THE IMPORTANCE OF USING ERP SYSTEMS IN HUMAN CAPITAL REPORTING

MILITARU ELIAN-GABRIEL
PHDSTUDENT, UNIVERSITY OF CRAIOVA, FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION, CRAIOVA, ROMANIA
e-mail: militarueligabriel@yahoo.com

LĂPĂDAT MIHAI-VALENTIN-CĂTĂLIN
PHDSTUDENT, UNIVERSITY OF CRAIOVA, FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION, CRAIOVA, ROMANIA
e-mail: lapadat.catalin@gmail.com

Abstract

Integrating information into internal reports amplifies top management decisions to implement a single database that gathers cross-departmental information from across the institution. Enterprise Resource Planning (ERP) systems create this possibility by integrating data flow and information exchange brings the advantage of easy access to information through simple, reliable and complete reports. The need to report financial and non-financial information is also a legal obligation specific to certain types of entities operating in the European Union vin addition to the internal need to account for financial information.

Current research into the best methods of reporting human capital elements aims to improve managerial decision-making based on data processed in the finance-accounting and human resources departments of each organisation. It has to be mentioned that the non-financial motivation of employees is complementary to the financial one. In this paper, the processes that determine the results quantification are extensively analysed. The research methods, the functionality and quality of information due to ERP systems, the analysis and interpretation of data, the identification of legal procedures and their comparison aim to substantiate the best decisions on personnel policy. Therefore, this paper aims to be a catalyst in the decision-making processes on human potential and seeks to enrich the literature with quality and relevant information in such a complex field where results are so important for management, shareholders, investors, creditors, employees, the state with its bodies, researchers etc.

Keywords: *integrated reporting, human capital, Enterprise Resource Planning, European Union, employee motivation*

JEL classification: *M12, M14, M15*

1.Introduction and context of the study

In today's fast-paced business landscape, the quality of information reporting plays a crucial role in decision-making processes. Companies are always looking for ways to improve data processing and reporting by implementing integrated solutions. The extensive functionality of these software solutions offers numerous benefits, from integrating easy-to-use and interactive interfaces for data visualisation, to accommodating artificial intelligence solutions for optimisation of reporting processes. The possibilities are endless (Katuu,2020).

The information gained by implementing an ERP system provides a unified view of internal operations in the business process. Thus, having financial and non-financial data on a single platform enables accurate, consistent and transparent reporting. This fact not only influences for a much better and updated decision making process but also increases stakeholder confidence in the reliability of the conferred information.

Given the significant benefits of ERP systems, we initiated a multi-criteria analysis in the field of information systems management. Our goal is a more detailed assessment of the benefits the organisations derive from ERP implementation, as well as the challenges associated with this process. Today's business environment is characterised by a dynamic of permanent evolution. This trend forces companies to regularly review internal policies and optimise reporting systems. Whether it is a voluntary initiative or imposed as a result of legal regulations, the integration of

advanced technologies such as ERP systems contributes significantly to improving the reporting framework.

Management's need for a comprehensive picture and reliable information increases with the complexity of a company's internal operations. In this context, implementing an ERP system is an important internal strategic decision for the well-being of the company. A robust, dedicated management information system, capable of integrating all organisational functions, contributes significantly to operational efficiency.

The full involvement of management is critical to the success of ERP implementation, providing the necessary support for a smooth transition and effective system adoption. Pre-informing users is another important element, making them aware of their essential role in exploiting the optimization potential of the ERP solution. At the heart of a successful implementation lies a thorough in-depth understanding of specific business requirements, ensuring a customised configuration and adaptability of the system.

ERP systems support business through efficient collaboration between departments, automating work processes, streamlining internal operations and improving business flows. This integrated approach significantly facilitates data reporting according to corporate reporting needs. The need for reporting is also driven by the choice of the organisation's management to report voluntarily based on certain environmental, social and governance (ESG) frameworks or mandatory reporting due or required by government or European bodies.

Voluntary reporting is intended to reduce information asymmetry between company management on how internal operations, strategy, investors and stakeholders are managed. Also, depending on the type of business, voluntary assurance is intended to address the biggest challenges related to social impact, governance and environmental protection measures.

Internationally, there are several regulatory frameworks under which corporations are obliged to report data on environmental protection (protection of forests and water), measures implemented to mitigate the greenhouse effect and social protection measures. There are also Global Reporting Standards (GRI), which set out measures to increase transparency in line with ESG. The reporting criteria can be influenced by the International Sustainability Standards (ISMB). By complying with these standards, companies present a transition plan for investors on how they are aiming to mitigate carbon emissions and drive business resilience to different climate scenarios. In this way, companies can voluntarily choose to report data on environmental impacts, human capital specific reporting (reporting on employee seniority, gender, professional development, management team structure, pay policy, equal opportunity policies, gender pay, etc.), social and environmental impacts through sustainability objectives.

Integrated reporting is a new reporting edge. This type of reporting provides a holistic view of the organisation, showing a clear connection between social, environmental and governance aspects. Through integrated reporting, companies go beyond simply presenting data and provide a thorough analysis of how ESG strategies and practices influence long-term performance.

Mandatory reporting refers to the regulatory approach that obliges companies to report on issues of importance to the state and its bodies, such as items related to employees, length of service, employment, health and safety at work, level of employee benefits, etc. all of which are necessary for the establishment of the social security system, the determination of taxes on payroll income, for various analyses required for statistical records. At EU level, for companies with more than 500 employees the report concerning the employee data through a non-financial statement is mandatory (Directive 2014/95/EU).

The processing of employee data and the reporting of this data in a voluntary or mandatory way can be managed with reporting software. Unlike traditional software which is limited, ERPs fill these needs and create comprehensive human capital reports.

Several authors have studied the problems that companies face in their implementation of ERP software (Gaol, 2023, Andreis, 2022, Xie, 2022, Fink, 2023, Beijsterveld, 2016, Kang, 2022).

These problems are related to the decrease in turnover following the implementation process and also with the training of employees being able to safely use the software for data entry, complexity of the systems, etc. ERP systems also offer many advantages aimed at tracking organizational development, increasing labor productivity and increasing the efficiency of operational processes (Ruivoa, 2020, Zaimovic, 2020, Lahlou, 2024).

These are just some of the specific features of implementing ERP solutions and to this end we propose a multi-criteria research on the benefits but also the challenges of integrating ERP systems and reporting human capital with them.

Previous research sets out numerous benefits but also the challenges associated with implementing these systems. This study explores a beneficial method of reporting human capital issues using ERP software. This approach is notable for its flexibility, being compatible with both voluntary and mandatory reporting requirements. Our research highlights the need for ERP solution providers to adapt to new reporting requirements, both voluntary and mandatory. This adaptability will allow companies to use existing ERP systems to comply with various reporting frameworks, significantly simplifying the process.

2. Research methodology

Our research involved reviewing articles published in Scopus, World of Science, Science Direct, Wiley, using a multi-directional approach. Firstly, our research details how the benefits of implementing an ERP system are perceived by both large companies and Small and Medium Enterprises (SMEs). This correlates with the need for voluntary reporting of human and social capital, as the relevant literature, as well as reports from vendors of such integrated data systems, place a strong emphasis on the benefits they provide.

Second, our research focuses on the challenges that arise with the implementation of ERP systems in companies and SMEs. The challenges that arise are discussed extensively in the work of over 50 authors from several countries, who have explored the impact and consequences of implementing ERP systems within companies and public institutions. These challenges are amplified by the dynamics of systems functionality, employee motivation and engagement challenges across all organisational departments.

Thirdly, we set out to categorise, describe and compare the main recording operations for obtaining reports containing employee data through traditional accounting systems and integrated data systems such as ERP.

Human capital specific data analysis methods require systems that integrate data and provide detailed and reliable information in real time. Knowledge of employee-specific aspects of pay, health and safety policies and other relevant aspects that contribute to employee satisfaction, motivation, retention and productivity is the subject of more effective workforce management in organisations. Thus, ERP systems can positively influence the quality of reporting on the basis of the information they collect, as opposed to traditional systems.

For this comparative study we have undertaken a detailed analysis of the reports and statements of ERP system providers on the recording of human capital information. These comparisons add to a large extent to the validation in terms of choosing a specific type of software type for organisational reporting. Depending on the size of the business we consider that the reporting of human capital specific information can be improved by choosing an ERP type software. The benefits obtained such as increased labour productivity, streamlined internal processes, internal control combined with increased return on investment (ROI), return on assets (ROA) or return on equity (ROE).

3. Benefits of ERP implementation

The research results show the most common benefits obtained after implementing ERP systems. They are based on data collected from the work of over 50 authors who have conducted extensive and in-depth empirical research in this area. They highlight the long-term benefits of implementing an integrated data system with long-term effects on internal process efficiency, increased labour productivity, organisational performance and market share growth.

It can be seen from Table 1 that a large number of authors discuss the numerous benefits that companies obtain from implementing integrated systems. Thus, the important role of data integration and centralisation leads to the streamlining of data flow. Management of the product delivery department and customer relations is improved and is attributable to a higher level of customer satisfaction as a result of more effective control. The repetitive nature of delivery operations also plays an important role. This is taken over by the ERP system through automation, which creates the context for exponential growth of the organisation at the expense of increased employee productivity.

According to Jones (2011), some employees react enthusiastically and see the implementation of ERP systems as an opportunity to develop their work skills. These employees are the ones who understand the benefits of automating repetitive work and contribute fully to the ERP implementation process.

An integrated database with information that can be accessed in real time facilitates better control, helps reduce internal costs and increases competitiveness. ERP systems allow for the integration of modules for each departmental activity (finance-accounting, human resources management, sales, customer management, production, etc.). These modules can be implemented as a whole, together with the ERP system, or in stages depending on organisational needs and budget. ERP systems are also compatible with modules from other local systems which are often cheaper and more user-friendly. Cost reduction boosts revenue growth through the implementation of integrated data systems, contributes to increased competitiveness and market share by increasing investor confidence.

Our research is built on scaling the benefits resulting from the implementation of ERP systems according to the frequency with which they are discussed. These benefits are specified in the works of more than 50 authors but also in the works of other authors adjacent to the research, which are cited but not mentioned in this paper. Thus, 142 responses are obtained for 23 mentioned benefits which are scaled according to the frequency of mentions. Our research aims to present the most important and common benefits that are obtained by implementing these systems. These are presented in detail in Table 1 as follows:

Table no 1 - Operational and economic benefits of implementing ERP systems

Benefits of implementing ERP systems		
Data integration and centralisation	17	11,97%
Data flow efficiency	13	9,15%
Standardisation of business processes	11	7,75%
Delivery management and customer relations	10	7,04%
Efficient business operations and organisational growth	9	6,34%
Increasing employee productivity	9	6,34%
Business process planning	8	5,63%
Reducing internal costs	7	4,93%
Increasing competitiveness	6	4,23%
Integration of blockchain, cloud computing, EAI and AI technologies	5	3,52%

Supports the development of instrumental capacities	5	3,52%
Organisational flexibility	5	3,52%
Increased transparency and control	5	3,52%
Process outsourcing	4	2,82%
Stock management	4	2,82%
Increasing market value	3	2,11%
Increased profitability	3	2,11%
Increasing audit quality	3	2,11%
Effective risk management / human error	3	2,11%
Integration of custom modules	2	1,41%
Improved turnover due to efficient data analysis methods	2	1,41%
Reducing employee ignorance	2	1,41%
Increased retail/wholesale production of foreign subsidiaries	2	1,41%
Improving non-financial benefits	1	0,70%
Integration with a large network of companies	1	0,70%
Decreases cash flow volatility	1	0,70%
Increase in the number of employees due to organisational growth	1	0,70%
Total	**142**	**100,00%**

Source: own processing based on data collected from scientific articles that enhance the benefits of ERP systems.

ERP systems are also influenced by the rapid evolution of technology, leading to a trend of resizing and integrating these advanced solutions. Technologies such as blockchain, cloud computing, Big Data and artificial intelligence (AI) play a crucial role in this process. AI in particular contributes to user efficiency by making the interface easier to use. Acting as a personal advisor, AI provides real-time support, optimises workflows and improves user interaction with the system. Examples such as SAP AI Assistant and Oracle Intelligent Advisor highlight how AI integration can enhance employee stability and overall ERP system performance. According to the Council of Europe's website (consilium.europa.eu), only half of Europe's adult population is currently digitally literate. Because of this, businesses are hampered by a lack of digital infrastructure in a world that is open and interconnected, where digital policies enable citizens and businesses to benefit from a sustainable digital future that aims to put people first. With the 2030 policy agenda "The Road to the Digital Decade", the European Union seeks to deliver a digital transformation for all businesses across the European Union in line with its values. Human capital is very important in the implementation of advanced digital technologies because technologies bring a huge impact on business strategy planning. Thus we believe that real-time data reporting helps to better manage and integrate business processes (Katuu, 2020).

The benefits of integrating data are that an ERP system is in fact a software platform that enables such capabilities only if it supports investments in employee professional development and digital skills.

ERP service providers such as SAP, recognise the importance of implementing a human-centric AI module and have incorporated an AI assistant into their Cloud ERP system completely transforming the way users interact with these types of systems. Thanks to the introduction of AI, several important issues are solved such as:

- the system becomes more intuitive providing a hyper-personalised experience based on users' role, preferences and past behaviour;

- available data, including user data, knowledge about the predictive analytics process and documentation representing valuable answers are automatically available to users by simply communicating in the most human way;
- intelligent insights that are highly relevant to users' roles and needs optimise operational processes while reducing time and associated costs.

Implementing AI creates for the ERP user a communication with the system in his native language solving problems related to cultural, social, political or climatic context. Predictive analytics measure disruptions that occur due to various causes and often affect the entire supply chain, becoming more sophisticated and accessible by analysing large amounts of data.

Artificial intelligence creates sophisticated trend-based predictions using machine learning. With AI, management can quickly analyse large amounts of data including information on sales forecasting, employee information, time management, real-time inventory status, inventory status, etc.

AI can provide analytics based on real-time reported data and users can set real-time strategies. The sense of security and trust in the ERP system is increased as vendors prioritise innovative technologies and ensure the highest levels of concern for security, transparency, privacy, ethics and ensure that user security and integrity are built in by design.

The company SAP SE, communicates on their website that they are integrating AI capabilities for all their modules, finance, supply chain, procurement, HR, sales, marketing, IT platform and industries. In terms of implementing AI capabilities for HR, they are creating professional development opportunities through customized role learning options, mentoring projects and connections. Workforce planning is also based on integrated, timely information and accountable decision-making.

AI technology, develops quick answers to workforce questions based on real-time data, improves collaboration and optimises information about employees and their skills, predictive information that helps much needed integrated workforce planning, develops and maintains interaction with customers, creates the opportunity for organizational development at the expense of increased productivity and organizational performance.

ERP service provider Oracle, also showcases the benefits of implementing AI on its website. These are obtained in all operational segments such as marketing, finance, human resources. According to the same vendor, the AI function provides sophisticated pattern-matching algorithms that, once trained, apply methods to help people accomplish tasks or solve problems using various capabilities, such as:

- presentation of interactive diagrams based on speech recognition;
- understanding and processing centralised data sets as recorded in documents;
- organisations can use their own data either structured, such as a database, or semi-structured or unstructured, text graphs, audio-video or to create custom reporting templates;
- human resource management obtains qualitative data on employee recruitment, skills and career development, performance management and employee experience in terms of interaction with the ERP platform.

The vendor has implemented conversational AI support, giving employees access to an AI-driven searchable knowledge base to help solve repetitive problems. This personalised guidance mode by integrating the artificial intelligence function facilitates the processing and communication of information through real-time reports. The reports present multiple information such as: how a company's management deals with equal opportunities for employees, predictive analytics for measuring employee performance and determining the level of labour productivity. Thus, the implementation of ERP systems at the organisational level, the integration of the concept of artificial intelligence within the largest ERP service providers represents a major benefit that solves several previous challenges specific to user perception and creates the context for reporting robust quantitative and qualitative data.

4. Challenges pecific to ERP implementations

Particularly important is awareness of the issues that negatively impact organisational development through the process of implementing integrated data systems; the success or failure of the implementation depends on this knowledge. Implementing an ERP system can bring significant benefits, but it is often a complex process marked by a number of problems. The complexity of the process can be compounded by poor planning, limited resources and the need to make significant organisational changes. ERP implementation can have a temporary negative impact on productivity as users need to adapt to the new system. Extra work, demotivation and familiarity with the interface can lead to decreased efficiency during the implementation phases.

ERP implementation can be a cumbersome process with a high chance of failure if not properly planned and managed. Lack of compatibility of the system with the specific needs of the organisation, insufficient customisation, inadequate user training and resistance to change can lead to implementation failure. This review examines the most common challenges identified in the literature, providing a detailed perspective and systematic approach. Implementing an ERP system can bring significant benefits to an organisation, but it is often a complex process marked by a number of issues. Detailed knowledge of the challenges and strategies to address them are essential to the success of the project.

The main challenges that companies need to take into account in the implementation process are centralised and sorted according to their frequency in Table 2, as follows:

Table no 2 - Difficulties arising from the implementation of ERP systems

Disadvantages		
High implementation costs	20	15,50%
Implementation is lengthy or subject to delays	14	10,85%
Cumbersome implementation procedure and high chances of failure	9	6,98%
SMEs forced to redesign business model with limited resources	8	6,20%
High degree of complexity	8	6,20%
Calls for the reshaping of organisational structure and business processes	7	5,43%
Requires knowledge or experience for operation	7	5,43%
Requires exclusive management support during the implementation phase	6	4,65%
Lack of targeted functionality on the business model	5	3,88%
ROI, ROA, ROE and stock returns fall in the short term	5	3,88%
Successful implementation depends on employees' ability to communicate effectively	5	3,88%
Productivity decreases as a result of demotivation of employees due to high workloads	5	3,88%
Splitting of modules due to high costs and lack of core functionality	4	3,10%
Calls for interdepartmental collaboration that is perceived as extra work for employees	4	3,10%
Request supplier dependency	4	3,10%
Requires short-term monitoring	4	3,10%
Cultural, political and language barriers	4	3,10%
CFS - urges adjustment to budget constraints	3	2,33%
High resilience for implementation	2	1,55%
SMEs depend on the services of a cloud provider due to limited resources	2	1,55%
Does not support e-commerce and business-to-business (B2B) interaction	1	0,78%

User-unfriendly interface	1	0,78%
Blockchain remains a new, complex and expensive technology	1	0,78%
Total	**129**	**100,00%**

Source: own processing based on data collected from scientific articles discussing organisational issues following the implementation of ERP systems.

Our research is built on the scaling of the problems that arise as a result of implementing ERP systems and the frequency with which they are presented in the works of over 50 authors and in the conclusions of other authors who are cited by them and who are not mentioned in this paper. Thus, 129 answers are obtained for 23 challenges.

By means of this research we wanted to find the most frequent problems that arise as a result of implementing ERP systems according to the impact they bring.

Global and local ERP vendors are continually striving to optimise the implementation process and minimise the impact of common problems. Significant costs drive the openness to modular integration with other software, ensuring software compatibility (Zaimovic et al., 2020). A significant example is the shortcomings identified by Haddara (2020) in the HR modules of some ERP systems. The lack of essential functionality for sales, marketing and service teams has led many organisations to opt for separate HRM systems at the expense of the HR module offered by SAP, for example. Today, this issue has been resolved by improving the module after SAP SE, acquired the SuccesFactors system (Haddara, 2020). These problems can only be solved if they are known in advance and taken into account to solve them at every stage of the implementation.

For example, high implementation costs can be adjusted by setting a realistic and detailed budget, evaluating more affordable solutions, i.e. modules that come from other sources but allow essential functions. Implementation can be carried out over a reasonable period of time by choosing a vendor with a wealth of experience and a well-defined implementation methodology. The implementation procedure becomes successful only if the chosen system is compatible with the needs and specificities of the business. The interface should be user friendly, intuitive to users and functionalities should be customised to the internal workflow. Management at every level and employees need proper training and continuous support and modern technologies can contribute fully, in real time, through user interaction.

The high level of complexity can be reduced by maintaining collaboration with experts beyond the implementation period. IT teams can also be formed to take over the administration of the system. Successful implementation requires the full involvement of top management to effectively communicate the benefits and impact of the re-engineering, to train the people involved in the implementation and motivate them with certain benefits, to organise sessions and training through easily accessible information materials, courses or tutorials.

The impact on SMEs can be improved, according to vendor Oracle, by choosing SME-specific solutions with lower costs and reduced complexity relative to the size of the business. Access to non-reimbursable funding through the Digital Europe Programme and customised consultancy is an option.

The short-term impact on financial indicators can also be improved by monitoring and analysing performance by identifying opportunities for optimisation, implementing process improvement measures and training users, requesting feedback and solving problems. Realistic expectations are needed for the whole period of adaptation to the new system.

Implementing an ERP system is a significant investment that can bring great benefits to an organisation. Knowing the challenges in detail and applying the right strategies to address them can go a long way towards increasing the chances of success and maximising the benefits gained.

5. Reporting on human capital specific elements through ERP integrated data systems

By centralising information and automating processes, transparent communication and collaboration is achieved, helping to improve operational efficiency and optimise resources. ERP systems, upgraded with cloud-based AI technology, include dedicated Human Resource Management (HRM) modules to manage management and employee databases.

MRU modules enable advanced functions required for diversity monitoring, pay equity, labour productivity and employee performance management, while ensuring compliance with ESG reporting standards.

Compared to traditional systems, ERP systems integrate employee data reporting processes into a single platform. Unlike traditional software, they collect information in real time and allow centralisation of data from all departments, eliminating redundancy and the risk of human error. It helps automate processes for collecting and analysing relevant information, saving time and resources. Through easy access to information, individual and consolidated reports can be generated for stakeholders, investors and regulators.

ESG reporting is a customised reporting based on advanced analytics. Transparency and accountability play an important role in the creation of the reports, and the audit function to ensure this. ERP systems can support enterprise reporting as they can be tailored to the reporting needs. On the other hand, traditional systems can be shattered and less interactive, which can make it difficult to report data in an accurate and verifiable way. They do not allow for data integration, do not collect real-time data and do not provide detailed or customisable reports. They often require significant manual effort to complete and interpret data, increasing the risk of errors and delays in reporting. They provide aggregated and standardised data, which can affect the reliability and transparency of reporting.

The functional differences between these types of software are presented below. This analysis explores how the implementation of ERP systems influences the reporting of socially relevant aspects from an ESG perspective in comparison to traditional ones. To do so, the ways of responding to each regulator's requirement are tested and a number of relevant regulations are considered, such as:

- IAS 19: Accounting for Employee Benefits;
- SDG 8: Promoting decent work and inclusive growth;
- RI - Human Capital: Human Resources Performance Indicators;
- EU Pillar for Social Rights: Fundamental Principles of the European Social Pillar;
- IAS 26: Accounting for retirement plans;
- Directive 2006/54/EC: Equal opportunities for women and men;
- Art. 157 TFEU: Equal pay for equal work.

The analysis focuses on a number of significant social issues related to the ways in which the data in the reports are processed. This information is retrieved from the websites of the providers of classical and integrated digital systems. This aims to validate the hypothesis that the implementation of ERP systems facilitates compliance with ESG standards and the applicable regulatory framework in the social domain as opposed to the classical ones which are limited. Classical software can also be adapted to the requirements but with a lot of programming effort and only for a small part of the specific ESG indicators. The social aspects analysed are the most representative for the business environment and are related to:

- Employment: Seniority at work and compliance with legal rules on working hours;
- Labour/management relations: Implementation of policies and practices that promote harmonious labour relations and transparent management (GRI 402);
- Occupational health and safety: Measures to ensure a safe and healthy working environment (GRI 403 / SDG 3);

- Training: Investment in training programmes to develop employee skills (GRI 404 / SDG 4);
- Diversity and equal opportunities: Policies and practices that promote diversity and combat discrimination (GRI 405 / SDG 5);
- Non-discrimination: Respect for the principle of non-discrimination in all aspects of human resources (GRI 406);
- Security practices: Measures to protect confidential employee and organizational information (GRI 410);
- Gender pay: Analysis of the pay gap for equal work (EU Pillar for Social Rights);
- Employees with disabilities: Policies and practices promoting the employment inclusion of people with disabilities (EU Pillar for Social Rights);
- Minority rights: Respecting the rights of ethnic and religious minorities (EU Pillar for Social Rights);
- Employee benefits: Retirement, share discount, leave, wages and salary benefits, post-employment benefits (EU Pillar for Social Rights, IAS 19, SDG 8, IR - Human Capital).

The findings of the analysis are presented in Table 3 as follows:

Table no 3 - Reporting human capital information through digital ERP and traditional systems

ESG – SOCIAL	Soft ERP	Soft classic	Regulatory framework
Employment			GRI 401
Length of serviceNorma de încadrare în muncă	TRUE	TRUE	RI – Human Capital
Labour/management relations	TRUE	FALSE	GRI 402
Health and safety at work	TRUE	FALSE	GRI 403 / SDG 3 RI – Human Capital
Training	TRUE	FALSE	GRI 404 / SDG 4 RI – Human Capital
Diversity and equal opportunities	TRUE	FALSE	GRI 405 / SDG 5 RI – Human Capital
Non-discrimination	TRUE	FALSE	GRI 406 RI – Human Capital
Security practices	TRUE	FALSE	GRI 410
Remuneration of women/men	TRUE	FALSE	EU pillar for social rights RI – Human Capital
Employees with disabilities	TRUE	TRUE	EU pillar for social rights
Minority rights	TRUE	FALSE	EU pillar for social rights
Employee benefits - Retirement; - Shares remitted; - Leaves; - Wages and salary benefits; - Post-employment benefits;		 TRUE	 IAS 19 SDG 8 RI – Human Capital EU pillar for social rights IAS 26
Employment equality between women and men;	TRUE	FALSE	DIRECTIVE 2006/54/EC SDG 5
Pay transparency reports;	TRUE	TRUE	Art. 157 TFUE RI – Human Capital

Source: own processing based on data published by digital system providers and regulators.

The results of the analysis reflect the potential of ERP systems to accommodate the requirements of various reporting frameworks, enriching their quality with concise, reliable information and minimising the risk of human error. The research findings provide a holistic perspective on the implementation of ERP systems as an investment with long-term benefits.

This analysis is based on a table with limited information. A more detailed analysis would require an in-depth examination of the organisation's policies and practices, as well as specific legislation in the country in which it operates.

6. Conclusions

The detailed analysis of the acquired information allows us to set forth a number of significant conclusions regarding the benefits of implementing ERP systems and reporting on specific human capital elements required by the most important international and European regulatory bodies. Choosing an ERP system over a traditional one can bring major benefits to an organisation, including improved operational efficiency, increased transparency of information, easier decision making, optimisation of human and financial resources.

ERP implementation is a complex process, marked by a number of challenges, such as high costs, long implementation time, risk of failure or temporary negative impact on productivity. These problems can be mitigated through management buy-in, transparent communication with ERP vendors and effective change management. Detailed planning, rigorous methodology, phased implementation, customised configuration, thorough training, effective management and continuous monitoring are essential elements for a positive outcome.

Through careful planning, effective challenge management and a systematic approach, organisations can maximise the benefits and achieve significant success following implementation.

7. Bibliografie

[1] **A. van Beijsterveld, AJ., H. van Groenendaal, JW.,** Solving misfits in ERP implementations by SMEs, Info Systems Journal, vol. 26, 2016, p. 369–393.

[2] **AboAbdo, S., Aldhoiena, A., Al-Amrib, H.,** Implementing Enterprise Resource Planning ERP System in a Large Construction Company in KSA, Procedia Computer Science, vol. 164, 2019, p. 463–470.

[3] **Ahmed, AA.,** Analysing the issues surrounding information and communication technology penetration and growth, Managerial and Decision Economics, vol. 44, 2023, p. 716–732.

[4] **Akrong, G., Yunfei, S., Owusu, E.,** Development and validation of an improved DeLone-McLean IS success model - application to the evaluation of a tax administration ERP, International Journal of Accounting Information Systems, vol. 47, 2022, 100579.

[5] **Alaskari, O., Pinedo-Cuenca, R., Ahmad, M.,** Framework for implementation of Enterprise Resource Planning (ERP) Systems in Small and Medium Enterprises (SMEs): A Case Study, Procedia Manufacturing, vol. 55, 2021, p. 424–430.

[6] **Alkraiji, AI., Jayawickrama, U., Olan, F., Asaduzzaman, M., Subasinghage, M., Gallage, S.,** The perspective of national ERP vendors in achieving ERP project success in government organisations: a case of Saudi Arabia, Enterprise Information Systems, Vol. 16, No. 1, 2022, p. 71–104

[7] **Anaya, L.,** To what extent is it viable to apply benefits management approach for ERP systems?, Procedia Computer Science, vol. 164, 2019, p. 33–38.

[8] **Anaya, L., Qutaishat, F.,** ERP systems drive businesses towards growth and sustainability, Procedia Computer Science, vol. 204, 2022, p. 854–861.

[9] **Andries, AM., Ungureanu, I.,** ERP and Performance of Companies in Romania. Journal of Risk and Financial Management, vol. 15, 2022, p. 433 - 445.

[10] **Awa, H. O., Ukoha, O., & Emecheta, B. C.**, Using T-O-E theoretical framework to study the adoption of ERP solution using T-O-Etheoretical framework to study the adoption of ERP solution. Cogent, Business & Management, vol. 42 (1), 2016, 1196571.

[11] **Babina, T., Fedyk, A., He, A., & Hodson, J.,** Artificial intelligence, firm growth, and product innovation. Journal of Financial Economics, vol. 151, 2024, 103745.

[12] **Balić, A., Turulja, L.,Kuloglija, E., Pejić-Bach, M.**, ERP Quality and the Organizational Performance: Technical Characteristics vs. Information and Service. MPI Information, vol 13, 2022, p 474 - 486.

[13] **Baumuller, B., Soop, K.,** Double materiality and the shift from non-financial to European sustainability reporting: review, outlook and implications, Journal of Applied Accounting Research, Vol. 23 (1), 2022, p. 8-28.

[14] **Chopra, R., Sawant, L., Kodi, D., Terkar, R.,** Utilization of ERP systems in manufacturing industry for productivity improvement, Materials Today: Proceedings, vol. 62, 2022, p. 1238–1245.

[15] **Christiansen, V., Haddara, M., Langseth, M.,** Factors Affecting Cloud ERP Adoption Decisions in Organizations, Procedia Computer Science, vol. 196, 2022, p. 255–262.

[16] **Coşkun, E., Gezici, B., Aydos, M., Tarhan, A., Garousi, V.,** ERP failure: A systematic mapping of the literature, Data & Knowledge Engineering, vol. 142, 2022, 102090.

[17] **Fink, L., Fošner, A., Dobrovoljc, A., Poznič, T.,** How user requirements affect the success of an enterprise system implementation project?, European Project Management Journal, Volume 14, Issue 1, 2024, p. 24 – 35.

[18] **Gagnon, E.,** Reconceptualizing ERP Integration: A Module Level Perspective, Procedia Computer Science, vol. 219, 2023, p. 596–605

[19] **Gessa, A., Jimenez, A., Sancha, P.,** Exploring ERP systems adoption in challenging times. Insights of SMEs stories, Tehnological Forecasting and Social Change, vol. 195, 2023, 122795.

[20] **Geerts, G., O-Learly, D.,** V-Matrix: A wave theory of value creation for big data, International Journal of Accounting Information Systems, vol. 47, 2022, 100575.

[21] **Greasley, A., Wang, Y.,** Building the hybrid organisation through ERP and enterprise social software, Computers in Industry, vol. 82, 2016, p. 69–81.

[22] **Haddara, M., Constantini, A.,** Fused or Unfused? The Parable of ERP II, International Journal of Information Systems and Project Management, Vol. 8, No. 3, 2020, p. 48-64.

[23] **Hansen, H., Haddara, M., Langseth, M.**, Investigating ERP System Customization: A Focus on Cloud-ERP, Procedia Computer Science, vol. 219, 2023, p. 915–923.

[24] **Hammad, MZ., Yahaya, JB., Mohamed, I.,** A model for enterprise resource planning implementation in the Saudi public sector organizations, Heliyon 10 (2024) e24531.

[25] **Harun, S., Dorasamy, M., Ahmad, AAB.,** Effect of ERP Implementation on Organizational Performance: Manager's Dilemma, International Journal of Technology, vol 13 (5), 2022, p. 1064-1074.

[26] **He, X.,** The ERP challenge in China: a resource - based perspective, Info Systems Journal, vol. 14, 2004, p. 153–167.

[27] **Hoffreumon, C., Forman, C., Zeebroeck, N.,** Make or buy your artificial intelligence? Complementarities in technology sourcing, Journal Economics & Management Strategy, vol. 33, 2024, p. 452–479.

[28] **Hustad, E., Stensholt, J.,** Customizing ERP-systems: A framework to support the decision-making process, Procedia Computer Science, vol. 219, 2023, p. 789–796.

[29] **Ilin, V., Ivetić, J., Simić, D.,** Understanding the determinants of e-business adoption in ERP-enabled firms and non-ERP-enabled firms: A case study of the Western Balkan Peninsula, Technological Forecasting & Social Change, vol. 125, 2017, p. 206–223.

[30] **Imane, L., Noureddine, M., Driss, S., Hanane, L.,** Towards Blockchain-Integrated Enterprise Resource Planning: A Pre-Implementation Guide, Computers, vol. 13 (11), 2024.

[31] **Janssens, G., Moorst, L., Kusters, R., Martin H.,** An expert-based taxonomy of ERP implementation activities, Journal of Computer Information Systems, vol. 60 (2), 2020, p. 175-183.

[32] **Janssens, G., Moorst, L., Kusters, R., Martin H.,,** Expecting the unexpected during ERP implementations: a complexity view, International Journal of Information Systems and Project Management, Vol. 8 (4), 2020, p. 68-82.

[33] **Jones, D., Kalmi, P., Kauhanen, A.,** Firm and employee effects of an enterprise information system: Micro-econometric evidence, International Journal of Production Economics, vol. 130, 2011, p. 159–168.

[34] **Kang, Y., Suh, J.,** Information technology and the spatial reorganization of firms, Journal Economics & Management Strategy, vol. 31, 2022, p. 674–692.

[35] **Katuu, S.,** Enterprise Resource Planning: Past, Present, and Future. New Review of Information Networking, vol. 25 (1), 2020, p. 37–46.

[36] **Lengnick-Hall, CA., Lengnick-Hall, ML.,** HR, ERP, and Knowledge for competitive advantage, Human Resource Management, Vol. 45, No. 2, 2006, Pp. 179–194.

[37] **Li, X., Lowry, PB., Lai F.,** The influence of ERP-vendor contract compliance and transaction-specific investment on vendee trust: A signaling theory perspective, Information & Management, vol. 61, 2024, 103932.

[38] **Liu, AZ., Pincus, M., Su, SX.,** Enterprise system implementation and cash flow volatility, Contemporary Accounting Research, vol. 40, 2023, p. 1937–1965.

[39] **Malik, M.O., Khan, N.,** Analysis of ERP implementation to develop a strategy for its success in developing countries. Production Planning & Control, vol. 32 (12), 2020, p. 1020–1035.

[40] **Martins, E., Belfo, F.,** Major concerns about Enterprise Resource Planning (ERP) systems: A systematic review of a decade of research (2011-2021), Procedia Computer Science, vol. 219, 2023,p. 378–387.

[41] **Molina-Castillo, F., Rodríguez, R., López-Nicolas, C., Bouwman, H.,** The role of ERP in business model innovation: Impetus or impediment, Digital Business, vol. 2, 2022, 100024.

[42] **Mohanty, P.K., Sekhar, C., Shahaida, P.,** Determinants of ERP Adoption, User Satisfaction, and User Engagement, International Journal of Information System Modeling and Design, Volume 13, Issue 1, 2020.

[43] **Newell, S., Tansley, C., Huang, J.,** Social Capital and Knowledge Integration in an ERP Project Team: The Importance of Bridging AND Bonding, British Journal of Management, Vol. 15, S43–S57, 2004.

[44] **O'Donnell, L., Kramar, R., Dyball, M.C.,** Human capital reporting: Should it be industry specific?, Australian Human Resources Institute, Vol. 47 (3), 2009, p. 358–373.

[45] **Paullson, V., Johansson, B.,** Cloud ERP systems architectural challenges on cloud adoption in large international organizations: A sociomaterial perspective, Procedia Computer Science, vol. 219, 2023, p. 797–806.

[46] **Ruivo, P., Johansson, B., Sarker, S., Oliveira, T.**, The relationship between ERP capabilities, use, and value, Computers in Industry, vol. 117, 2020, 103209.

[47] **Salas, W.,** Model to improve an ERP implementation based on agile best practice: A Delphi study, Procedia Computer Science, vol. 219, 2023, p. 1785–1792.

[48] **Silva, T., Marques, R., Azevedo, G.,** The Impact of ERP Systems in Internal Auditing: The Portuguese Case, Procedia Computer Science, vol. 219, 2023, p. 963–970.

[49] **Sun, X., Jin, J., Yang, Y., Pan, Y.,** Telling the "bad" to motivate your users to update: Evidence from behavioral and ERP studies, Computers in Human Behavior, vol. 153, 2024, 108078.

[50] **Sunmola, F., Lawrence, G.,** Key Success Factors for Integration of Blockchain and ERP Systems: A Systematic Literature Review, Procedia Computer Science, 232, 2024, p. 775–782

[51] **Tarik, Z., Muharem, K., Tarik, M.,** ERP Solution and End-user Efficiency in Bosnia and Herzegovina, TEM Journal, Volume 9 (4), 2020, p. 1562-1570.

[52] **Tiron-Tudor, A., Lacurezeanu, R., Bresfelean, V.P., Dontu, A.,** Perspectives on How Robotic Process Automation Is Transforming Accounting and Auditing Services, Accounting Perspectives, Vol. 23 (1), 2024, p. 7–38.

[53] **Xie, Y., Allen, C., Ali, M.,** Critical success factor based resource allocation in ERP implementation: A nonlinear programming model, Heliyon, vol. 8, 2022, e10044.

[54] **Zhang, J., Xue, T., Liu, S., Zhang, Z.,** Heavy and light media multitaskers employ different neurocognitive strategies in a prospective memory task: An ERP study, Computers in Human Behavior, vol. 135, 2022, 107379.

[55] *** https://op.europa.eu/webpub/empl/european-pillar-of-social-rights/en/, Pilonul European pentru drepturi sociale, (accesat pe 17.03.2024).

[56] *** https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/digital-europe-programme_en?prefLang=ro, Planul Europa Digitală (accesat pe 17.03.2024).

[57] *** https://sdgs.un.org/goals, Sustenable Development Goals (SDE), (accesat pe 17.03.2024).

[58] *** https://www.ifrs.org/issued-standards/list-of-standards/, Standardele Internationale de Raportare Financiară (accesat pe 04.04.2024),

[59] *** https://sdgs.un.org/goals/goal8, SDG8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, (acesat pe 04.04.2024).

[60] *** https://www.sap.com/romania/sustainability/social-responsibility.html, Raportarea ESG cu SAP hana 4, (accesat pe 17.03.2024).

[61] *** https://academia-de-sustenabilitate.ro/blog/cadre-raportare-esg, Trei cadre internationale de raportare ESG, (accesat pe 02.04.2024).

[62] *** https://www.theazores.ro/romania-csr-index/, Romanian CST index, (accesat pe 02. 04.2024).

[63] *** https://www.oracle.com/erp/, Oracle Enterprise Resource Planning (ERP), (accesat pe 02.04.2024).

[64] *** https://www.datalab.eu/feature-comparison/, Pantheon ERP – Complete Human Resource Management, (accesat pe 04.04.2024).

[65] *** http://www.imis.eu/en/solutions/electronic-archive/examples-of-use/archiving-objects-from-erp-crm-and-adapted-applications/, Integration with DMS, ERP, CRM, BPM and other applications, (accesat pe 05.04.2024).

[66] *** https://edicomgroup.com/edi-software, Advantages of Integrated EDI in the Cloud, (accesat pe 05.04.2024).

[67] *** https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32014L0095& from =EN, Non-Financial Reporting Directive – NFRD, (accesat pe 07.04.2024).