://www.asz.hu/public-financequarterly-articles/2012/the -role of systemic-internal control...Local-governments/a-173-183-gyure. Accessed on 10th Nov. 2022.
- 38. Hall, A.T., Frink, D.D. & Buckley, M.R. (2017). An accountability account: A review and synthesis of the theoretical and empirical research on felt accountability. Journal of Organizational Behavior, 38(2):204-224.
- 39. Heald, D.A. (2012). Why is Transparency About Public Expenditure So Elusive?", International Review of Administrative Sciences, 78(1):30-49.
- HM Government. (2022). Localism Act 2011. Available at: http://www.Legislation.gov.uk/ukpga/2011/20/contents/enacted. Accessed on 12th Nov. 2022.
- 41. HM Treasury. (2020). HM Treasury Annual Report and Accounts 2020 to 2021. Available at: https://www.gov.uk/government/publications/hm-treasury-annual-report-and-accounts-2020-to-2021. Accessed on 20th Nov. 2022.

- 42. Hood, C. (2010). Accountability and Transparency: Siamese Twins, Matching Parts, Awkward Couple?", West European Politics, 33(1): 989-1009.
- 43. Kagan, R.A. (2019). Adversarial legalism: The American way of law. Harvard University Press.
- 44. Kanyane, M.H. (2011). Financial viability of rural municipalities in South Africa. Journal of Public Administration, 46(2):935–946.
- 45. Khaile, F.T. & Davids, G.J. (2020). The role of council committees in promoting financial accountability. Public Policy and Administration Research, 8(1):66-75.
- 46. Kim, T. & Lim, S. (2017). Forging soft accountability in unlikely settings: A conceptual analysis of mutual accountability in the context of south-south cooperation. Global Governance, 23(1):183-195
- 47. Kivistö, J. (2007). Agency theory as a framework for the government university relationship. Tampere University Press.
- 48. Knudsen, J.S. (2018). Government regulation of international corporate social responsibility in the US and the UK: How domestic institutions shape mandatory and supportive initiatives. British Journal of Industrial Relations, 56(1):164-188.
- 49. Kolisang, M.L. (2019). The impact of oversight mechanisms on service delivery in the Midvaal Local Municipality (Doctoral dissertation, North-West University (South Africa). Vanderbijlpark Campus).
- 50. Lopes, H. (2012). Individuals, persons and agency theory: Contrasted views on social interactions at work. Working Paper. DOI:10.7749/dinamiacet-iul.wp.2014.04.
- Madumo, O.S. & Koma, S.B. (2019). Local government reform in South Africa: The quest for review and repositioning of municipal administration. Journal of Reviews on Global Economics, 8(1): 581-590.
- 52. Mahaney, R.C. & Lederer, A.L. (2011). An agency theory explanation of project's success. The Journal of Computer Information Systems, 51(4): 102-113
- 53. Mahrani, M. & Soewarno, N. (2018). The effect of good corporate governance mechanism and corporate social responsibility on financial performance with earnings management as mediating variable. Asian Journal of Accounting Research.
- 54. Mantzaris, E. (2013). Corruption is a sickness, but a curable one. ACCERUS Newsletter, 3:3.

- Mashaw, J.L. (2012). Creating the Administrative Constitution: The Lost One Hundred Years of American Administrative Law (New Haven, CT: Yale University Press)
- 56. Masuku, M.M. & Jili, N.N. (2019). Public service delivery in South Africa: The political influence at local government level. Journal of Public Affairs, 19(4):1935-1944.
- 57. Mathenjwa, M. (2018). The legal status of local government in South Africa under the new Constitutional dispensation. Southern African Public Law, 33(2)1-14.
- 58. Matheus, R., Janssen, M. & Janowski, T. (2021). Design principles for creating digital transparency in government. Government Information Quarterly, 38(1):1-12.
- 59. Mathiba, G.L. (2020). The role of the Auditor-General in the promotion of efficient financial management in municipalities: a case study of the Northwest province.
- 60. Mothupi, A.J., Musvoto, W. & Lekunze, J.N. (2022). Financial Accountability Framework for Local Municipalities in the North West Province. International Journal of Financial Research, 13(1):74-89.
- 61. National Treasury. (2018). Budget Review, Pretoria: National Treasury
- 62. National Treasury. (2019). State of Local Municipality Finances and Financial Management: National Treasury Briefing.
- 63. Nombembe, P. (2021). Municipal officials bust three hundred thousand RDP home-sales scam. https://www.timeslive.co.za/news/south-africa/2021-08-14-municipal-official-bust-for-r300000-rdp-home-sales-scam/. Accessed on 10th June 2022.
- 64. Nyalungu, J.D. (2022). Exploring corporate governance practices on state entities: a case study of Umgungundlovu District Municipality (Doctoral dissertation).
- 65. Okpala, K. (2019). Financial Accountability and National Development: Analysis of Role and Effect. Journal of Accountancy. 15(1):51 -61
- 66. Olu-Adeyemi, L. & Obamuyi, T.M. (2010). Public accountability: implications of the conspiratorial relationship between political appointees and civil servants in Nigeria.
- 67. Pamungkas, B., Ibtida, R. & Avrian, C. (2018). Factors influencing audit opinion of the Indonesian municipal governments' financial statements. Cogent Business & Management, 5(1):1-15.

- 68. Prosser, T. (2014). The Economic Constitution. Oxford: Oxford University Press.
- 69. Psygkas, A. (2020). Correction to: Accommodating Legal Pluralism and "Pluralizing" the Constitution: The Example of the United Kingdom. In Debating Legal Pluralism and Constitutionalism (pp. C1-C1). Springer, Cham.
- 70. Psygkas, A. (2017). From the Democratic Deficit to a Democratic Surplus: Constructing Administrative Democracy in Europe. Oxford University Press.
- 71. Radcliffe, V.S. (2011). Public Secrecy in Auditing Revisited. Critical Perspectives on Accounting, 22(7): 722-732.
- 72. Republic of South Africa. (2003). Municipal Financial Management Act. Pretoria: Government Printers.
- 73. Republic of South Africa. (1996). The Constitution of the Republic of South Africa. Pretoria: Government Printer.
- 74. Rose-Ackerman, S., Egidy, S. & Fowkes, J. (2015). Due Process of Lawmaking. Cambridge University Press.
- 75. Safara, L & Odeku, K.O. (2021). Critical legal perspective of international anticorruption laws for tackling corruption in South Africa," Perspectives of Law and Public Administration, Society of Juridical and Administrative Sciences. 10(1), 203-216.
- 77. Sambo, V. (2021). Is Accountability in the Management of Public Finances a Myth? The Case of the West Rand District Municipality. International Conference on Public Administration and Development Alternatives (IPADA).
- 78. Sebola, M.P. (2021). Monitoring for good governance in south africa: the complex of a fair public administration. Acta Universitatis Danubius. Administration, 13(1).
- 79. Segal, L. & Lehrer, M. (2012). The institutionalisation of stewardship: Theory, propositions, and insights from change in the Edmonton Public Schools. Organisation Studies, 33(2):169-201.
- 80. Sibanda, M.M., Zindi, B. & Maramura, T.C. (2020). Control and accountability in supply chain management: Evidence from a South African metropolitan municipality. Cogent Business & Management, 7(1):1-12.

- 81. Sisi, M.G. (2019). Assessment of Supply Chain Corruption in the three Metropolitan Municipalities in the Gauteng Province of South Africa. Doctoral Thesis, University of Fort Hare.
- 82. Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104(1): 333-339.
- 83. Stoker, G. (2017). Transforming local governance: from Thatcherism to New Labour. Bloomsbury Publishing. UK Public Sector: Act Two 'The Annual Budget'", Public Money and Management, 32(2):119-126
- 84. Van Rooyen, D. (2017). Consumer debt to municipalities still at R117 billion. http://www.iol.co.za/business-report/economy/consumer-debt-to-municipalities-still-at-r117-billion-9209656. Accessed on 12th November 2022.
- 85. Woods, G. & Mantzaris, E. (2012). Anti-corruption reader. ACCERUS, University of Stellenbosch.
- 86. Zietlow, J., Hankin, J.A., Seidner, A. & O'Brien, T. (2018). Financial management for non-profit organizations: policies and practices. John Wiley & Sons.
- 87. Zu, X. & Kaynak, H. (2012). An agency theory perspective on supply chain management. International Journal of Operations, 32(4):423-446.

Appendix

- 1. A financially unqualified opinion with no findings (clean audit) means the municipality:
 - >>Produced quality financial statements free of material misstatements (in other words, errors or omissions that are so significant that they affect the credibility and reliability of the financial statements)
 - >>Produced quality performance reports that measure and report on performance in a manner that is useful and reliable.
 - >>Complied with key legislation
- A financially unqualified opinion with findings means the municipality was able to produce quality financial statements but struggled to produce quality performance reports and/or comply with all key legislation.
- 3. A financially qualified opinion with a finding means the municipality's financial statements contained material misstatements that were not corrected before the financial statements were published. The municipality also had challenges with the quality of the performance report and/or compliance with key legislation.
- 4. The financial statements of a municipality with an adverse opinion with findings included so many material misstatements that disagreed with virtually all the amounts and disclosures in the financial statements.
- 5. A municipality with a disclaimed opinion with findings could not provide evidence for most of the amounts and disclosures in the financial statements. It is therefore difficult to conclude or express an opinion on the credibility of the financial statements. Municipalities with adverse and disclaimed opinions are typically also unable to provide sufficient supporting documentation for the achievements they report in their performance reports and do not comply with key legislation.

THE MINIMUM WAGE AND ECONOMIC GROWTH. ANALYSIS IN THE CASE OF ROMANIA

Nicoleta MIHĂILĂ, PhD*

Abstract

There are theoretical and empirical studies that highlight a variety of determinants of economic growth, including investments, physical capital accumulation, human capital, innovation, political and legal institutions, macroeconomic conditions etc. The purpose of our paper is to determine the extent to which the evolution of the minimum wage has influenced the economic growth in Romania in the period 2007-2021, the objectives pursued being the definition of economic growth and the method of measuring it, the evolution of the minimum wage in the period mentioned above, as well as determining the effects the minimum wage on some economic indicators (consumption, GDP/capita). In this sense, we use an empirical and descriptive methodology, by referring to statistical data and bibliographic references from national and international literature.

Keywords: GDP/capita, consumption, Romanian economy, global financial crisis

JEL Classification: E60; O47

1. Economic growth - concept and methods of determination/ measurement

The process of economic growth is a complex one of increasing the results of the national economy, based on the combination and use of direct production factors: labour force, fixed capital and the consumption of material circulating means. Economic growth is desired in any country because it enables the population to consume more goods and services and at the same time contributes to the provision of a greater amount of goods and social services, such as health, education, thus leading to the real improvement of living standards.

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Economic growth represents a real increase, in a certain period and in a certain space, of an economic indicator, GDP. A wide range of theoretical and empirical studies highlight a wide variety of determinants of economic growth. Thus, it is considered that investments, the accumulation of physical capital, human capital, innovation, geography, political and legal institutions, macroeconomic conditions, have a role in improving economic performance (Pânzaru, Stefan, 2008).

In the economic literature, there are numerous approaches regarding the classification and ordering of economic growth factors. These were elaborated both according to the possibilities of quantifying the direct and indirect contribution, according to the order of action priorities through economic policy, but also based on their appearance in the issue of economic dynamics (Popa, 2012).

Therefore, Kuznets (2001) considers the economic growth of a country as an increase in the capacity to provide increasingly different economic goods, this capacity being based on advanced technology, as well as on the institutional and ideological adaptations that it requires them. Arndt (1978) considers economic growth as an increase in average per capita income (usually measured by GDP per population/ capita). Perroux (1981) appreciates growth as the increase in the size of the national economy expressed in the total of goods and services obtained during a period, including depreciation. In his opinion, however, only long-term quantitative growth constitutes economic growth, short-term growth means expansion.

Since Kuznets, there have been many attempts to create a GDP 2.0, which would more accurately reflect the level of economic growth. Nordhaus and Tobin in the 1970s add previously invisible goods to GDP: leisure and unpaid household activities.

There have been a number of variations on this theme for building an Index of Authentic Progress: by subtracting (toxic elements such as ecological footprint) or adding (volunteering) some elements (Voica, 2009). The adjustments also come along the lines of income inequality, spending on crime prevention and health insurance, etc. For example, the Human Development Index (HDI), published in the United Nations Development Programme's Human Development Report, is a comparative measure of life expectancy, literacy, education and living standards (UNDP, 2022).

David Pilling, in the book "Economic growth, a delusion. The wealth, poverty, and well-being of nations" summarizes the issue of

measuring the well-being of a nation and all the steps taken to achieve this goal.

Economic growth is defined as the process of increasing the dimensions of economic results, determined by the combination and use of production factors and highlighted by macroeconomic indicators - gross domestic product, gross national product and national income in real terms, both in total and per inhabitant.

In this paper, we express economic growth through the gross domestic product (GDP). According to the INS, it represents the synthetic expression of the results of the economic activity produced within the economic territory in a period of time, regardless of the contribution made by internal or foreign subjects.

It can be determined through several modalities/methods, and in the case of the expenditure method (the final production method) we consider to be a source of significant information on the main correlations that influence the evolution of the main macroeconomic aggregate (Anghelache, 2011).

Thus, according to the previously mentioned calculation method, GDP can be determined by adding up the components that express the use of goods and services that form the final production, respectively:

$$GDP = CP + CPL + IB + EXN$$
 or $GDP = CF + FBCF + VS + (E - I)$

where:

consumption FBCF - gross fixed capital formation

CPL - public consumption
IB - gross investments
EXN - net exports

I - value of imports

For Romania, the GDP is mainly influenced by the evolution of private and public consumption.

It should be mentioned that in the GDP measurement it is necessary to specify some considerations/differentiations, respectively the factors that must be taken into account in the GDP evaluation, as well as the difference between nominal and real GDP (Căpraru, 2021).

Thus:

- nominal GDP vs real GDP. Nominal GDP is calculated at current prices, including inflation. Real GDP is calculated at the price level of a reference year, thus using constant prices, extracting the

inflationary effect. In the case of high and/or rising inflation nominal GDP will be higher, but not necessarily as a result of the increase in the level of goods and services produced in that economy.

- GDP calculated at purchasing power parity This indicator is used to compare the level of GDP between two or more countries taking into account purchasing power parity (expresses the equivalence between the level of prices expressed in the same currency in different countries). Thus, prices are brought to the same denominator (through a common currency), and the GDP comparison takes into account the volumes of goods and services of two or more countries.
- Potential GDP reflects the production capacity of an economy at a given time, in the context of the normal use of the factors of production, namely capital, labour and the total factor of productivity. In other words, it represents the maximum level of GDP that can be produced, using the available factors of production at full capacity.

If we compare it with real GDP, some conclusions can be drawn about the state of the economy. The GDP deviation (the difference between the actual and potential GDP) quantifies the demand deficit/surplus. A positive GDP deviation (actual current GDP is higher than potential - excess demand) indicates inflationary pressures, while a negative GDP deviation (deficit demand) indicates disinflationary pressures. The GDP deviation also shows us the cyclical position of the economy. If the difference is positive, then we are talking about an expansionary gap (and if the difference is very large, we can expect an overheating of the economy), and a negative difference, reveals a recessionary gap. In the long run, the GDP deviation tends to zero, bringing GDP to its potential level.

- GDP/capita - demographic developments must be taken into account. The increase in the phenomenon of labour migration abroad, the increase in mortality and/or the decrease in the birth rate are phenomena that distort the value of such an indicator (for example, its increase in the context of a relatively constant GDP may show a decrease in the well-being of the population).

When determining the GDP size, we must take into account the moment of comparison, the component that led to the increase in the level of the indicator, as well as which branches of the economy contributed to this increase.

To calculate the level of economic growth, we refer to the size of GDP in the past, at a given time (a quarter or more ago, a year, etc.).

If at the reference time we have witnessed an economic decline, in the following period, if there is an increase, it will appear relatively higher, as a result of the (lower) reporting base.

From the point of view of the GDP component that brought the increase (the largest), it starts from the GDP determination method (expenditure method), according to which GDP is composed of: C (private consumption) + G (government expenses) + I (investments of companies in capital goods) + (X (export)- M (import)). Currently, according to official statistical data, Consumption prevailed. Economists argue that healthy growth is achieved on the back of investment and positive net export. Also, increased government spending can lead to higher GDP (Căpraru, 2021).

The branches of the economy that contributed to growth over time were agriculture, industry, construction, services. An economy can specialize over time on the growth of a certain field of activity. It is important that, as a whole, there should be harmonious growth in all branches of the economy. Reliance on one or two branches is not beneficial in the long run, especially in crisis situations (Concordia, 2020).

In Romania, the increase in the minimum wage led to an increase in consumption, thus an increase in GDP due to government spending and consumption. Agriculture, industry, construction, services also contributed to the increase (where there are most minimum wage contracts) (FES, 2021).

2. The minimum wage in Romania - concept and evolution after 2007

The minimum wage in the economy is the lowest value of the hourly, daily or monthly wage that the law of the respective country allows employers to give to an employee. The first countries to legislate a minimum wage were Australia and New Zealand at the end of the 19th century. Currently, the minimum wage per economy is established in more than 90% of the world's countries (CES, 2014).

In 2010, worldwide, Luxembourg had the highest minimum wage at \$1.687 per month, and Burundi had the lowest minimum wage at \$6 per month, while the minimum wage in Uganda was \$7. Out of the 120 countries analysed at that time, Romania was among the top 50 countries, with a minimum wage value of 320 dollars (PPP) in 2009.

Among the member countries of the European Union, only Bulgaria had a lower minimum wage than Romania (\$292).

In May 2014, citizens of Switzerland rejected the introduction of an economy-wide minimum wage of around 3,300 euros, the highest minimum wage in the world, given the country's high cost of living.

In Romania, until 2011, there was an obligation to grant a minimum salary for people who finished a university, which was equivalent to two national minimum salaries.

Ever since the introduction of the first minimum wages, at the end of the 19th century, they have been very controversial. As the name suggests, the minimum wage represents the lowest amount that the employer is obliged to pay the employee. Many countries in the world have clear provisions in this sense, although there are often many exceptions to the rules.

At the European level, the introduction of the "European minimum wage" can have both positive and negative effects.

Among the positive effects are the following:

- Stopping labour migration;
- Improving the standard of living;
- Creating the necessary premises for the development of the future workforce;
- Promotion of collective negotiations for establishing salaries;
- A corresponding degree of adequacy of the legal minimum wages;
- Effective access to minimum wage protection.

Among the possible negative effects of the implementation of the future directive, without taking into account the differences between the strength of the economies of the member states, the different structure of the labour market and the different levels of income in the member states, we mention:

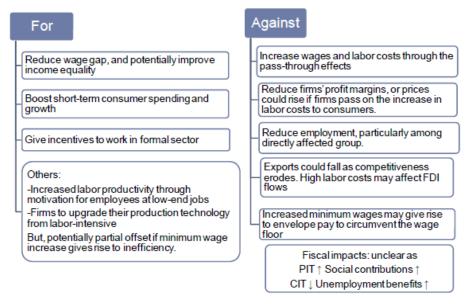
- Closing companies that cannot support the wage increase;
- The migration of multinational companies to other non-EU states where labour is cheaper;
- The increase in inflation.

The increase of the gross minimum wage, in the context of the application of complementary public policies aimed at reducing the level of poverty and the integration of vulnerable groups on the labour market, can lead to the reduction of income inequalities (Socol, 2018). Sometimes, the increase in the minimum wage causes a moderate

increase in the amount of wages between the minimum and the average level, thus widening the target group of beneficiaries of the measure. Employers' costs may also increase significantly in this context.

The minimum wage in Romania was first introduced in 1949. The level of minimum wage in Romania is determined at national level by the government after consulting the trade unions and employers' organizations. There is only one minimum wage determined by law. The minimum wage has only one fixed component and is calculated on monthly gross basis. It has typically adjusted twice a year in January and July, except for 2016 in which the minimum wage will be adjusted only once in May. In recent years, the Romanian government has extensively utilized the minimum wage as a tool to achieve the objective set out for Europe strategy 2020 in order to reduce the number of persons at risk of poverty and social exclusion by 580,000 persons (IMF, 2016).

Figure 1 Arguments "For" and "Against" the Minimum Wage Increase



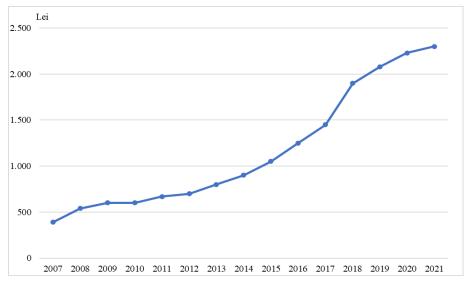
Source: IMF (2016)

We believe that there is a need to introduce/increase the minimum wage in Romania. The high share of workers (employed

persons) at risk of poverty (full-time/part-time), the accentuated income inequality, the inequity of the distribution of the net national income between labour and capital, the asymmetric dissemination of the benefits of economic growth and the slowness of the social lift, as well as the asymmetry of negotiation between unions and employers (especially after the flexibility of the 2011 Labour Code in Romania) there are just as many arguments for raising the minimum wage to a decent level that would ensure the potentiation of the economic and social multiplier effects of using this tool.

Next, we present the evolution of the minimum wage in Romania, in the period 2007-2021 (according to Table 1, in the Appendix).

Figure 2 The minimum gross salary during the period 2007- 2021



Source: data based on Table 1 (Appendix)

We observe an upward trajectory of it, especially starting with 2016, when it increased by 16% compared to 2015, and in 2018 there was a 37% increase compared to 2017. If we consider the year 2021 compared to the year 2007, the minimum wage is currently approximately 6 times higher. As a matter of fact, the most employees with minimum salary were in retail trade, wholesale trade, land and pipeline transport.

3. The relationship between minimum wage and economic growth

In our work, we express economic growth through the GDP/capita indicator. Therefore, in the following we show that there is a directly proportional correlation between the minimum wage and GDP/capita, as well as between the minimum wage and the effective individual consumption of households (abbreviated AIC).

In the case of determining the relationship between the minimum wage and GDP/inhabitant compared to the AIC, the difference between these two concepts must be made.

Effective individual consumption more faithfully reflects the well-being of a citizen of a certain country than the Gross Domestic Product per capita. The latter is based on goods and services purchased and paid for by a household. Instead, the AIC is calculated based on the goods and services actually consumed by individuals, without taking into account the fact that they were contracted and paid for by households, government or non-profit organizations. That is why it is preferable for international comparisons and better reflects the standard of living.

The differences result from the fact that the share of payments made directly by households for important services, such as health and education, differs substantially from one country to another. Thus, the apparent order of the countries according to the standard of living, which would result from the comparison of the classic GDP/capita, may undergo important changes.

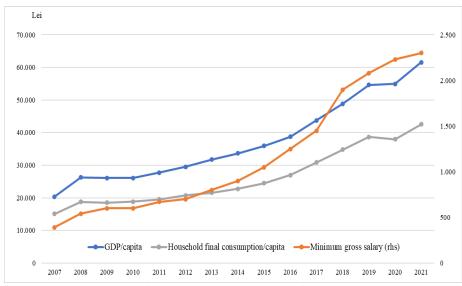
The actual individual final consumption of households includes: the expenses of households for the purchase of goods and services in order to satisfy the needs of their members, the expenditure for individual consumption of public administrations (education, health, social security and social actions, culture, sports, recreational activities, household waste collection) and the expenditure for individual consumption of non-profit institutions serving households (religious organizations, trade unions, political parties, unions, foundations, cultural and sports associations) (INS, Methodological specifications).

During 2007-2021, both the minimum wage and GDP/inhabitant increased, the minimum wage at a faster rate (approx. five times), and GDP/inhabitant three times (see Table 2, in the Appendix). The peak was reached, for the two indicators, in 2021.

However, the year 2009 is an exception, when the GDP/capita indicator registered a lower level of 219 lei compared to 2008. Household consumption/inhabitant increased approximately 3 times in 2021, compared with 2007. The minimum wage influences consumption, its increase implicitly leading to an increase in the population's expenses.

In the analysed period, final consumption experienced a sharp evolution, with significant increases from one period to another. The exception is the year 2009, when it recorded a decrease of 234 lei, compared to 2008. It is noted that the evolution of the two macroeconomic indicators (GDP/capita and household consumption) is very similar, with sharp increases for the period 2010-2021.

Figure 2
Evolution of gross minimum wage, GDP/capita, household final consumption/capita in the period 2007-2021



Source: processing according to Table 2 (in the Appendix)

In order to verify the influence of the minimum gross salary per inhabitant, measured in lei, and of the effective individual consumption of households per inhabitant (Ron) on the GDP per inhabitant (Ron) at the level of Romania, the VAR econometric analysis method was used.

VAR-type models are frequently used for forecasting interconnected time series systems and for analysing the dynamic

impact of innovations on the system of variables. The VAR approach circumvents the need for structural modelling by treating each endogenous variable in the system as a function of lags, of past values, of all endogenous variables in the system. The VAR model has the following advantages:

- does not require a clear separation of endogenous and exogenous variables;
- they can be used to deduce how economic variables respond to shocks;
- are widely used in macroeconomic modelling, being included in most econometric programs.

A VAR model was also chosen for an additional reason, namely the impossibility of stationarity in the level, the first difference or the second difference of the GDP per capita indicator. The result of the VAR model is shown in Table 3.

Table 3 VAR type analysis

Vector Autoregression Estimates Date: 10/16/22 Time: 20:50 Sample (adjusted): 2009 2021

Included observations: 13 after adjustments Standard errors in () & t-statistics in []

	GDP/capita	AIC/ capita	Gross minimum wage
GDP/ capita(-1)	0.520212	-0.118039	-0.022106
• • •	(1.10735)	(0.91674)	(0.05146)
	[0.46978]	[-0.12876]	[-0.42957]
GBP/capita(-2)	1.209755	0.999835	0.101127
• • • •	(0.93244)	(0.77194)	(0.04333)
	[1.29741]	[1.29523]	[2.33370]
AIC/ capita(-1)	-0.734229	0.188454	0.125775
• , ,	(1.48244)	(1.22727)	(0.06889)
	[-0.49528]	[0.15356]	[1.82564]
AIC/capita(-2)	-1.886946	-1.436518	-0.117212
• ,	(1.70545)	(1.41189)	(0.07926)
	[-1.10642]	[-1.01744]	[-1.47888]
Gross_min_wage(-1)	23.42894	17.57011	0.022296
,	(13.3822)	(11.0787)	(0.62191)
	[1.75076]	[1.58593]	[0.03585]
Gross_min_wage(-2)	-2.186011	-4.504922	-0.475202
= = & \ /	(13.5902)	(11.2509)	(0.63158)
	[-0.16085]	[-0.40040]	[-0.75240]

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C	18927.55	11994.88	-1352.414		
	(20853.2)	(17263.7)	(969.113)		
	[0.90766]	[0.69480]	[-1.39552]		
R-squared	0.990940	0.987176	0.993277		
Adj. R-squared	0.981880	0.974351	0.986554		
Sum sq. resids	16003988	10968643	34564.68		
S.E. equation	1633.197	1352.075	75.89980		
F-statistic	109.3773	76.97640	147.7379		
Log likelihood	-109.5983	-107.1426	-69.70285		
Akaike AIC	17.93820	17.56040	11.80044		
Schwarz SC	18.24240	17.86461	12.10464		
Mean dependent	39481.79	27556.77	1266.923		
S.D. dependent	12132.87	8442.429	654.5404		
Determinant resid covarian	ice (dof adj.)	7.05E+14			
Determinant resid covarian	nce	6.93E+13			
Log likelihood		-262.4887			
Akaike information criterio	on	43.61364			
Schwarz criterion		44.52625			

Source: own calculations according to data taken from the INS, 2022 (Table 2)

According to the data in the table, it can be seen that in the case of all three equations, especially the one of interest (with GDP per capita as the dependent variable and the other two indicators analyzed as independent), the influence of the endogenous variables on the exogenous is around 99%. The extracted equation is analyzed in the following:

```
GDP/capita = 0.520211997803*GDP/capita(-1) + 1.20975543902* GDP/capita(-2) - 0.734228554406*AIC/capita(-1) - 1.88694613022*AIC/capita(-2) + 23.4289385052*gross min wage(-1) - 2.18601133198*gross min wage(-2) + 18927.5495522cap
```

It can be noticed the minimal influence and the oscillating trend of the effective individual consumption of households per inhabitant on both lags, varying between -0.734228554406 on lag 1 and +1.20975543902 on lag 2, proving that the gross minimum wage, for the analysed period, has the greatest influence, especially on lag one (+23.4289385052), on lag two being, as in the case of the first independent indicator, negative (-2.18601133198).

In conclusion, in the short term the gross minimum wage has a significant impact on GDP per capita, but in the long term this influence decreases. On the other hand, the influence of the actual individual consumption of households in both the short and long term is much smaller.

4. Conclusions

In our paper, we made an analysis of the gross minimum wage in Romania, in the period 2007-2021, as well as its evolution in correspondence with the GDP/ capita and the individual consumption of households' indicators, being a proportional relationship. I expressed the economic growth by means of GDP/inhabitant, and about consumption it is well known that it has an important weight in determining the GDP.

The increase in the minimum wage led to an increase in consumption, so the increase in GDP was achieved due to government spending and consumption. Also, agriculture, industry, construction, services contributed to the growth (where there are most minimum wage contracts).

Also, in this interval, both the minimum wage and GDP/inhabitant increased, the minimum wage at a faster rate (approx. 5 times), and GDP/inhabitant three times. The peak was reached for both indicators in 2021. However, the year 2009 is an exception, when the indicator registered a lower level of 219 lei compared to 2008. Household consumption/inhabitant increased by approx. 3 times in 2021, compared to 2007. The minimum wage influences consumption, its increase implicitly leading to an increase in the population's expenses.

In the analysed period, final consumption experienced a sharp evolution, with significant increases from one period to another. The exception is the year 2009 (the year of economic and financial crisis), when it recorded a decrease of 234 lei, compared to 2008.

It is noted that the evolution of the two macroeconomic indicators (GDP/capita and household consumption) is very similar, with sharp increases for the period 2010-2021.

At the same time, in order to verify the influence of the minimum gross salary per inhabitant, measured in lei, and of the effective individual consumption of households per inhabitant (lei) on the GDP per inhabitant (lei) at the level of Romania, the VAR econometric analysis method was used, according to which, especially in the case of the equation with GDP per capita as the dependent variable and the other two indicators analysed as independent, the influence of the endogenous variables on the exogenous is around 99%. In conclusion, in the short term the gross minimum wage has a significant impact on GDP per capita, but in the long term this influence decreases. On the

other hand, the influence of the actual individual consumption of households in both the short and long term is much smaller.

References

- Anghelache, C. (2011). Analysis of the correlation between GDP and final consumption, Theoretical and Applied Economics, Volume XVIII, No. 9(562)
- 2. Arndt, H. W. (1978) The Rise and Fall of Growth, H. Study în "Contemporary Thought", Longman Cheshire Pty Limited, Melbourne
- 3. Căpraru, B. (2021). 7 milestones to consider when analyzing economic growth, https://www.hotnews.ro/stiri-opinii-25150743-7-repere-care-trebuie-tinem-cont-atunci-cand-analizam-cresterea-economica.htm
- 4. CES Romania (2014). MINIMUM BASKET- A viable tool in establishing the national minimum wage and social policies in Romania?. Available at: https://www.ces.ro/newlib/studii-ces/COSUL-MINIM.pdf
- 5. FES (2018). Minimum monthly consumption basket for a decent living for the population of Romania, Friedrich-Ebert-Stiftung. Available at: https://library.fes.de/pdf-files/bueros/bukarest/14759.pdf
- 6. IMF (2016). Romania- Sellected issues. IMF Country Report No. 16/114
- 7. Kuznets, S. (2001). Economic Growth and Structura. Selected Essay, Hainemann Educational Books Ltd, London.
- 8. Nordhaus, W., Tobin, J. (1972). Is Growth Obsolete?, chapter from the book Economic Research: Retrospect and Prospect, Volume 5, Economic Growth, NBER.
- Pânzaru,S. and Ştefa, A. (2008). Economical growth and development in European and mondial context. Review of General Management, Issue 2, pp.94-109 Available at: http://www.managementgeneral.ro/pdf/2_2008_7.pdf
- 10.Popa, A-M. (2012). The impact of social factors on economic growth: Empirical evidence for Romania and European Union countries, Romanian Journal of Fiscal Policy (RJFP), ISSN 2069-0983, ASE Publishing House, Bucharest, Vol. 3, Issue 2
- 11. Pilling, D. (2018). The Growth Delusion: The Wealth and Well-Being of Nations, Bloomsbury Publishing, London.
- 12. Perroux, Fr. (1981). Pour une philosophie du nouveau developpement, Les Presses d'UNESCO, Paris.
- 13.Socol, C. (2018). The minimum wage as a public policy tool pro or con?, Available at: https://library.fes.de/pdf-files/bueros/bukarest/13270.pdf

- 14.UNDP (2022). Human Development Index, https://hdr.undp.org/data-center/human-development-index#/indicies/HDI
- 15. Voica, I.E. (2009). Factors influencing economic growth at the level of Romania, "Constantin Brâncuşi" University Annals from Târgu Jiu, Economy Series, No. 3.
- 16.*** Considerations on the minimum wage policy in Romania, 2020, Concordia Employers Confederation Study carried out with the support of the Consilium Policy Advisers Group (CPAG) think tank

Other data sources

- The Ministry of Labor and Social Justice. The minimum gross salary in the period 2007-2021
- Ministry of Public Finance, IMPACT ANALYSIS regarding the minimum gross salary guaranteed in payment for the year 2020
- National Institute of Statistics, online TEMPO databases

Table 1 Evolution of minimum gross salary during the period 2007- 2021

	Minimum salary		Change				
Valid from	Gross	Net wage	Gross (higher education)	Net (higher education)	(increase) compared previous period	Government decision	Note
			LEI		%		
1 January 2021	2 300				+ 3,1	HG 4/2021	
1 January 2020	2 230	1 346	2 350 (€ 491,74)	1 413 (€ 295,67)	+ 7,2	HG 935/2019	
1 January 2019	2 080	1 263	2 350 (€ 502,58)	1 413 (€ 302,19)	+ 9,5	HG 937/2018	
1 January 2018	1 900	1 163			+ 31,0	H.G.846/2017	OUG 79/2017 - The gross salary also increased due to the transfer of contributions from the employer to the employee 25% of Romanian employees earn approximately the minimum in the economy
1 February 2017	1 450	1 065			+ 16,0	HG 1/2017	1,3 million employees, representing 30% of the total, work on the minimum wage.
1 May 2016	1 250	925			+ 19,0	HG 1017/2015	
1 July 2015	1 050	785			+ 7,1		
1 January 2015	975	732			+ 8,3	HG 1091/2014	In 2015, Romania had the second lowest salary in the European Union, after Bulgaria. About 2,4 million workers earned the national minimum wage or less, which represented 40% of the total number of active workers. Of these, 1,6 million worked full-time and 0,7 million worked part-time.
1 July 2014	900	678			+ 5,9		
1 January 2014	850	644			+ 6,3	HG 871/2013	At the end of 2014 there were over one million employees (20% of the total wage earners in the economy) who had the minimum wage, almost 12 times more than in August 2011.
1 July 2013	800	609			+ 6,7	HG 23/2013	In December 2013, Romania had the second lowest salary in the European Union, after Bulgaria.
1 February 2013	750				+ 7,1		
1 January 2012	700				+ 4,5	HG 1225/2011	ÎIn April 2012, Romania was the only country where almost a quarter of employees had the minimum wage.
1 January 2011	670				+ 11,7	HG 1193/2010	In August 2011, fewer than 90,000 workers were paid the national minimum wage.
1 January 2009	600		1 200 (€ 298)		+ 11,1	HG 1051/2008	
1 October 2008	540		(= => 0)		+ 8,0	HG 1051/2008	
1 January 2008	500				+ 28,2	HG 1507/2007	
1 January 2007	390				+ 18,2	HG 1825/2006	

Source: The Ministry of Labor and Social Justice, the minimum gross salary in the period 2007-2021

Table 2
Evolution of gross minimum wage, GDP/capita, household final consumption/capita in the period 2007-2021

Years	GDP/capita	Minimum gross salary	Household final consumption/capita
2007	20 385	390	15 092
2008	26 285	540	18 770
2009	26 066	600	18 536
2010	26 104	600	18 854
2011	27 740	670	19 516
2012	29 501	700	20 760
2013	31 766	800	21 568
2014	33 626	900	22 780
2015	35 916	1 050	24 494
2016	38 751	1 250	26 941
2017	43 786	1 450	30 861
2018	48 847	1 900	34 765
2019	54 654	2 080	38 660
2020	54 954	2 230	37 969
2021	61 553	2 300	42 534

Source: INS, Main aggregates, per inhabitant - SEC 2010, current prices, Tempo databases

FINANCIAL EDUCATION AND DIGITALIZATION. THE CASE OF ROMANIA

Tudor CIUMARA, PhD*

Abstract

This paper¹ highlights the importance of financial education and digital literacy in the context of the digitization of the economy. Building on the theoretical grounds established in the literature we use relevant data and statistics from comprehensive studies on financial education, financial literacy and digitalization. We suggest that addressing the issue of insufficient financial knowledge and increasing digital financial literacy could have important implications for individual and societal well-being.

Keywords: financial literacy, financial system, technology, economic development

JEL Classification: A20; G50; O33

1. Introduction

The last two decades have been marked by a succession of crises and major events worldwide, starting with the global financial crisis, which have put pressure on decision-makers to find solutions to counteract the adverse effects generated.

In this paper we address the issue of how the digitization of the economy influences the level of financial education of the population and its financial behaviour, also discussing a more recently emerged concept of digital financial literacy. We discuss the broad themes of financial education and digitization, with the pursuit of the general objectives to establish some coordinates of the level of financial education in Romania and making assessments regarding the likely

¹ This paper is based on the research project "Financial education and financial behavior in the context of economic digitalisation", T. Ciumara, "Victor Slăvescu" Centre for Financial and Monetary Research, 2022.

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developments, while also isolating and analysing some particularities of financial behaviour in the context of the digitalization of the economy.

Numerous studies indicate the lack of a sufficient level of financial knowledge among important segments of the population. Such data emerge from studies conducted across the globe, even if some countries have greater deficiencies than others in this area. This insufficient education leads to the taking of financial decisions that are far from optimal, a situation with important impact, both at the individual level and at the level of the entire society. As long as the ability to use financial concepts in the use of individual financial resources is limited, we cannot expect these resources to be adequately managed. We find that the digitization process at the economic and social level is accelerated. Due to the importance for the field of finance, it seems necessary that, for an important part of the population, financial literacy is also doubled by digital literacy. The proper use of financial technology requires greater financial sophistication than what was sufficient in the past, both to simply use new financial products and services and also to avoid financial fraud and other costly mistakes.

It is very possible that precisely the ability to use new technologies in the financial field at the level of the entire population will represent a new and important differentiator at the level of different national economies and societies. As a result, it could be that precisely the ability of nations to prepare their population in this field can have a decisive role in the process of ensuring the premises of national well-being.

2. Literature review

Much of the body of literature on financial literacy considers the relationship with individuals' contributions to pension funds (such as the study by Behrman and Mitchell, 2012) while some also point to the importance for stock market development (Panait and Lupu, 2009). Also, numerous studies highlight the importance of the results for public policymakers, who can use them to substantiate measures aimed at increasing the degree of financial education (Chen et al., 2020, Contreras and Bendix, 2021). In a novel approach, Volpe et al. (2006) set out to determine the set of questions needed to test the degree of financial literacy, which would allow some standardization of the studies pursuing this theme. An interesting perspective is that of

Gray et al. (2021), which examines the extent to which education in general contributes to improving financial behaviour.

We cannot propose a comprehensive review of the literature, given that in this field, due to the abundance of studies carried out, we have moved from a narrative review of the literature (such as that of Martin, 2007, Hastings et al, 2013 or Abad-Segura et al., 2019) to meta-analyses designed to lead to an aggregation of study results (such as that of Fernandez et al., 2014 or Kaiser and Menkhoff, 2017). These ideas regarding the state of the literature analysis in the field, by Kaiser et al (2021), can be supplemented with data regarding their assessment from the perspective of the number of Web of Science articles published on the topic of financial literacy, which experienced an exponential increase, from under 50 in 2010, to over 600 in 2020, with a total of about 2500 articles in this interval. We note, therefore, the abundance of studies on the subject of financial education in well-rated publications, without taking into account the studies from marginal publications.

3. Methodology and data

In order to build on the theoretical grounds established in the literature we use relevant data and statistics from comprehensive studies on financial education, financial literacy and digitalization. This helps to establish general levels on these aspects and compare the position registered in Romania with international averages and a relevant set of countries.

Examining the data from a more recent OECD study on financial literacy (2020), we also note here the extremely poor scores recorded by respondents from Romania, both compared to the global level and compared to respondents from neighboring countries. In the table below we reproduce these scores, obtained both by simple addition and by normalization.

Table 1 Financial literacy scores (selected countries)

		Financial literacy score	Knowledge	Behaviour	Attitude
	Romania	11,2	3,5	5	2,7
	Bulgaria	12,3	4,1	5,3	2,9
Score	Hungary	12,3	4,6	4,5	3,3
Š	Moldova	12,6	4	5,5	3,1
-	All countries average	12,7	4,4	5,3	3
	Romania	53,4	48,3	55,7	54,7
Scores normalised	Bulgaria	58,5	56,9	59,3	57,6
	Hungary	58,8	65,6	49,9	65,1
	Moldova	59,8	55,6	60,6	61,4
	All countries average	60,5	62,8	59,2	59,2

Source: OECD, 2020

We note that the general score in the above table can take values from 1 to 21, by adding the scores of the component elements (financial knowledge - score from 0 to 7, financial behavior - score from 0 to 9, financial attitude - score from 1 to 5). Taking this information into account, we find that the scores in Romania are approximately halfway up the scale for each component of financial literacy, with the one related to knowledge being the most deficient, both in absolute terms and in relation to the average of the study.

Other interesting aspects that emerge from the OECD study concern the answers provided by the respondents in each country to a series of questions designed to determine the level of financial knowledge held. We notice that, especially in the case of Romania, very few respondents correctly understood notions that can be considered basic, such as what simple and compound interest means. We note that, especially compared to the respondents from the other countries presented in the table below, in Romania the understanding of the relationship between time and the value of money is problematic.

Table 2
Correct answers to seven questions regarding financial knowledge – selected countries (%)

	Romania	Bulgaria	Hungary	Moldova	Study average
Time value of money	36,9	51,7	66,8	67,5	59,9
Understanding interest paid on a loan	76,5	71,5	90,4	80	84,4
Simple interest calculation	41,3	52,7	55,9	43,5	57,1
Understanding correctly both simple and compound interest	14,3	30,3	18,3	14,2	26,3
Understanding risk and return	64,9	76,5	81,2	74,4	77,1
Understanding the definition of inflation	65,2	78,6	84,7	68,2	78
Understanding risk diversification	46,2	45,4	61,6	54,6	58,9

Source: OECD, 2020

It should be noted that the OECD methodology (2020) is also replicated in other studies that aim to validate these results or compare them with different representative samples for certain segments of the population (Atkinson and Messy, 2012, Fraczek et al. 2017, Tulai et al., 2021).

Some additional data of interest in assessing how the use of financial services is influenced by digitization can also be found in The Global Findex Database, an extensive analysis of the World Bank (2022). In the table below we include a brief selection that allows us to see a relevant evolution of some indicators in recent years, in the case of Romania.

Table 3
Date regarding the evolution of digital financial transactions in Romania

Year	2014	2017	2021
Made or received a digital payment (% age 15+)	43%	47%	64%
Made or received a digital payment, primary education or less (% ages 15+)	17%	21%	33%
Made or received a digital payment, secondary education or more (% ages 15+)	55%	59%	70%
Made a digital payment, primary education or less (% ages 15+)	8%	8%	21%
Made a digital payment, secondary education or more (% ages 15+)	40%	44%	64%
Received digital payments, primary education or less (% ages 15+)	14%	18%	23%
Received digital payments, secondary education or more (% ages 15+)	44%	51%	52%
Used a mobile phone or the internet to check account balance (% age 15+)		12%	40%
Used a mobile phone or the internet to buy something online (% age 15+)		16%	37%
Made a digital online merchant payment for an online purchase (% age 15+)		32%	61%

Source: World Bank, 2022

From the previous table we note the accelerated increase in the share of people who have made or received digital payments in the last 8 years. If we also analyse the data regarding the level of education of these people, we notice two important aspects: firstly, the experience of digital payments is much less frequent among people with a low level of education but, secondly, the rate of adoption of these payments by this category of people is higher. However, the gap between the more educated and the less educated is widening. This finding reinforces our idea that the digitization process can lead to an increase in the vulnerability of some segments of the population.

We also note that for both categories of respondents, grouped according to the level of education, the experience with making digital payments is less than that with receiving such payments. While the gaps in receiving digital payments remain at the same level during the analysed time period, they grow in terms of making such payments. Receiving digital payments is more passive than making such payments. Many times, although they may prefer to receive payments in cash, people are forced to receive them digitally. We can think here of receiving salaries or pensions by card versus the traditional option of receiving them in cash. This is pretty much a forced digitization of payments from the perspective of individuals. What is most interesting, however, is how the share of people who have made digital payments is increasing. On the one hand, we observe a substantial increase in the share of these people in 2021 compared to 2017, in both education level categories for which we have data, with COVID-19 undoubtedly being a catalyst for this evolution. On the other hand, it is very interesting that the share of people with a low level of education who made digital payments became almost equal to that of those who received such payments, while, in the case of people with a higher level of education, the share of those who made digital payments became significantly higher than those who received such payments. We notice, therefore, a transition from the passive adoption of digitization in the field of payments to their active approach.

From the data presented, we also note an accelerated increase in recent years in the share of people who make online purchases and who check their account balances online, behaviours that indicate the increasing adoption of digital developments in financial activities.

4. Discussion

The connection between the financial system and technology is not recent. However, the unprecedented development of information technology leads to a very strong merger. The digitized trajectory of the financial system promises to reveal numerous opportunities and also important risks and threats. If we pay attention to the opportunities that digitization brings to the financial field it becomes relevant to introduce the notion of financial literacy and education in this context. Technology has changed the financial system and the way people and businesses interact with it. There is much talk about how technological changes have brought the financial system closer to many people who

did not have access to it before. However, this is only one facet of change. It is easy to see how, beyond the growth of financial inclusion, the way other users interact with actors in the financial system has also fundamentally changed. Technology has had a double impact on the financial system: on the one hand it has transformed segments of the financial system through the digitization process, and on the other hand it has created new segments. This is also a trend that promises to last long into the future, thus being an important area of study.

The direction towards which the financial system is heading in the context of technological changes is relatively clear. We don't know exactly how the financial landscape will change in the next 5 or 10 years, but we know the main coordinates. The pandemic that emerged in 2020 has helped to accentuate the digitization process and increase the conditions that favour the development of FinTech, making people go through a process of "forced digitization". Probably, many investors have redirected their funds from "brick and mortar" investments to investments based on digital solutions. We will see in the coming years what the exact consequences of this crisis are, but at this point we can anticipate that they will be substantial.

As mentioned, the "forced" digitization of a large proportion of the population is fuelling the demand for FinTech solutions, accelerating digitization. As the pandemic subsides, the habits acquired during the period of social distancing take stronger root, reinforcing the adoption of financial behaviour with a more important digital component. One basic premise for this paper is that financial digitization is not the real goal of the process, but a means used to an end, it is the path that industry players are currently following to achieve their goals. This process certainly has a transformative impact on the financial behaviour of all stakeholders, be they individuals or companies, beneficiaries or providers of financial services.

Digitization advances at different rates in the world. A 2022 study by the European Investment Bank highlights the fact that the European Union is behind the US in terms of digitalization and the impetus given by COVID-19 was stronger in the US than in the EU, which leads to the accentuation of already existing gaps. Within the EU, Romania has a below-average degree of digitization and had a lower rate of digitization than the EU average during the COVID-19 period, which leads to another level of widening of the gaps. It should be mentioned that the study we are referring to analysed the degree of digitization of companies in the evaluated countries.

Digitization makes financial transactions more accessible, fast, secure and timely (OECD, 2018). At the same time, the uneven advance of the digitalization of the financial system leads to different developments and particular situations at the global level. In 2017, the OECD published a report in which it evaluated aspects related to consumer protection, financial education and the use of digital tools in financial education in the context of the digitization process, highlighting some particularities at the national level. This report reveals the different approaches of the states to these types of problems. Some states, such as Australia, Indonesia, the Philippines and India, seem to pay particular attention to improving the regulatory and supervisory framework, while some states seem to focus more intensively on aspects related to consumer protection of digital services in the context digital (Hong Kong, China). Concerns about improving the degree of digital literacy seem to be dominant in European states such as Austria or Estonia.

A framework for analysing digital divides is advanced by Chakravorti et al. (2020) who, analysing the process of accelerating digitalization worldwide, divided the states into four categories: a) economies that already have a high level of digitalization and are on an accelerated trajectory of continued digitalization (South Korea, Singapore, Hong Kong); b) economies with a limited level of digitization at present but which are digitizing rapidly (China, Kenya, Argentina); c) economies with a high degree of digitization, where the digitization process advances more slowly (many of the EU countries) and d) economies that have both a low degree and a low speed of digitization (countries in Africa, South America, Europe of South). In these terms, we note three important aspects. First of all, digitization is a process that advances unevenly in the world, a fact that leads to the emergence of important gaps. Second, the degree of financial education differs substantially from country to country and the strategies to address the problem of financial literacy differ greatly. Thirdly, digital financial literacy, a relatively new theme arising from digital progress and the need to ensure a sufficient degree of financial education, fundamentally depending on the first two aspects mentioned, cannot be otherwise than deeply uneven at global level. It will probably be a long time before a relative standardization is reached in this area given the fact that the digital financial landscape will be increasingly different in various areas of the world in the coming period.

Focusing on the case of Romania, we can start from a few available data sets, which indicate some relevant facts. From a global perspective, a Digital Skills Gap Index conducted by Wiley in 2021 placed Romania in 74th place in terms of digitalization advance, out of 134 countries, with a score of 4.7 out of 10. Comparing this data with that regarding the level of financial education, we have a representation of the fact that Romania has both a very low level of financial education and a very low level of digital skills, a completely unfavourable situation, given that many countries are much better positioned on at least one of these indicators. To complete the perspective, we can include some additional data regarding aspects related to digitization. A Eurostat assessment carried out in 2021 places Romania in 35th place out of 36 countries in which the level of people's digital skills was measured. The latest statistics available show that only 28% of Romanians have basic or advanced digital skills, compared to an EU average of 54%, with 10% of the population having no digital skills at all (compared to the EU average of 3%).

The positive aspect of the fact that Romania seems to be far behind other countries is that rapid progress could be made relatively easily in the early stages of a real and supported digitalization project. Digital infrastructure is not a problem in Romania, and probably neither is cultural openness to the adoption of new technologies. Serious impediments to the digitization process appear to be the educational system and governmental inadequacy.

5. Conclusions

Clearly, Romania is not a country that can be considered in the vanguard in terms of financial education, financial behaviour, or digitization. All available relevant statistics indicate the existence of gaps, smaller or larger, with the most advanced countries in each of these areas. Some of these gaps could be covered relatively quickly if the right actions were taken, but others would require time and perseverance under any circumstances.

An aspect that does not emerge clearly from the specialized literature consulted refers to the connection between the level of financial education of the population and the economic development of the country. Most studies focus on the effect of the level of education on the individual, ignoring, to a large extent, the aggregate effect at the level of the entire society, possibly demonstrated through a

comparative analysis looking at the evolution over time of economic development in several countries, in correlation with the evolution of the level of financial education in the respective countries. This may be an interesting topic to address in the future.

References

- 1. Abad-Segura, E., González-Zamar, M.D. (2019) "Effects of financial education and financial literacy on creative entrepreneurship: A worldwide research", Education Sciences, vol. 9, no. 3, p.238.
- 2. Atkinson, A., Messy, F.A. (2012) "Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study", OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing.
- 3. Behrman, J. R., Mitchell, O. S., Soo, C. and Bravo, D. (2012) "How financial literacy affects household wealth accumulation", American Economic Review, vol. 102, no. 3, p.300-304.
- 4. Chakravorti, B., Bhalla, A. and Chaturvedi, R. (2020) "Which Economies Showed the Most Digital Progress in 2020?", Harvard Business Review, December 18.
- 5. Chen, F., Lu, J., Li, J., Wang, W. and Bissielou, H. (2020) "Sustainable financial education and consumer life satisfaction" Sustainability, vol. 12, no. 3, p.1150.
- 6. European Investment Bank (2022), Digitalisation in Europe 2021-2022: Evidence from the EIB Investment Survey.
- 7. Fernandes, D., Lynch Jr, J. G. and Netemeyer, R. G. (2014) "Financial literacy, financial education, and downstream financial behaviors", Management Science, vol. 60, no. 8, pp. 1861-1883.
- 8. Fraczek, B., Bačová, M., Hintošová, A. B. and Sivicek, T. (2017) "Simultaneous use of the financial literacy level and the financial inclusion degree as a result of financial education efficiency in Visegrad group countries", Journal of Economics & Management, vol. 27, pp. 5-25.
- 9. Gray, D., Montagnoli, A. and Moro, M. (2021) "Does education improve financial behaviors? Quasi-experimental evidence from Britain", Journal of Economic Behavior & Organization, vol. 183, pp. 481-507.
- 10. Hastings, J.S., Madrian, B.C. and Skimmyhorn, W.L. (2013) "Financial literacy, financial education, and economic outcomes", Annual Review of Economics, vol. 5, no. 1, pp.347-373.

- 11. Kaiser, T., Menkhoff, L. (2017) "Does financial education impact financial literacy and financial behavior, and if so, when?", The World Bank Economic Review, vol. 31, no. 3, pp.611-630.
- 12.Martin, M. (2007) "A literature review on the effectiveness of financial education", FRB Richmond Working Paper No. 07-03.
- 13. Contreras, O., Bendix, J. (2021) "Financial Literacy in the United States", Milken Institute.
- 14.Organization for Economic Cooperation and Development (OECD), (2017), G20/OECD INFE Report on ensuring financial education and consumer protection for all in the digital age.
- 15.Organization for Economic Cooperation and Development (OECD), (2018), G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy.
- Organization for Economic Cooperation and Development (OECD), (2020), OECD/INFE 2020 International Survey of Adult Financial Literacy.
- 17. Panait, I., Lupu, I. (2009) "The behavior of the Bucharest Stock Exchange during the current financial markets crisis and proposed measures for its sustainable development" Annals of Spiru Haret University Economic Series, vol. 1, no. 1, pp. 73-80.
- 18. Tulai, H. I., Făt, C.M. and Beju, D.G. (2021) "The current framework of financial education in Romania in the context of the informational economy", Journal of Financial Studies, vol. VI, nr. 10, pp. 33-47.
- 19. Volpe, R. P., Chen, H. and Liu, S. (2006) "An analysis of the importance of personal finance topics and the level of knowledge possessed by working adults", Financial services review, vol. 15, no. 1, pp. 81.
- 20. Wiley (2021) Digital Skills Gap Index.
- 21. World Bank (2022) The Global Findex Database 2021.

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