

INTEGRATED REPORTING: THE NEXT STEP AHEAD FOR A SUSTAINABLE SOCIETY

Radu-Dan Turcu¹

¹*The Bucharest University of Economic Studies*



EUROPEAN JOURNAL
OF BUSINESS SCIENCE
AND TECHNOLOGY

Volume 1 Issue 1
ISSN 2336-6494
www.ejobsat.com

ABSTRACT

The recent global developments have emphasized the limits of the actual corporate reporting system. Today's organizations experience a growing pressure exercised by various types of stakeholders as a result of the increasingly public concern regarding environmental and social issues. Hence, companies must assume their responsibility for the improvement of the environment and society within which they operate materialized through the disclosure of sustainability and corporate responsibility information. The main challenge is not to simply increase the amount of information provided inside the annual reports, but to increase their relevance through new, comprehensive and condensed reporting practices which combine and interconnect financial and nonfinancial data. Accordingly, the concept of integrated reporting is founded. Despite its necessity and adequacy, differences among countries regarding the adoption of integrated reporting exist. This paper aims to analyze the relation between the number of integrated reports issued by companies inside a country in relation with its economic, social and environmental performances. The results found that there is a higher commitment from companies, belonging to more developed countries, to make their contribution towards the development of integrated reporting concept and practice.

KEY WORDS

integrated reporting, sustainable development, sustainability

JEL CODES

M400, M410, Q010, Q560

1 INTRODUCTION

Filling the gaps left by the actual financial reporting system in sustaining financial performance and risk management represents a real preoccupation. The main objective is not to simply increase the amount of information provided inside the annual report to cover the deficient areas, but to increase their relevance through new comprehensive and condensed reporting practices that respond to the diverse and continuous changing needs of different types of stakeholders. Consequently the concept of Integrated Reporting is founded having as main goal to clarify and harmonize the relationship between financial and nonfinancial data sustained by the newest technological possibilities (Devi, 2014).

In 2010, The International Integrated Reporting Council (IIRC) was created as a result of the collaboration between International Federation of Accountants IFAC (IFAC), Global Reporting Initiative (GRI), and the Prince's Accounting for Sustainability, having as main objective to develop a "globally acceptable framework for Accounting for Sustainability ... which brings together financial, environmental, social and governance information in a clear, consistent and comparable format – put briefly, in an 'integrated' format" (James, 2013, p. 22).

The IIRC encompasses specialists and leaders representing the academic environment, private industry, accounting firms, regulators or standard setters. Among the organizations represented, it may be mentioned: the International Accounting Standards Board (IASB), Financial Accounting Standards Board (FASB), United Nations Environmental Programme Finance Initiative, United Nations Global Compact, Carbon Disclosure Standards Board (CDSB), International Organization of Securities Commissions (IOSC), World Wide Fund for Nature (WWF) or the World Business Council for Sustainable Development (WBCSD) (James, 2013; Devi, 2014).

On the 9th of December 2013, IIRC released the first Integrated Reporting Framework "following extensive consultation and testing by

businesses and investors in all regions of the world, including the 140 businesses and investors from 26 countries that participate in the IIRC Pilot Programme. The Consultation Draft, lunched on 16 April, 2013, had been developed based on the analysis of the responses to the 2011 Discussion Paper 'Towards Integrated Reporting – Communicating Value in the 21st Century', the publication of a draft outline in July 2012, and a Prototype Framework in November 2012" (International Integrated Reporting Council, 2013a).

In Eccles and Krzus's (2010, p.10) view "one report means producing a single report that combines the financial and narrative information found in a company's annual report with the nonfinancial (such as environmental, social, and governance issues) and narrative information found in a company's 'Corporate Social Responsibility' or 'Sustainability' report. But the integration of financial and nonfinancial reporting is much more than simply issuing a combined paper document. It involves using the internet to provide integrated reporting in ways that cannot be done on paper, such as through analytical tools that enable the user to do his or her own analysis of financial and nonfinancial information. It also involves providing information that is of particular interest to different stakeholders."

The Extensible Business Reporting Language (XBRL) stands out when referring to new technology supporting the concept of integrated reporting. "XBRL allows the creation of reusable, authoritative definitions, called taxonomies that capture the meaning contained in all of the reporting terms used in a business report, as well as the relationships between all of the terms. Taxonomies are developed by regulators, accounting standards setters, government agencies and other groups that need to clearly define information that needs to be reported upon. XBRL doesn't limit what kind of information is defined: it's a language that can be used and extended as needed" (XBRL, 2014).

Emphasizing the connectivity of information represents a primary goal for an integrated report as value creation over time can only be achieved through the interaction between the organization and its external environment. XBRL makes possible to connect a piece of information to another or to its corresponding specialized literature through the use of “tags”. Consequently information can be easily reused and exploited, thus representing a significant step ahead for reducing financial reports complexity. Among the features of software making use of XBRL tags it may be considered: sorting the information according to each user’s needs, improving the ease of understanding the information or increasing comparability among companies (Eccles and Krzus, 2010; Monterio, 2010, 2014; Busco, Quattrone, Frigo and Riccaboni, 2013, 2014).

IRC Framework (International Integrated Reporting Council, 2013b) defines integrated reporting as “the process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. An integrated report, as defined by the same source, represents a concise communication regarding the way in which an organization’s strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term”.

Integrated reporting goes beyond disclosing information related to a company’s strategy, governance and financial performance, by covering aspects related to a company’s social, environmental and economic context (Healey, 2013). Hence, integrated reporting makes its contribution in evaluating and monitoring internal performance as well as supporting financial capital attraction (Druckman, 2014).

An integrated report should draw the features of a sustainable company as an integral part of a sustainable world, while empha-

sizing the entity’s contributions to achieving sustainability as well as its unsustainable actions resulted from the interaction between the company and the social, environmental and economic context within which it operates (Thomson, 2014).

The IIRC Framework does not set a template for the format of an integrated report, but sets eight content elements that are fundamentally linked to each other and are not mutually exclusive, as presented in the following table (International Integrated Reporting Council, 2013b).

According to Eccles, Krzus and Ribot (2014) only 1% of the 46,000 listed companies all over the world issued a self-declared integrated report in 2012. As concerning sustainability reporting, 3,704 companies, as compared to just 11 companies for 1999, produced a sustainability report using GRI Guidelines in 2012. Additionally, the Corporate Sustainability Assessment, a study analyzing the annual reports for 2011 and 2012 of the 2000 world’s largest companies, issued by RobecoSAM, the preparer of the Dow Jones Sustainability Indices (DJSI), shows that only 12% of the analyzed entities for 2012 (respectively 8% for 2011) had provided data regarding the measure in which environmental and social initiatives lead to cost saving or increased revenues (Eccles, Krzus and Ribot, 2014).

Consequently, these figures become more significant as a study published by Ernst & Young (2013), including employees from seventeen activity sectors, highlights the fact that about half of the respondents express their concerns about the probability that company’s core business objectives will be affected by natural resource shortages in the next three to five years. Moreover, the study reveals the existence of a strong agreement among the respondents that company’s sustainability performance would benefit if integrated reporting is adopted.

Tab. 1: Content elements of an integrated report

| Content elements | Question to be answered |
|--|--|
| Organizational overview and external environment | What does the organization do and what are the circumstances under which it operates? |
| Governance | How does the organization's governance structure support its ability to create value in the short, medium and long term? |
| Business model | What is the organization's business model? |
| Risks and opportunities | What are the specific risks and opportunities that affect the organization's ability to create value over the short, medium and long term and how is the organization dealing with them? |
| Strategy and resource allocation | Where does the organization want to go and how does it intend to get there? |
| Performance | To what extent has the organization achieved its strategic objectives for the period and what are its outcomes in terms of effects on the capitals? |
| Outlook | What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its business model and future performance? |
| Basis of preparation and presentation | How does the organization determine what matters to include in the integrated report and how are such matters quantified or evaluated? |

Source: International Integrated Reporting Committee (2013, p. 5)

2 METHODOLOGY AND DATA

There are significant findings that companies belonging to different types of economies tend to react differently to similar changes or shocks (Hall and Soskice, 2001). Consequently, the present paper regards the analysis of the correlation between the numbers of integrated reports published by companies inside one country in relation with its social, environmental and economic performances.

Differences among countries regarding the adoption of integrated reporting were previously examined. Based on Matten and Moon (2008) framework explaining differences in Corporate Social Responsibility practices, determined by different institutional context, Jensen and Berg (2011) analyze the similarities and differences between companies using traditional sustainability reporting and those that publish integrated reports by reference to the political, financial, educational, labor, cultural and economic systems. Frías-Aceituno, Rodríguez-Ariza and García-Sánchez (2013) investigate the influence of one of the most significant institutional factors, the legal system, on the issuance of integrated reports.

The study is conducted by reference to two sets of data, the first one regards a worldwide analysis while the second one is concentrated on the European Union. The decision to divide the study resulted from the fact that at global level no such set of sustainability indicators are issued.

The study conducted at the European Union level aims to analyze the relationship between the number of integrated reports issued by each country and the European Union set of headline sustainability indicators issued every two years by Eurostat, with the purpose of monitoring the EU Sustainable Development Strategy.

The list of sustainable indicators contains more than 130 indicators, out of which, ten have been identified as headline indicators. "They are intended to give an overall picture of whether the European Union has achieved progress towards sustainable development in terms of the objectives and targets defined in the strategy" (Eurostat, n.d). A short description of each headline indicator can be found in the annexe section.

Moreover, the results obtained are confronted with the ones resulting from the rank correlation analysis between the number of integrated reports attributed to each EU member and the ranking prepared by Bolcárová and Kološta (2014) based on the aggregate index of sustainable development developed based on the same set of headlines sustainability indicators.

Taking into consideration the lack of sustainability indicators at global level, the worldwide analysis is founded on Jensen and Berg (2011) model and examines the correlation between the number of integrated reports issued in relation with a country's cultural and economic system. Accordingly, a number of five indicators (The National Corporate Responsibility Index, The Environmental Performance Index, The Human Development Index, per-capita Gross National Income and The Economic Freedom Index) were embedded, covering the three pylons of sustainability development, namely social, environmental and economic development (Drexhage and Murphy, 2010).

"One important aspect of a country's culture consists in the extent to which companies are seen as responsibility bearing parts of society. Whereas in some countries corporate responsibility is primarily limited to financial wellbeing, in other countries corporate responsibility involves a broader set of environmental and social values" (Jensen and Berg, 2011, p. 304). As measure for a country's cultural system, The National Corporate Responsibility Index (NCRI) is used. NCRI is the world's first assessment of the state of corporate responsibility at a global level. The index assesses over 80 countries on criteria including corruption, civic freedom, corporate governance and environmental management to establish a global ranking. The NCRI takes values from 0 to 100, with 100 representing the highest development status (AccountAbility, 2005).

The inclusion of NCRI was decided even though it refers to a different year from the analyzed one, since it is considered "as one of the only available indices that attempts to capture variation in country regimes with respect to a broad range of social and environmental-related institutional factors" (Kolk and Perego 2008,

p. 8) and no later publication of this indicator exists. Moreover, the indicator captures aspects related to a country's culture which are less probably to change rapidly over time.

For a deeper analysis concerning the cultural system, the environmental responsibility and social development of a country are taken into consideration. The environmental responsibility is measured by The Environmental Performance Index (EPI). EPI ranks how well countries perform on high-priority environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystems, taking values from 0 to 100. The higher the value of the indicator, the lowest the environmental impact and implicitly the higher development status (Jensen and Berg, 2011).

The Human Development Index (HDI) issued by UNDP is used as a proxy for the social development of a country (Jensen and Berg, 2011). HDI is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living and represents the geometric mean of normalized indices for each of the three dimensions (United Nations Development Programme, 2013). The indicator ranges from 0 to 1, the values close to 1 denoting the highest status of human development.

The economic system of a country is measured by per-capita GNI based on purchasing power parity. For a more detailed analysis the level of state intervention in economic activities is considered, quantified by The Economic Freedom Index (EFI). EFI documents the positive relationship between economic freedom and a variety of positive social and economic goals. The ideals of economic freedom are strongly associated with healthier societies, cleaner environments, greater per capita wealth, human development, democracy, and poverty elimination (The Wall Street Journal and The Heritage Foundation, 2012). The Economic Freedom Index takes values between 0 and 100, the upper value corresponding to the highest degree of economic freedom (Jensen and Berg, 2011).

As regards the sample embedded, the actual number of integrated reports attributed to each country comes from two main sources, namely the self-declared integrated reports published in the GRI Sustainability Disclosure Database during the year 2013 and the integrated reports issued by the companies included in The International Integrated Reporting Council (IIRC) Pilot Program. According to Eccles, Krzus and Ribot (2014, p. 61) “Global Reporting Initiative’s Sustainability Disclosure Database for the period 2010–2013 provides a useful indicator of the rise in the number of integrated reporting companies, based on self-declared integrated reports”.

At an initial stage of the paper, I tried to conduct the analysis by dividing the total number of reports attributed to each country to the total number of registered companies or total population but the results obtained were inconclusive. A reason for this may be found in the reduced number of reports published as a consequence of the inexistence of legal requirements for the issuance of integrated reports, excepting the special case of South Africa. Also, the usage of year to year relative change for the total number of reports was not

suitable and led to distorted results, for the same above-mentioned reason.

The variables embedded were obtained from various sources, for more accurate results the data used, if available, refers to the year 2012 which corresponds to the year of the analyzed annual integrated reports. In order to quantify the correlation between the indicators, two correlation coefficients are applied: Pearson correlation coefficient for the worldwide analysis and Spearman’s rank correlation coefficient, concerning the study conducted at the European Union level. The software used for data processing was Microsoft Office Excel.

Pearson correlation coefficient, also called product-momentum coefficient, represents one of the most used measure of the linear correlation between two variables. Spearman correlation coefficient measures the association between two ranked variables and it is usually used when the sample embedded is small, usually under 30 observations. Both coefficients take values from -1 to 1 , where -1 indicates a perfect negative linear relationship, while 1 indicates a perfect positive linear relationship. Moreover, in order to test for the significance of the obtained results the t test was computed (Opariuc, 2011).

3 RESULTS

Integrated reporting raised a great interest among the European Union members, seven of the first fifteen countries around the world as regards the number of integrated reports published are members of the European Union. Also, the number of reports published by these countries represents almost 30% of the total of top 15 and approximately 55% if we are excluding South Africa.

South Africa detains a special status as a result of the King III (The King Code of Governance Principles for South Africa 2009) report and its requirement that all South African listed companies on the country’s stock exchange publish an integrated report starting with 2010 under the governance of “apply or explain” approach.

The highest number of integrated reports published inside the European Union is attributed to Finland (35, approx. 18% of total), followed by Netherlands (34, approx. 17% of total) and Spain (28, approx. 14% of total). Despite the overall interest showed by the European Union as a whole, integrated reporting does not represent an actual interest for all the state members, roughly 89% of the total reports being published by the first 10 performers. Therefore, companies from countries such as Czech Republic, Estonia, Ireland, Cyprus, Lithuania, Luxembourg, Malta, Romania or Slovakia have not published any integrated report during the analyzed year.

Tab. 2: Summary of analyzed indicators

| Indicator | Issuer | Reference year |
|------------------------------------|---|----------------|
| Cultural system | | |
| NCRI | AccountAbility | 2005 |
| EPI | YCELP & CIESIN | 2012 |
| HDI | UNDP | 2012 |
| Economic system | | |
| GNI per-capita | The World Bank | 2012 |
| EFI | The Wall Street Journal & The Heritage Foundation | 2012 |
| Sustainable development indicators | | |
| Eurostat | | 2012 |
| Sustainable development index | | |
| Bolcárová and Kološta (2014) | | 2011 |

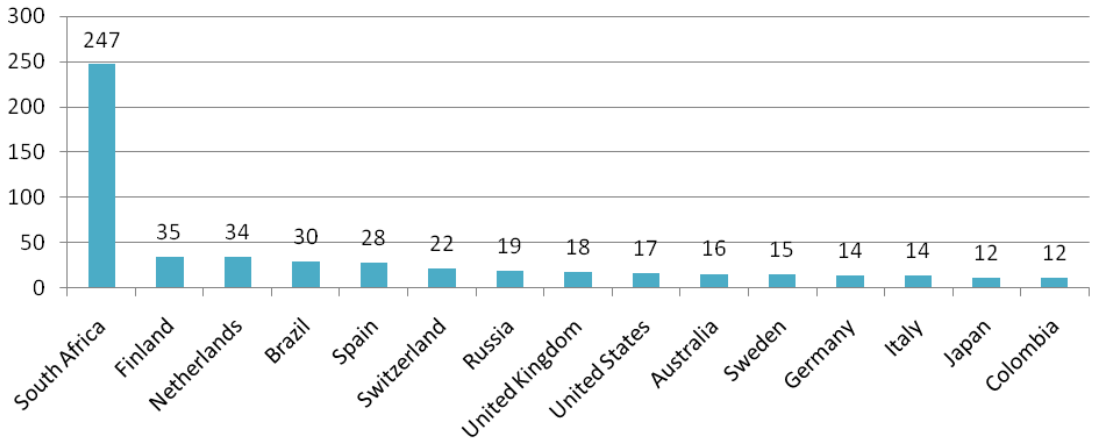


Fig. 1: Top 15 countries by the number of integrated reports issued

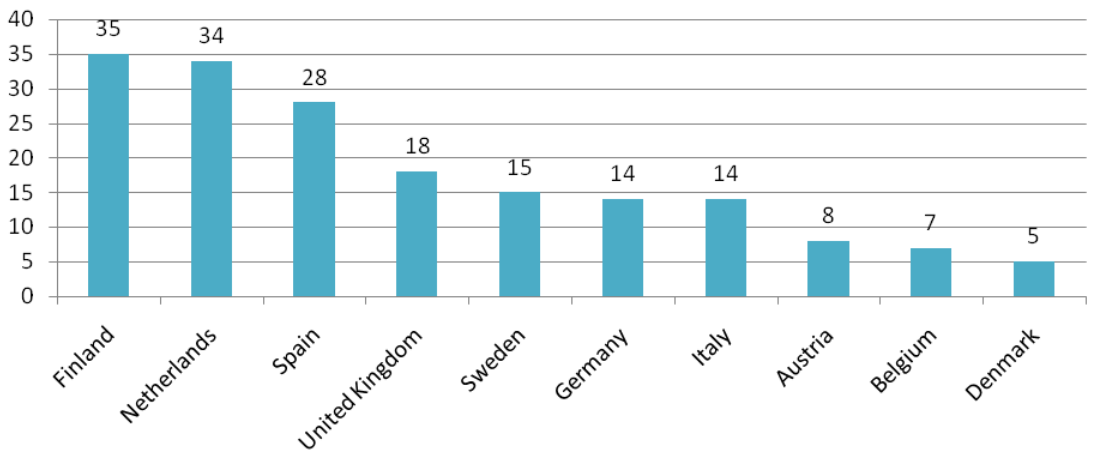


Fig. 2: Top 10 countries from European Union by number of integrated reports issued

Tab. 3: Correlation between the number of integrated reports issued and social, environmental and economic indicators

| Indicator | Pearson correlation coefficient (r) | t computed | t critic (df = 40, $\alpha = 0.05$) |
|-----------|---|--------------|--|
| EPI | 0.38582 | 2.805* | 1.684 |
| HDI | 0.38484 | 2.797* | 1.684 |
| NCRI | 0.47526 | 3.583* | 1.684 |
| GNI | 0.38154 | 2.738* | 1.684 |
| EFI | 0.28374 | 1.984* | 1.684 |

Note: * significance at 0.05 level

There is a positive correlation between the number of integrated reports issued and a country's social, environmental and economic development. The highest correlation level being registered by the National Corporate Responsibility Index (0.47) followed by Environmental Performance Index, Human Development Index and Gross National Income, indicators for which very close values were obtained, around 0.38.

More than 64% of the total number of integrated reports issued all over the world are published by companies from countries registering higher values than the average for the analyzed indicators. Going deeper, 73.89% of the total integrated reports are published from countries registering a Human development index over 0.8, 70.93% pertain to countries having an Environmental Performance Index higher than 63.97 and 70.44% are issued from countries with an Economic Freedom Index above 65.54.

The results obtained are consistent with the ones presented by Jensen and Berg (2011) who claim that companies from countries registering a higher level of national corporate responsibility and economic development are more likely to publish integrated reports.

Going further and exploring the results achieved on the European Union level, we can state that eight out of the ten analyzed indicators obtained the expected values, meaning significant correlation level for a significance level lower than 0.05 and correct positive or negative relationship. The two indicators for which insignificant results were registered are share of renewable energy in gross final energy consumption and energy consumption of transport relative to GDP.

The highest correlations levels were obtained between the number of integrated reports published attached to each country and the following sustainable development indicators: resource productivity (0.48), life expectancy at birth (0.47) and employment rate of older workers (0.42).

Out of the total number of integrated reports, almost 95% were published from countries with a life expectancy at birth for males higher than 76 years, around 77% were published from countries with a real GDP per capita superior to the European Union average and over 73% were issued inside countries with a resource productivity higher than the average. Also, 73.87% were published by companies from countries registering a lower proportion of people at risk of poverty or social exclusion.

Furthermore, over 60% of the integrated reports are issued by companies belonging to countries registering higher values than the average for each analyzed indicator, excepting the share of renewable energy in gross final energy consumption.

Going deeper and analyzing the results obtained for the rank correlation analysis based on Bolcárová and Kološta's (2014) study, it can be stated that they confirm the previous presented ones, accordingly the correlation between the number of integrated reports published inside one country and its sustainable development performances is a strong and positive one. The value of 0.60 obtained for the correlation coefficient indicates that the results are significant for a significance level lower than 0.05, supporting the idea according to which countries registering higher values for the sustainable development indicators are the ones that issue more integrated reports.

Tab. 4: The number of integrated reports issued by reference to a country's social, environmental and economic performances

| Indicator | Average value | Number of reports published in countries which are above the average | Number of reports published in countries which are below the average |
|-----------|---------------|--|--|
| EPI | 63.79 | 70.93% | 29.07% |
| HDI | 0.804 | 73.89% | 26.11% |
| NCRI | 58.63 | 64.75% | 35.25% |
| GNI | 27.243 | 69.62% | 30.38% |
| EFI | 65.54 | 70.44% | 29.56% |

Tab. 5: Correlation between the number of integrated reports issued and sustainable development indicators

| Sustainable development indicator | Pearson correlation (r) | t computed | t critic (df = 26, $\alpha = 0.05$) |
|---|-----------------------------|--------------|--|
| Real GDP per capita | 0.36283 | 1.98* | 1.706 |
| Resource productivity | 0.48708 | 2.84* | 1.706 |
| People at-risk-of-poverty or social exclusion | -0.37905 | 2.09* | 1.706 |
| Employment rate of older workers | 0.41957 | 2.35* | 1.706 |
| Life expectancy at birth (males) | 0.47113 | 2.72* | 1.706 |
| Greenhouse gas emissions relative to GDP | -0.36735 | 2.01* | 1.706 |
| Share of renewable energy in gross final energy consumption | 0.12152 | 0.62 | 1.706 |
| Primary energy consumption relative to GDP | -0.34324 | 1.86* | 1.706 |
| Energy consumption of transport relative to GDP | -0.23434 | 1.23 | 1.706 |
| Official development assistance as share of gross national income | 0.38810 | 2.15* | 1.706 |

Note: * significance at 0.05 level

Tab. 6: The number of integrated reports issued by reference to the sustainable development indicators values

| Indicator | Average value | Number of reports published in countries which are above the average | Number of reports published in countries which are below the average |
|---|---------------|--|--|
| Real GDP per capita | 20.807 | 77.38% | 23.76% |
| Resource productivity | 1.40 | 73.86% | 26.14% |
| People at-risk-of-poverty or social exclusion | 25.59 | 26.13% | 73.87% |
| Employment rate of older workers | 47.5 | 61.30% | 38.70% |
| Life expectancy at birth (males) | 76.01 | 95.47% | 4.53% |
| Greenhouse gas emissions relative to GDP | 0.001516 | 2.01% | 97.99% |
| Share of renewable energy in gross final energy consumption | 16.87 | 35.67% | 64.33% |
| Primary energy consumption relative to GDP | 56.55 | 23.11% | 76.89% |
| Energy consumption of transport relative to GDP | 92.04 | 29.14% | 70.86% |
| Official development assistance as share of gross national income | 0.31 | 66.33% | 33.67% |

Tab. 7: Correlation between the number of integrated reports issued and sustainable development index

| Indicator | Spearman's rank correlation coefficient (r_s) | t computed | t critic (df = 25, $\alpha = 0.0005$) |
|-------------------------------|---|--------------|--|
| Sustainable development index | 0.60747 | 3.823* | 3.725 |

Note: significance at 0.05 level, * Croatia was not included in Bolcárová and Kološta's (2014) study

Tab. 8: The number of integrated reports issued by reference to the sustainable development index ranking

| Indicator | Number of reports published by the first half of the ranking | Number of reports published by the second half of the ranking |
|-------------------------------|--|---|
| Sustainable development index | 90.90% | 9.10% |

Note: Croatia was not included in Bolcárová and Kološta's (2014) study

Out of the total integrated reports issued at the European Union's level, over 90% were published from countries placed in the first half

of the ranking. Moreover, 86 out of the total 198 integrated reports issued for the financial year 2012 belong to the top five countries.

4 DISCUSSION AND CONCLUSIONS

As annual reports remains the most valuable source of information when making investment decisions (ACCA, 2013), integrated reporting may represent a viable solution for meeting the actual information demands through the use of a comprehensive and intuitive language in accordance with each user's needs.

Companies from different countries tend to react differently to the adoption of integrated reporting. The results obtained, which are consistent with the ones presented by Jensen and Berg (2011), indicate that companies attitude towards the adoption of integrated reporting is influenced by a country's sustainability performances.

Other significant country-level determinants influencing the adoption of integrated reporting, as presented by other relevant papers, may include investor protection, the degree of market coordination, ownership dispersion, private expenditure for tertiary education, trade union density (Jensen and Berg, 2011) or the legal system (Frías-Aceituno, Rodríguez-Ariza and García-Sánchez, 2013).

The present paper reveals a positive correlation between the number of integrated reports issued by companies inside one country and the values registered for the sustainable development indicators. Consequently, companies from countries registering a higher status of social, economic and environmental development, the three pillars of sustainability development, are the ones that publish more integrated reports.

It is sure that integrated reporting does not directly influence the macro indicators level but, as we have seen, there is a bigger commitment from companies, belonging to more developed countries, to make their contribution for the improvement and development of integrated reporting concept and practice.

Future research may attempt to investigate the relationship between a company's decision to publish an integrated report by reference to its financial, social and environmental performances.

5 ACKNOWLEDGEMENTS

This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007–2013 “Performance and excellence in doc-

toral and postdoctoral research in Romanian economics science domain”, project number POSDRU/159/1.5/S/134197.

6 REFERENCES

- AccountAbility. 2005. *Responsible Competitiveness: Reshaping Markets Through Responsible Business Practices*. [online]. Available at: <http://www.accountability.org/images/content/1/1/110/Full%20Report%20%28Compressed%29.pdf>. [Accessed 2014, November 9].
- Association of Chartered Certified Accountants. 2013. *Understanding investors: directions for corporate reporting*. [online]. Available at: <http://www.accaglobal.com/content/dam/acca/global/PDF-technical/financial-reporting/pol-afb-ui02.pdf>. [Accessed 2014, November 11].
- BOLCÁROVÁ, P. and KOLOŠTA, S. 2014. Assessment of sustainable development in the EU 27 using aggregated SD index. *Ecological Indicators*, 48 (January 2015), 699–705.
- BUSCO, C., QUATTRONE, P., FRIGO, M. and RICCABONI, A. 2013. Redefining Corporate Accountability through Integrated reporting. What happens when values and value creations meet? *Strategic Finance*, 95 (8), 33–41.
- BUSCO, C., QUATTRONE, P., FRIGO, M. and RICCABONI, A. 2014. Leading practices in Integrated Reporting. *Strategic Finance*, 96 (9), 23–32.
- DEVI, R. U. 2014. Integrated reporting – the future phase of corporate reporting: An analysis. *International Journal of Research in Social Sciences*, 4 (2), 393–409.
- DREXHAGE, J. and MURPHY, D. 2010. *Sustainable Development: From Brundtland to Rio 2012*. [online]. Available at: http://www.un.org/wcm/webdav/site/climatechange/shared/gsp/docs/GSP1-6_Background%20on%20Sustainable%20Dev.pdf. [Accessed 2014, November 7].
- DRUCKMAN, P. 2014. Integrated Reporting: A New Governance Tool. *The Corporate Board*, 35 (206), 6.
- ECCLES, R. G. and KRZUS, M. P. 2010. *One report Integrated Reporting for a Sustainable Strategy*. John Wiley & Sons.
- ECCLES, R. G., KRZUS, M. P. and RIBOT, S. 2014. *Integrated Reporting Movement*. John Wiley & Sons.
- Ernst & Young. 2013. *Six growing trends in corporate sustainability*. Available at: [http://www.ey.com/Publication/vwLUAssets/Six_growing_trends_in_corporate_sustainability_2013/\\$FILE/Six_growing_trends_in_corporate_sustainability_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Six_growing_trends_in_corporate_sustainability_2013/$FILE/Six_growing_trends_in_corporate_sustainability_2013.pdf). [Accessed 2014, November 9].
- Eurostat. 2014. *Sustainable Development Indicators*. [online]. Available at: <http://ec.europa.eu/eurostat/web/sdi/indicators>. [Accessed 2014, November 10].
- FRÍAS-ACEITUNO, J., RODRÍGUEZ-ARIZA, L. and GARCÍA-SÁNCHEZ, I. 2013. Is integrated reporting determined by a country’s legal system? An exploratory study. *Journal Of Cleaner Production*, 44, 45–55.
- HALL, P. A. and SOSKICE, D. 2001. *Varieties of Capitalism*. Oxford University Press.
- HEALEY, M. 2013. Integrated reporting – one company’s experience. *Keeping good companies*, June 2013, 262–264.
- JAMES, M. L. 2013. Sustainability and Integrated Reporting: Opportunities and Strategies for Small and Midsize Companies. *Entrepreneurial Executive*, 18, 17–28.
- JENSEN, J. and BERG, N. 2011. Determinants of Traditional Sustainability Reporting Versus Integrated Reporting. An Institutional Approach. *Business Strategy and the Environment*, 21 (5), 299–316.
- KOLK, A. and PEREGO, P. 2008. Determinants of the adoption of sustainability assurance statements: an international investigation. *Business Strategy and the Environment*, 19, 182–198.
- MATTEN, M. and MOON, J. 2008. “Implicit” and “Explicit” CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33 (2), 404–424.

- MONTERIO, B. J. 2010. Sustainability reporting and XBRL – part 2. *Strategic Finance*, 92 (3), 56–61.
- MONTERIO, B. J. 2014. Integrated Reporting and Corporate Disclosure. *Strategic Finance*, 96 (3). 54–57.
- OPARIUC, C. D. 2011. *Statistica aplicată în științele socio-umane* (Applied statistics in Socio-human sciences). ASCR Cluj-Napoca.
- The International Integrated Reporting Council, 2013a. *Consultation draft of the international <IR>Framework*. [online]. Available at: <http://www.theiirc.org/wp-content/uploads/Consultation-Draft/Consultation-Draft-of-the-InternationalIRFramework.pdf>. [Accessed 2014, November 9].
- The International Integrated Reporting Council, 2013b. *The International <IR> Framework*. [online]. Available at: <http://www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf>. [Accessed 2014, November 9].
- THOMSON, I. H. 2014. But does sustainability need capitalism or an integrated report: a commentary on The International Integrated Reporting Council: A story of failure by Flower, J. *Critical Perspectives on Accounting*, DOI: 10.1016/j.cpa.2014.07.003.
- The Wall Street Journal and The Heritage Foundation. 2012. *Index of Economic Freedom Promoting Economic Opportunity and Prosperity*. [online]. Available at: <http://www.heritage.org/index/download>. [Accessed 2014, November 17].
- United Nations Development Programme. 2013. *Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World*. [online]. Available at: http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf. [Accessed 2014, November 17].
- World Bank. 2012. *World Bank Indicators*. [online]. Available at: <http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD>. [Accessed 2014, November 10].
- XBRL. 2014. *The Business Reporting Standards*. [online]. Available at: <https://www.xbrl.org/the-standard/what/an-introduction-to-xbrl/>. [Accessed 2014, November 10].
- Yale Center for Environmental Law & Policy. 2012. *Environmental Performance Index and Pilot Trend Environmental Performance Index*. [online]. Available at: http://epi.yale.edu/files/2012_epi_report.pdf. [Accessed 2014, November 17].

7 ANNEX

Tab. 9: Social, environmental and economic indicators description

| Indicator (measurement unit) | Description |
|---|--|
| Environmental Performance Index (0–100) | The Environmental Performance Index (EPI) ranks how well countries perform on high-priority environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystems. |
| Human Development Index (0–100) | The Human Development Index is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. |
| National Corporate Responsibility Index (0–100) | National Corporate Responsibility Index is the world's first assessment of the state of corporate responsibility internationally. The index assesses over 80 countries on criteria including corruption, civic freedom, corporate governance and environmental management to establish a global ranking. |
| Gross National Income per capita (USD per inhabitant) | GNI per capita based on purchasing power parity (PPP). PPP GNI is gross national income (GNI) converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GNI as a U.S. dollar has in the United States. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. |
| Economic Freedom Index (0–100) | The Index of Economic Freedom documents the positive relationship between economic freedom and a variety of positive social and economic goals. The ideals of economic freedom are strongly associated with healthier societies, cleaner environments, greater per capita wealth, human development, democracy, and poverty elimination. |

Source: AccountAbility (2005); The Wall Street Journal & The Heritage Foundation (2012); The World Bank (2012); UNDP (2012); YCELP & CIESIN (2012)

Tab. 10: Sustainable development indicators description

| Sustainable development indicator (meas. unit) | Theme | Description |
|--|--|--|
| Real GDP per capita (EUR per inhabitant) | Socio-economic development | Real GDP per capita is calculated as the ratio of real GDP to the average population of a specific year. It is often used as an indicator of how well off a country is, since it is a measure of average real income in that country. However, it is not a complete measure of economic welfare. For example, GDP does not include most unpaid household work. Neither does GDP take account of negative effects of economic activity, like environmental degradation. |
| Resource productivity (EUR per kilogram, chain linked volumes, 2005) | Sustainable consumption and production | Resource productivity is gross domestic product (GDP) divided by domestic material consumption (DMC). DMC measures the total amount of materials directly used by an economy. It is defined as the annual quantity of raw materials extracted from the domestic territory of the focal economy, plus all physical imports minus all physical exports |
| People at-risk-of-poverty or social exclusion (percentage of total population) | Social inclusion | This indicator corresponds to the sum of persons who are: at risk of poverty or severely materially deprived or living in households with very low work intensity. Persons are only counted once even if they are present in several sub-indicators. At risk-of-poverty are persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income (after social transfers). |
| Employment rate of older workers (percentage of total population) | Demographic changes | The employment rate of older workers is calculated by dividing the number of persons in employment and aged 55 to 64 by the total population of the same age group. |
| Life expectancy at birth (males, years) | Public health | Life expectancy at birth is defined as the mean number of years still to be lived by a person at birth, if subjected throughout the rest of his or her life to the current mortality conditions. |
| Greenhouse gas emissions (total greenhouse gas emission in CO ₂ equivalent, indexed to 1990) | Climate change and energy | It presents annual total emissions in relation to 1990 emissions and. The aggregated greenhouse gas emissions are expressed in units of CO ₂ equivalents. The indicator does not include emissions and removals related to land use, land-use change and forestry (LULUCF); nor does it include emissions from international maritime transport. |
| Share of renewable energy in gross final energy consumption (% of gross final energy consumption) | Climate change and energy | Renewable energy sources cover solar thermal and photovoltaic energy, hydro (including tide, wave and ocean energy), wind, geothermal energy and biomass (including biological waste and liquid biofuels). The contribution of renewable energy from heat pumps is also covered for the Member States for which this information was available. |
| Primary energy consumption (million TOE (tons of oil equivalent)) | Climate change and energy | “Primary Energy Consumption” is meant the Gross Inland Consumption excluding all non-energy use of energy carriers (e.g. natural gas used not for combustion but for producing chemicals). This quantity is relevant for measuring the true energy consumption and for comparing it to the Europe 2020 targets. |
| Energy consumption of transport relative to GDP (% of GDP, chain-linked volumes, at 2000 exchange rates) | Sustainable transport | This indicator is defined as the ratio between the energy consumption of transport and GDP (chain-linked volumes, at 2000 exchange rates). The energy consumed by all types of transport (road, rail, inland navigation and aviation) is covered, including commercial, individual and public transport, with the exception of maritime and pipeline transport. |
| Official development assistance as share of gross national income (% of gross national income) | Global partnership | Official development assistance (ODA) consists of grants or loans that are undertaken by the official sector with the objective of promoting economic development and welfare in recipient countries. Disbursements record the actual international transfer of financial resources, or of goods or services valued at the cost of the donor. |

Source: Eurostat website (2014)

AUTHOR'S ADDRESS

Radu-Dan Turcu, Department of Accounting and Audit, Faculty of Accounting and Management Information Systems, The Bucharest University of Economic Studies, 010374 Bucharest, Romania, e-mail: radu.turcu@cig.ase.ro