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***The influence of long-term orientation and integrated
reporting on financial performance***

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Abstract

Integrated reporting is said to influence the financial performance of a company. Culture is said to influence the extent to which integrated reporting is adopted. This paper contributes to both statements and investigates the relation between the cultural dimension, long-term orientation, and integrated reporting on financial performance.

The results show a positive effect of integrated reporting on long-term financial performance and a positive effect of long-term orientation on long-term financial performance. No effect of integrated reporting on short-term financial performance and long-term orientation on short-term financial performance is found. The results indicate that integrated reporting mediates the effect of long-term orientation on long-term financial performance. The positive effect of integrated reporting together with long-term orientation on long-term financial performance might indicate a complementary effect, the negative result on short-term financial performance might indicate a substitution effect. Both indicating that integrated reporting is expensive in the short run, but pays off in the long run.

Keywords: Culture, Hofstede, long-term orientation, integrated reporting, financial performance, Return on Assets, Tobin's Q, mediation effect, moderation effect.

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1. Introduction

“Our purpose is fully anchored in our purpose-led, performance-driven strategy: creating brighter lives for all. This will serve the interests of all stakeholders – customers, employees, shareholders and society at large – creating value across three dimensions simultaneously: People, Planet and Profit.

We contribute to these with our science-based solutions to create brighter lives for people today and generations to come.

We are a company that is striving to do well by doing good – because ultimately, we cannot be successful, nor even call ourselves successful, in a world that fails.

We are proud to be recognized as a positive contributor to a changing world. We have achieved this through working side by side with governments, industry bodies and peers.

Working with and for our stakeholders, we will create a brighter future. We are truly excited about what we can achieve together.”

Royal DSM, Annual Integrated Report 2018 (DSM, 2018, p. 5)

Brighter lives for all. Serve the interests of all stakeholders. Creating value. Today and for generations to come. Working side by side. What we can achieve together.

These are small quotes from the integrated report of 2018 of Royal DSM. Integrated reports play an important role in the commitment to corporate social responsibility (CSR), because a correct sustainability strategy needs transparency. CSR needs to be integrated into the core business of a company and acts as a tool to manage the company and to report on the business activities of the company (Vaz et al., 2016).

An integrated report (hereafter “integrated reporting” or abbreviated as IR) explains the company’s power to create and maintain value over time (García-Sánchez et al., 2013). It combines the strategy, governance, performance and prospects of the company in the context of the company’s external environment and explains how the company can create value over time for the short, medium and long term (IIRC, 2013a). Using integrated reports, firms concentrate on long-term value creation. Integrated reporting gives investors the opportunity to make a better decision of the allocation of their resources, because an integrated report gives a more complete overview of the company. Investors need this integrated information besides only the financial information (Barth et al., 2017). This is also visible in the statement of the Annual Integrated Report of 2018 of DSM, showed above. DSM wants to create value over time for the people today and for generations to come and they want to achieve this by working together with their stakeholders (DSM, 2018). The integrated reporting framework of the International Integrated Reporting Council (IIRC) uses six capitals to define the value creation: Financial capital, Manufactured capital, Intellectual capital, Human capital, Natural capital and Social and Relational capital (IIRC, 2013a) and the value creation preference for People, Planet and Profit of DSM, fits into these capitals of the IIRC.

Investors think that the relation between IR and financial performance is important (Churet & Eccles, 2014), but the literature is inconclusive about the outcome if IR has a positive or negative effect on the financial performance. Integrated Reporting increases the informational quality, which makes it easier for investors to divide their capital (Lee & Yeo, 2016). Because stakeholders have access to more information, this attracts investors and creates trust, which has a positive influence on the financial performance (Hoque, 2017) in the long run (Churet & Eccles, 2014). But on the other hand, an integrated report shows what the company is really doing and this can reveal proprietary and competitive sensitive information, which can be negative for the performance of the firm (Lee & Yeo, 2016). There is argued that integrated reporting creates value for the long run (IIRC, 2013a) but that

short- term performance and integrated reporting are not related (Churet & Eccles, 2014). Companies with better Environmental, Social and Government (ESG) performance are seen as a better option to invest in, and this has a positive influence on the long term performance of the company (Eccles & Serafeim, 2011). The long-term effects of integrated reporting on financial performance and on the capital market, are explained by Barth et al. (2017), where the quality of information provided to the participants of the capital markets is done through the capital market channel. Where an integrated report of good quality has a positive influence on firm valuation. The same argument is made by Zhou et al. (2017), stating that the use of an integrated report provides useful information for participants in the capital market, reduces the costs of equity capital and therefore increasing the financial performance. Lee and Yeo (2016) find the same result, that the firm valuation increases after the implementation of integrated reporting. However, that research made use of companies where the adaption of integrated reporting is mandatory and companies do not voluntarily choose to publish and integrated report.

The other point of integrated reporting is the voluntarily adoption of it. In some countries, it is mandatory to publish an integrated report. This is the case in South Africa (Villiers, Venter, & Hsiao, 2017). In other countries, companies voluntarily adopt to the publication of integrated reports and culture can be an important factor in this. Culture influences the decision-making process of people and it therefore influences the organizational structure, managerial behavior and company performance, where differences in cultural systems play an important role in accounting practices or in the different types of reports that are published (García-Sánchez et al., 2013). Culture also influences the decision-making process (Fernandez-Feijoo et al., 2011). This means that culture can also have an influence on the adaptation and publication of an integrated report.

Culture is defined as *“the collective programming of the mind which distinguishes the members of one group or category of people from another”* (Hofstede, 1980, pp. 25) and can be explained by using six cultural dimensions: power distance, uncertainty avoidance, masculinity versus femininity, collectivism versus individualism, long-term versus short-term orientation and indulgence versus restraint (Hofstede, 2019). Companies operating in countries that focus on long-term orientation have more transparency about the behavior of the company and have a bigger commitment towards sustainability. This leads to the publication of more integrated reports in long-term oriented countries (García-Sánchez et al., 2013). This suggests that there can be a mediation effect between culture and integrated reporting, stating that specific types of culture lead to different ways of publishing annual reports.

Culture might also have an impact on the financial performance of a company (Newman & Nollen, 1996). Countries focusing on long-term orientation have activities that do not directly lead to financial performance in the short run (Wang & Bansal, 2012) and this argument can be linked to the statement that long-term orientation, as well as integrated reporting, influences the long-term financial performance of a company.

To be best of my knowledge, the relation between long-term orientation and integrated reporting on financial performance has not been investigated. There is also no research for the voluntarily application of publishing an integrated report in relation to long-term and short-term financial performance. That is where this research fills the gap in the existing literature, by contributing on this topic with the research question:

“What is the influence of long-term orientation and integrated reporting on financial performance?”

The remainder of this paper is structured as follows, chapter 2 gives an overview of the existing literature. Chapter 3 explains the research model, the methodology and the variables and data that are used. Followed by the results in chapter 4 and ending with a conclusion and limitations of the research in chapter 5.

2. Literature review

This chapter explains the existing literature about financial performance, integrated reporting and culture. The hypotheses following from the literature, are also presented in this chapter.

2.1 Financial performance

The target of most companies is to achieve a higher performance than the average of competing companies operating in the same industry. Profits and earnings are meant when talking about performance (Arend, 2004). To understand the performance of a company it is important to look at the endurance and success of the company. The organizational performance is a crucial measure for managing and accessing the actions of the company (Ahmed, Ahmed, & Shafiq, 2014). The organizational performance consists of different types of performances, where the central part is the financial performance, including measures for economic outcomes (Combs et al., 2005) and where earnings are the “bottom-line” accounting measure for financial performance (Nichols & Wahlen, 2004).

The financial performance of a company can be measured for the long-run and for the short-run (Carter et al., 2010) and in a lot of different ways. Accounting measures of financial performance look at the historical performance, where market measures are a reflection of future performance (Margolis & Walsh, 2001). Nichols and Wahlen (2004) show how the current period (short term) and the future period (long term) are related. This is visible in figure 1. The current period earnings include important information about wealth creation and the expected earnings in the future. These expected future earnings then, give information about future payments of dividend and shareholders can use this information to develop expectations about future dividends. These expectations about future dividends in turn determine the share price of the company.

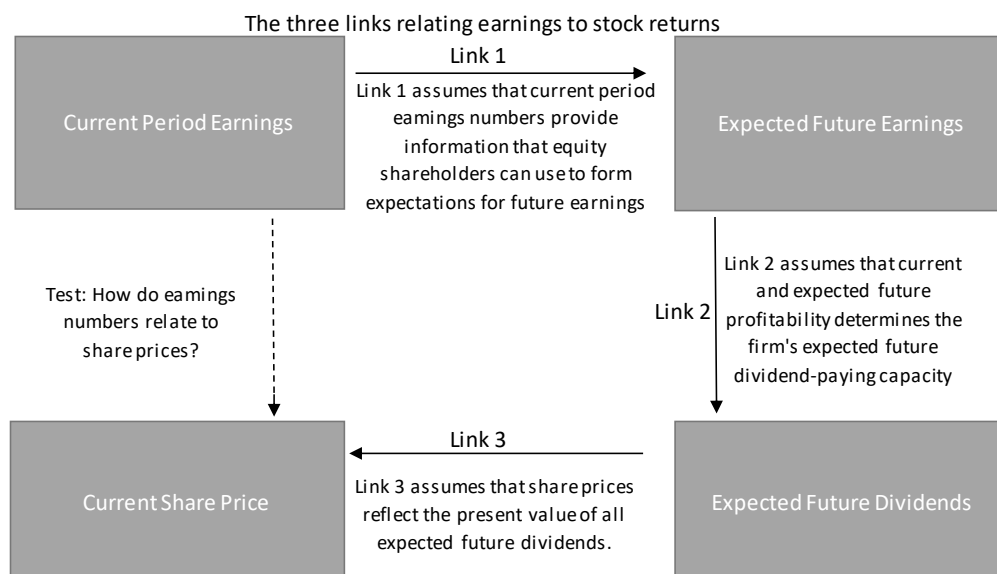


Figure 1: Three links relating earnings to stock returns (Nichols & Wahlen, 2004).

Short-term financial performance

To measure the short-term financial performance of a company, accounting ratios as the Returns on Assets (ROA) are often used (Rowe & Morrow, 2009). If ROA is calculated as the net income divided by the book value of the total assets, it represents the accounting income produced for the shareholders (Carter et al., 2010) and is seen as one of the most relevant measures for firm performance from the stakeholder's perspective (Arena, et al., 2015). Where current period earning give information about

the current period wealth creation, ROA can be seen as current period earning as is shown in figure 1 (Nichols & Wahlen, 2004). Rates of return, like ROA, are looking backwards and might be influenced by differences in risk, tax laws, accounting standards and earnings management (Dezsö & Ross, 2012), which is a disadvantage of using ROA.

Long-term financial performance

Long-term financial performance looks at the future performance of a company (Margolis & Walsh, 2001). A long-term measure for financial performance can be Tobin's Q, which is the market value divided by the total assets (Lee & Yeo, 2016). Tobin's Q is a representation of the market value of the company (Carter et al., 2010). It is a measure that looks at the future and captures the whole value of the firm (Dezsö & Ross, 2012). Since Tobin's Q is a representation of the market value, this means that it captures the speculations and expectations of shareholders. Tobin's Q can therefore be seen as the current share price as described in figure 1 by Nichols and Wahlen (2004). A benefit of using Tobin's Q as a measure is that it implicitly uses the right discount rate that is adjusted to risk and that it minimizes the distortion coming from differences in tax law and accounting agreements (Dezsö & Ross, 2012), which can all be seen as long-term issues. A disadvantage of using Tobin's Q might be that market-based measures are vulnerable to the expectations of the investors and the risk of a downward bias in the period of observation (Arena, et al., 2015).

2.2 Integrated Reporting

Sustainability and transparency have become more important for the stakeholders of a company. These stakeholders want to know how a company is managed and which risks the company faces. The stakeholders also want to know what the impact of the company is on the society and the environment. To meet the demand for this information, companies publish this financial and non-financial information (Hoque, 2017). Firstly, this was done by providing different reports for the financial, social and environmental performance and these reports were long and complex (Villiers et al., 2014). Only sustainability reports cannot help investors to make the right decisions and other information is therefore needed. It is said that separate sustainability reports are not connected to the company's financials and that those sustainability reports are looking back instead of looking at the future (Hoque, 2017). More recent moves have integrated these separately published reports into one report: the integrated report (Villiers et al., 2014). This integrated report shows and explains the company's power to create and maintain value over time (García-Sánchez et al., 2013).

The IIRC defines:

"An integrated report is a concise communication about how 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." (IIRC, 2013a)

Integrated reporting wants to improve the quality of information that is available for the providers of financial capital to make the allocation of capital more efficiently (IIRC, 2013a).

The IIRC developed a framework which contains all the capitals: financial, manufactured, intellectual, human, social and relationship and natural capital. This framework is shown in figure 2.

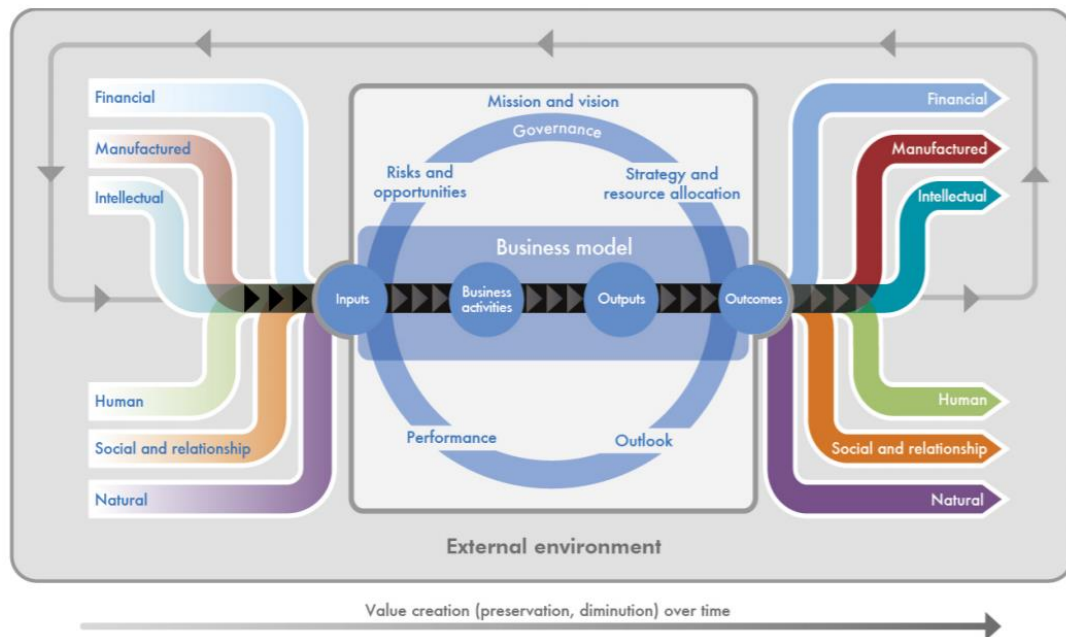


Figure 2: Integrated Reporting Framework. (IIRC, 2013a)

The integrated reporting framework is based on six capitals. The capitals describe where a company should report on. Besides financial capital, companies also use other capitals to create value. The capitals are:

- **Financial capital:** the combination of financial funds that are available for the company. This is related to both the debt and equity of the company.
- **Manufactured capital:** this is human-created, production-oriented equipment and tools. It looks at the inventory for the short-term value and at plant and equipment for the long-term value. It is tangible capital.
- **Intellectual capital:** is about intangible capital and contains knowledge, property rights, patents, copyrights, procedures, protocols and systems developed by the organization.
- **Human capital:** are the capabilities of individuals and the knowledge, skills and experience of the people within the organization.
- **Natural capital:** the renewable and non-renewable environmental stocks that the organization uses to produce the goods or services.
- **Social and relational capital:** is about the power of the relationships in the supply chain, the level of acceptance of the community and relations with governments and competitors (IIRC, 2013b).

The external environment is the context in which the company operates and contains the economic conditions, technological changes, societal issues and environmental challenges. The mission and vision stand for the entire company, explaining the purpose and intentions. Governance stands for the creation of an oversight structure to motivate the ability of the value creation. At the center of the company is the business model. In the business model the capitals are used as input and are turned into outputs using the business activities of the company. The business activities are the planning and design of products or the use of knowledge for services. Innovation in this stage can reduce the social or environmental impacts and can adapt to changes in customer demand. The outputs are products, services, by-products and waste. The activities and the outputs together lead to outcomes which affect the capitals. The outcomes can be positive or negative. Monitoring and the analysis of the environment connected to the mission and vision of the company point out risks and opportunities for the strategy, as well as, for the business model. The strategy shows how the company can reduce risks and increase opportunities. Resource allocation makes sure that the strategies can be reached. To achieve

information about the performance, the company needs measurement and monitoring systems. These systems give information for the decision-making process. The process of value creation is an ongoing process and needs continuous reviewing of all the elements and the interactions of the elements of the model. It needs a focus on the outlook of the company and this leads to revision and refinement to improve all the elements (IIRC, 2013a).

2.2.1 Financial Performance and Integrated Reporting

For investors, the relation between integrated reporting and financial performance is important (Churet & Eccles, 2014) and the information published in an integrated report is helpful for analysts to evaluate the financial performance in the future (Zhou et al., 2017). Financial reporting gives information to equity shareholders, about current and expected future probabilities and firms are dependent on their financial reporting to show believable information about the ability to create future wealth (Nichols & Wahlen, 2004).

Literature shows two opposite views on the relation between integrated reporting and firm performance. One view is that integrated reporting has benefits to the shareholders and therefore integrated reporting has a positive effect on firm valuation (Lee & Yeo, 2016). Integrated reporting increases the quality of information that is published in a way that suppliers of capital can more effectively divide their capital (Healy & Palepu, 2001). If the publication of information about the company shows proprietary and competitive information, this is costly and firms are not willing to publish this information (Verrecchia, 1983). There is argued that integrated reports shows this proprietary information and if firms are forced to publish proprietary information, firm value is negatively related to integrated reporting. If firms have to adopt processes that are very costly, IR can also be negatively associated with firm valuation. However, if the benefits of an integrated report are bigger than the costs, a positive relation is expected (Lee & Yeo, 2016).

One of the reasons that companies publish an integrated report is that they want to show stakeholders how they create value in the long run (Hughen et al., 2014). Most of the companies voluntarily disclose information about the impact of the business activities on the society and on the way this impact is managed insight the firm. When there is no disclosure, investors think the worst of the company and are not willing to invest (Brammer & Pavelin, 2004). Using integrated reporting gives stakeholders more information about the company, attract investors and creates trust. This increases the reputation and performance of the company (Hoque, 2017). An integrated report publishes forward-looking information and it therefore reduces the uncertainty about the long-term financial performance of the company (Zhou et al., 2017). Companies using integrated reporting, have a higher firm valuation in terms of stock market and the accounting performance (Lee & Yeo, 2016). This value is created over time and for different stakeholders, using the different capitals of integrated reporting (IIRC, 2013a). The use of integrated reporting is associated with long-term value creation (Barth et al., 2017), and by the focus on communication and integrated reporting, companies can increase the number of long-term investors (Eccles & Serafeim, 2013). The long-term vision of integrated reporting is that the integrated thinking is embedded in the company's business systems (IIRC, 2013a). Integrated reporting shows the long-term consequences of the decision-making process and the performance measures are rebalanced away from the short-term perspective in annual reports towards a long-term perspective in integrated reports (Jensen & Berg, 2012).

The possibility of a company to adapt to changes affects the company's long-term viability and the integrated information about revenue and profit growth can establish long-term relations with customers and stakeholders (IIRC, 2013a). Where CSR is a proxy for integrated reporting, using a CSR strategy, means that the company has a long-term shareholder value approach. This approach means that the company has a long-term view on the maximization of profit (Falck & Heblich, 2007). There is a significant time lag before the implementation of Environmental, Social and Government management (ESG) and the results of this being visible in the improvement of the financial performance (Eccles & Serafeim, 2011). The costs of capital of CSR activities are high, but the overall costs of the company can be reduced due to less use of energy, less waste or the fewer materials that

are used. The benefits from these lower costs take time to take place, while the higher costs of capital are immediately visible (Wang & Bansal, 2012). This indicates that the higher financial performance is visible in the long-run. This statement is confirmed by Churet and Eccles (2014,) arguing that companies with good ESG management, have a higher financial performance in the long run. The positive effects of CSR activities outperform the negative effects and this results in positive economic returns. The negative effects are the high costs of implementing CSR activities or the development of environmental friendly technologies. The positive effects are the reduction of future costs, due to the development of techniques that can save the use of resources (Wang & Bansal, 2012).

This can be seen as a positive effect of using CSR on the long-term financial performance of the company. A positive relation between integrated reporting and long-term financial performance is therefore expected:

H1a: Integrated reporting has a positive association with long-term financial performance.

Some literature does not find a relation between integrated reporting and short-term measures for financial performance (Churet & Eccles, 2014) and other literature finds a negative relation between integrated reporting and short-term financial performance. The more CSR activities a firm has, the higher the costs and if the firm divides more resources towards CSR activities, the less resources are available for the core business of the company. The higher costs can also be related to the research and development of CSR strategies that have to be done before and during implementation (Wang & Bansal, 2012). Eccles and Serafeim (2011) argue that the time lag between implementing integrated reporting and getting the benefits from it are not immediately visible. This indicates that the costs in the short-run are high, leading to a lower short-term financial performance. If firms have to adopt to processes before IR can be implemented effectively, and this adoption is very costly, the performance in the short-run is low, because of the high expenses that have to be done (Lee & Yeo, 2016). This is the same as is argued by Wang and Bansal (2012) that the lower costs of CSR due to less use of energy or materials take time to materialize, but that the costs of capital related to CSR activities are high and immediately visible. The short-run financial performance related to CSR is therefore lower.

There is also literature that finds a positive relation between integrated reporting and the short-term financial performance of the company. However, the effect is stronger when more time has passed after the implementation of IR (Lee & Yeo, 2016). The positive relation found by McGuire et al. (1988) states, that through the effect on the stakeholders, there is a positive relation between corporate social responsibility reporting and ROA.

Where previous literature finds negative, as well as, positive results for the effect of integrated reporting on short-term financial performance, no relation between integrated reporting and the short-term financial performance is expected.

H1b: Integrated reporting has no specific association with short-term financial performance.

2.3 Culture

Culture may play an important role in influencing and explaining the behavior in social systems (Gray, 1988). According to Hofstede (1980) culture is defined as *“the collective programming of the mind which distinguishes the members of one group or category of people from another”* (Hofstede, 1980, pp. 25). More specified, culture is about implicit and explicit patterns and behavior that is acquired and passed on by symbols, where the core of a culture is about traditional ideas and the values connected to it. Culture can be a product of action, or a factor for future action (Adler, 2008). Where nations are “subculturally heterogeneous,” this means that the culture of a nation, the “national culture” is the average of all the cultures in that nation (Hofstede, 1980). Meaning that not all people in a country have the same subculture, but that all those people have a common national culture (McSweeney, 2002). Cultural aspects that are also covered by this definition are the legal and tax

environments of a country, the economic systems and technological potentials. Social institutions, beliefs and material culture are also part of the cultural aspects of a country (Gleason et al., 2000). According to Hofstede (1980), culture is specified towards groups, as nations or corporations. For this research, the national culture of a country is selected, because as McSweeney (2002) argues, it captures all the different cultures that exist in a country, into a common culture, meaning that the common national culture also affects citizens and companies in that country (García-Sánchez et al., 2013).

Hofstede has distinguished six cultural dimensions to explain cultural differences between countries. Those dimensions are: power distance, uncertainty avoidance, masculinity versus femininity, collectivism versus individualism, long-term versus short-term orientation and indulgence versus restraint.

Power distance

Power distance explains the degree to which less powerful people accept that power is unequally distributed in a country (Hofstede, 1983). Countries with a high level of power distance are more hierarchical and every member has its own place in the society. In countries with a low level of power distance, the distribution of power is more equalized (Hofstede, 2019). For companies this influences the level of formal hierarchy, the level of centralization and the way people can participate in the decision-making process (Newman & Nollen, 1996).

Uncertainty avoidance

This dimension explains if people in a country feel uncomfortable if there is uncertainty. Countries with a high level of uncertainty, prefer to have structured and good functioning institutions (Hofstede, 1983). Countries with a preference for uncertainty avoidance, have strict codes about behavior and beliefs. Countries with a lower level of uncertainty avoidance, are more relaxed and practices are more important than strict principles (Hofstede, 2019). High uncertainty avoidance is visible in the form of plans, policies, systems and procedures that companies have (Newman & Nollen, 1996) and in the form of written rules and regulations (Hofstede, 1980).

Masculinity versus femininity

This cultural dimension explains the distribution of sexes within a society and questions whether men and women can have different roles (Hofstede, 1980). Masculine countries are competitive and want material rewards and assertiveness, while feminine countries prefer modesty and a good quality of life, while taking care of the weak in the society (Hofstede, 2019). Masculine countries do not like failure and are characterized by doing and acquiring instead of thinking and observing. For companies, this means that masculine cultures have a favor for high earnings, rewards and recognition, where companies in feminine cultures prefer interpersonal relations and a good working life (Newman & Nollen, 1996).

Individualism versus collectivism

In individualistic countries, people look after themselves and after their direct family members. The social framework in these countries is loose. In more collectivistic countries, people look after others and the social framework is more tight (Hofstede, 1983). It is about the “we” thinking in collectivistic countries, compared to the “I” thinking in individualistic countries (Hofstede, 2019). Individual responsibility for results and a high level of autonomy represents an individual culture of a company. When the focus is on the work unit cooperation and rewards based on the results of a team, there is a more collectivistic culture (Newman & Nollen, 1996).

Long-term orientation versus short term orientation

Long-term orientation (LTO) is focused on learning, honesty, adaptiveness, accountability, self-discipline and investing in long-term relations (Hofstede & Minkov, 2010). Countries that have a preference for long-term orientation support modern ways of education to prepare for the future

(Hofstede, 2019). Long-term oriented countries also try to learn from other countries (Hofstede, 2011). Countries oriented towards the long term are more patient than short-term oriented countries and feel that they are responsible for the larger good (Newman & Nollen, 1996). A long-term oriented society has the characteristic that it searches for the goodness for the whole society, where short-term oriented countries are thinking about themselves (Hofstede & Minkov, 2010). People oriented towards the short term want to see quick results (García-Sánchez et al., 2013) and immediate satisfaction to keep up with social trends (Hofstede & Minkov, 2010), instead of investment for the future as long-term oriented people prefer (García-Sánchez et al., 2013). Countries with a preference for short-term orientation like to stick to traditions and norms, while they have suspicion for changes in the social environment (Hofstede, 2019). Short-term orientation is based on efficiency, where long-term orientation is based on effectiveness (Wang & Bansal, 2012).

Indulgence versus restraint

Indulgent countries accept that satisfaction can be free for basic and natural human drives. Restraint countries regulate gratification of needs by using strict social norms (Hofstede, 2011). Countries with a high level of indulgence enjoys leisure time and the spending of money, where countries with a high level of restraint are bound by strict norms and therefore break away towards illegitimate payments (Achim, 2016).

2.3.1 Long-term orientation and financial performance

This section explains the relation between long-term orientation and its effect on financial performance. For the effect of culture, the cultural dimension long-term orientation versus short-term orientation is chosen, since this dimension has proven to have an effect on sustainability reporting (Wang & Bansal, 2012). Sustainability reporting is a proxy for integrated reporting and integrated reporting has a long-term vision (IIRC, 2013a), where long-term orientation is focused on the long term as well. Based on these common grounds, there is investigated if the cultural dimension long-term orientation has an influence on financial performance and there will also be investigated if long-term orientation has an effect on integrated reporting.

The culture within an organization can raise the awareness of how to solve problems and it can affect the performance of the organization. If the culture of the organization is opposite to the expectations of the stakeholders, this can have a negative influence on the performance (Ahmed, Ahmed, & Shafiq, 2014). Different countries can have different beliefs. For example, managers in the United States have a “shareholder perspective,” where managers in the Netherlands have a “stakeholder perspective.” These beliefs can be seen as different cultural beliefs. But these different beliefs have impact for the design of the organization. The shareholder perspective focusses on productivity and financial performance indicators. The aim is to serve the interest of the shareholders. Within the stakeholder perspective, these stakeholders are important parts in the decision-making process (Jansen et al., 2009). Where culture has impact on the decision-making process of people, it is expected that it also has an influence on the organizational structure, managerial behavior and company performance (García-Sánchez et al., 2013).

Long-term versus short-term orientation

Long-term orientation is focused on the reduction of risks and the long-term goals are better specified, leading to a higher performance (Lumpkin et al., 2010). Firms that have more planning activities outperform companies with a shorter planning history (Bracker & Pearson, 1986). This indicates that if you think more about future actions, it is better for the results of the company. Countries with a long-term orientation tend to prefer long-term employment and solutions to problems, rather than “quick fixes” (Newman & Nollen, 1996). Companies that make investments based on long-term sustainability initiatives are highly connected to their stakeholders, oriented towards the long term

and have closer relations with the stakeholders. This improves the shareholder value (Hughen et al., 2014) and there can therefore be argued that it also improves the long-term financial performance. People who are oriented towards the long term, have a strong tendency to invest in the future (García-Sánchez et al., 2013). These companies participate in long-term investments that are expensive in the short-run, but pay off in the longer run and because investments pay off in the long run, performance in the long run increases (Flammer & Bansal, 2017). The same argument is made by Wang and Bansal (2012), that firms focusing on the long term, often take part in activities that do not have immediate returns. They may investigate in resources that do not have value for the short term. Companies with a long-term oriented view have a broader vision than short-term oriented companies and can therefore see the potential values of CSR investments. Because these companies can see the benefits that occur in the future, they are willing to invest in activities that cost money in the short run, but pay off in the long run. This indicates that a long-term orientation leads to a higher financial performance in the long run and this leads to hypothesis 2a:

H2a: Long-term orientation has a positive influence on long-term financial performance of firms.

People with a short-term orientation want to see quick results and have a small tendency to save for future investments (García-Sánchez et al., 2013). The focus is on the profit that counts for the current year (Hofstede & Minkov, 2010). When people are short-term oriented, investments decisions with a negative net present value in the short run may be postponed or declined, even when these investments may contribute to future and long-term performance (Falck & Heblich, 2007). The same argument is made by Flammer and Bansal (2017) arguing that short-term oriented companies turn down valuable investment opportunities and this leads to lower long-term firm performance. Because long-term oriented companies participate in activities that do not have immediate returns in the short run, but do cost money in the short run, the performance in the short run is lower than in the long run (Wang & Bansal, 2012). This leads to hypothesis 2b:

H2b: Long-term orientation has a negative influence on the short-term financial performance of firms.

2.4 Long-term orientation, integrated reporting and financial performance

This section explains the relation between long-term orientation, integrated reporting and financial performance. The first part of this section explains the relation between long-term orientation and integrated reporting and the mediation effect. The second part describes the moderation effect of the relation between long-term orientation, IR and financial performance.

2.4.1 Long-term orientation and integrated reporting, the mediation effect

Culture can be an important factor to understand how systems change because of “cultural influences.” These influences can be the norms and values that count in the system, or the behavior of groups within the system (Gray, 1988). Companies operating in different parts of the world, face different cultures and values. This means that the way of publishing needs to be adjusted to the conditions of the country where the company is operating (Bustamante, 2011). Corporate social responsibility can mean something different, in different places, to different people, in different times and this means that CSR can be interpreted differently according to the value systems and context a company is working in (Thanetsunthorn, 2015). When corporate social responsibility is understood as a voluntary commitment to social trends and institutional demands, the differences between countries in the level of importance for CSR become clear (Falck & Heblich, 2007). Companies working in countries with cultural systems that are alike, show the same patterns and behavior when it comes to integrated reporting. This is because companies want to meet the expectations of the stakeholders (García-Sánchez et al., 2013). These stakeholders need information about the economic, social and environmental impact of the company and only ESG information in annual reports is insufficient.

Different stakeholders also need different types of information and this gives rise to a diverse set of norms and values (Bustamante, 2011). These different norms and values give rise to different business practices on the publication of information. For example, companies operating in collectivistic countries, and to a greater extent, feminine countries have more interest in publishing integrated information in a way that stakeholders can base their decisions on. These countries are marked by people with the univocal aim to improve the quality of life in the society. This means that companies should respond to a bigger social and environmental demand instead of a purely economic demand. To achieve this, the company will present better information on these topics. Power distance and uncertainty avoidance are not cultural dimensions that have a key influence on integrated reporting. People in countries with these characteristics are more interested in individual reporting instead of integrated reporting. It is expected that firms in these countries present less or no integrated reports (García-Sánchez et al., 2013).

When companies are myopic, they have a vision on the short term and when these companies adopt to a long-term vision, they can create long-term value for the company (Flammer & Bansal, 2017). Long-term orientation affects the way a society deals with the environment (Hofstede & Minkov, 2010), where companies located in countries with a high level of long-term orientation also have a bigger commitment to sustainability, meaning that they have more transparency with regard to the behavior of the company by publishing integrated reports that show the information needed by investors to analyze the long-term expectations of the company (García-Sánchez et al., 2013). By having a long-term orientation, they have strong relationships with stakeholders, which leads to a good reputation and trust (Flammer & Bansal, 2017). And companies focused on long-term orientation also fulfill social obligations (Jansen et al., 2009). When companies focus on long-term orientation, this opens their vision to see the potential values of investments in CSR (Wang & Bansal, 2012), which in this case can be seen as a proxy for integrated reporting.

This suggests that there can be a mediation effect between culture and integrated reporting. A variable acts as a mediator if it influences the relation between the dependent and independent variable (Baron & Kenny, 1986). For this research this means that integrated reporting might act as a mediator on the relation between culture and financial performance.

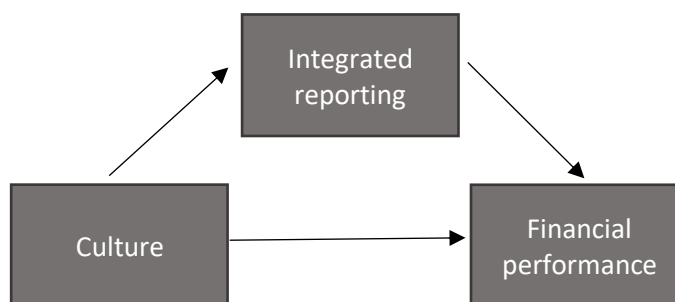


Figure 3: Mediation model

The mediation effect argues that specific types of culture lead to different ways of publishing. A culture expects something of a company, the culture forces the company to adapt to a certain way of publishing financial and non-financial information. More specifically, long-term orientation has an influence on the relative number of integrated reports published in a country. Companies with a focus on long-term orientation think that information is important in the decision-making process (Wang & Bansal, 2012). When companies are located in a country with a stronger long-term orientation, it is more likely these companies will apply an integrated reporting format for providing their annual report. There is also expected that long-term oriented countries publish more integrated reports, because those countries have a stronger relation with their stakeholders (Hughen et al., 2014).

Integrated reporting acts as a mediator between the effect of long-term orientation and financial performance, where there is expected that long-term oriented countries publish more integrated reports. This leads to the following hypothesis:

H3a: Integrated reporting mediates the effect of culture (long-term orientation) on long-term financial performance.

H3b: Integrated reporting mediates the effect of culture (long-term orientation) on short-term financial performance.

2.4.2 Long-term orientation and integrated reporting on financial performance, the moderation effect

The sections above explained that integrated reporting has a relation with financial performance and that long-term orientation has a relation with financial performance. There is also the connection between long-term orientation and integrated reporting. Concluding from above is that long-term orientation can play a role in the relation between integrated reporting and the financial performance of a company and that long-term orientation moderates the relation between integrated reporting and financial performance.

A moderation effect means that a third variable splits an independent variable into subgroups that determine the effectiveness concerning the dependent variable and a moderator specifies when a specific effect holds. This effect can be complementary or substitutionary (Baron & Kenny, 1986).

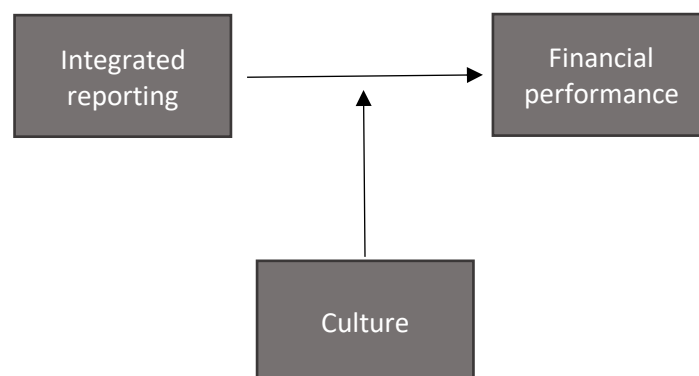


Figure 4: Moderation model

A complementary effect means that the effect of long-term orientation on integrated reporting will strengthen the effect on financial performance. A substitution effect explains whether the effect of openness in a culture is absorbed by the application integrated reporting.

As Maniora states that *“Internalizing new ethical norms can be initiated by more ethical reporting practices and can foster ethical management and business practices (Maniora, 2017 pp. 783),”* it might be an indication for a complementary effect. When publishing an integrated report, this is a more ethical type of publication, since the company is more open and shows where it is creating value of its environment. There is stated that countries focused on long-term orientation publish more integrated reports (Wang & Bansal, 2012), and there is also argued that long-term orientation has a positive influence on financial performance (Flammer & Bansal, 2017). Jensen and Berg (2012) argue that integrated reporting changes the financial performance measures towards the long term. Flammer and Bansal (2017) argue that long-term orientation, as cultural dimension, has a positive influence on long-term financial performance. If these two arguments are combined, one could argue that

integrated reporting in countries with a perspective on long-term orientation have a more positive effect on long-term financial performance than only integrated reporting or long-term orientation. This result is also found by Wang and Bansal (2012), that CSR activities together with long-term orientation have a positive influence on financial performance. This leads to hypothesis 4a:

H4a: Long-term orientation and integrated reporting complement in explaining long-term financial performance.

Literature finds a positive effect of integrated reporting and short-term financial performance (Lee & Yeo, 2016), where a negative relation is also found (Wang & Bansal, 2012). There is expected that long-term orientation has a positive effect on long-term financial performance (Flammer & Bansal, 2017) and that long-term orientation has a negative effect on short-term financial performance (Wang & Bansal, 2012). Given the expectations that the effect of long-term orientation and integrated reporting on short-term financial performance can be positive or negative, the exploratory hypothesis becomes:

H4b: Long-term orientation and integrated reporting complement (substitute) in explaining short-term financial performance.

3. Research Model Methodology and Data

This chapter first shows the conceptual model that is used for this research, followed by the description of the dependent, independent and control variables. Then the regression models are explained ending with an explanation of the data collection.

3.1 Conceptual model

This chapter presents the conceptual model of the research. Integrated reporting is the company level determinant and culture is the country level determinant.

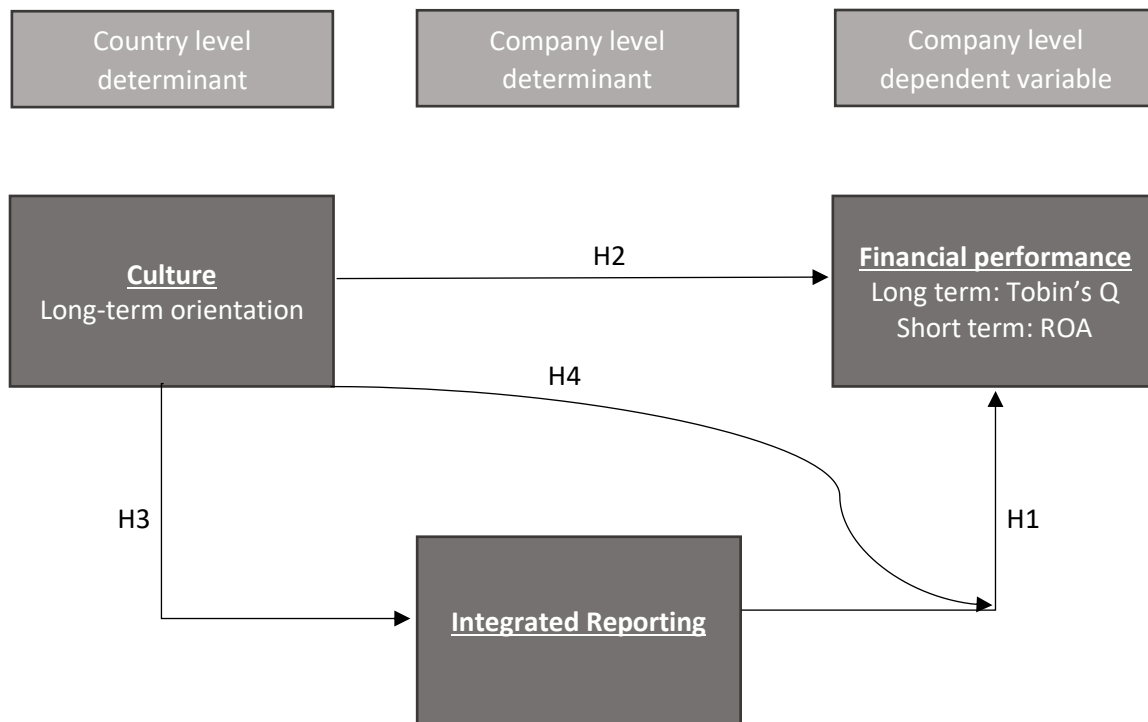


Figure 5: Conceptual model

3.2 Dependent Variable

The dependent variable is firm performance. Firm performance is measured for the short and the long term.

For the short term, firm performance is measured using the Return on Assets (ROA) of the firm. Return on assets is taken as a ratio from Thomson Reuters database EIKON and is measured as:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$$

For the long term, firm performance is measured using Tobin's Q (TOBINQ). Tobin's Q is the market value divided by the total assets (Lee & Yeo, 2016) and reflects the market value of the assets compared to the carrying amounts. The intellectual, human, social and natural capitals are to a limited extent, or not, reflected in the carrying amounts of the assets (Barth et al., 2017). Since there will be investigated what the relation is between integrated reporting and financial performance this makes Tobin's Q a suitable variable.

Tobin's Q is measured as:

$$Tobin's Q = \frac{\text{Market Value}}{\text{Total assets}}$$

3.3 Independent Variables

The independent variables are integrated reporting and culture.

Integrated reporting is used as a dummy variable if a company publishes an integrated report yes (1) or no (0). This is done by looking at the annual reports the companies published and checks if this is an integrated annual report yes or no. The website of Corporate Register (2019) is also used, because this website indicates if a company's annual report is an integrated report and what integrating standards the report follows (Corporate Register, 2019).

The other independent variable, culture, is defined using the six cultural dimensions by Hofstede (1980), Collectivism versus individualism, Masculinity versus femininity, Uncertainty avoidance, Power distance, Long term versus short term orientation and Indulgence versus Restraint.

Each country gets a score for the dimension based on the Country Comparison website by Hofstede Insights (2019). In this paper, long-term orientated cultures are investigated, since there is found that long-term orientation has a relation with integrated reporting, since companies with a focus on the long term see the potential values of CSR investments (Wang & Bansal, 2012).

The means of the dimension is calculated and then there is stated if a country is located high, above the median split mean, of this dimension, or low, below the median split of the dimension, using dummy variables. The use of dummy variables avoids methodological problems relating to the use of the original Hofstede numerical variables, which are constant for companies located in the same country (García-Sánchez et al., 2013).

The operationalization for long-term oriented counties is done using dummies, indicating:

Long-term orientation (D_LTO) = 1 above the mean and 0 below the median split.

The Hofstede (1980) dimension long-term orientation counts if a country is oriented towards the long term. This means that if a country scores high on this dimension, it is long-term oriented. Countries that score above the median split are oriented towards the long term and therefore receive a score of 1 for the dummy.

3.4 Control Variables

To avoid results that are biased, different control variables are added. Firm size (SIZE) is added as a control variable, since bigger firms are more likely to publish information (Frias-Aceituno et al., 2014) and bigger size is associated with a higher performance (Gleason et al., 2000). Size is measured as the logarithm of the total assets (García-Sánchez et al., 2013; Lee & Yeo, 2016).

If companies work in the same industry, it is expected that they adopt the same behavior about information publishing as other companies in that sector. Because if they don't do this, the market interprets this as a weakness. Therefore there is controlled for the industry (INDUSTRY) (García-Sánchez et al., 2013). Industry is measured with the 4-digit SIC1 industry code.

Growth opportunities (GROWTH). If the growth opportunities for companies are higher, there is expected that these companies give more resources to the publication of information (García-Sánchez et al., 2013). This variable is measured as prior year's sales growth (Lee & Yeo, 2016).

Leverage (LEVERAGE). If a company has a lot of debt, this can influence the agency costs of free cash flow (Lee & Yeo, 2016) and therefore the ratio of total debt to total assets, the leverage ratio, is included in the regression analyses (Barth et al., 2017).

Control variable	Abbreviation	Definition
Firm size	SIZE	Logarithm of total assets
Firm growth	GROWTH	Net sales (year ₁ – year _{t-1}) / year _{t-1}
Industry	INDUSTRY	SIC1, 4-digit industry code (dummy)
Leverage ratio	LEVERAGE	Total dept / total assets

3.5 Regressions and the relation to the hypotheses

To investigate the influence of having an integrated report, on the long-term financial performance, as stated in hypothesis 1: “integrated reporting has a positive association with long-term financial performance,” the following regression model (H1a) is used. To investigate the influence of having an integrated report on the short-term financial performance, regression model H1b is used.

$$(1.1) \text{ H1a: Tobin's } Q \\ = \alpha + \beta_1 IR + \beta_2 SIZE + \beta_3 GROWTH + \beta_4 LEVERAGE + \beta_5 INDUSTRY + \varepsilon$$

$$(1.2) \text{ H1b: ROA} \\ = \alpha + \beta_1 IR + \beta_2 SIZE + \beta_3 GROWTH + \beta_4 LEVERAGE + \beta_5 INDUSTRY + \varepsilon$$

To confirm hypothesis 1a, that integrated reporting has a positive influence on long-term financial performance, Tobin's Q, β_1 needs to be positive and significant. To confirm hypothesis 1b, that integrated reporting has no association with short-term financial performance, ROA, β_1 in equation 1.2 has to be positive, but no significant sign is expected, since no relation is expected.

The second hypothesis tests the relation between long-term orientation and firm performance. For hypothesis H2a there is expected that companies with a high level of long-term orientation have a higher performance in the long run. Hypothesis H2b expects that companies with a high level of long-term orientation have a lower firm performance in the short run. The following regression models are used to test these hypotheses:

$$(2.1) \text{ H2a: Tobin's } Q \\ = \alpha + \beta_1 \text{Long term orientation} + \beta_2 SIZE + \beta_3 GROWTH + \beta_4 LEVERAGE \\ + \beta_5 INDUSTRY + \varepsilon$$

$$(2.2) \text{ H2b: ROA} \\ = \alpha + \beta_1 \text{Long term orientation} + \beta_2 SIZE + \beta_3 GROWTH + \beta_4 LEVERAGE \\ + \beta_5 INDUSTRY + \varepsilon$$

There is expected that a higher level of Long-term orientation leads to a higher financial performance in the long run (Tobin's Q). β_1 in regression model 2.1 is therefore expected to be positive and significant. A high level of long-term orientation is expected to lead to a lower financial performance in the short run (ROA) and to confirms this hypothesis, β_1 in regression model 2.2 is therefore expected to be negative and significant.

To test for the mediation effect of culture on integrated reporting, 3 regressions need to be made. The first regression is the independent variable influencing the mediator. In this case, that means long-term orientation influencing integrated reporting:

$$(3.1) H3: IR = \alpha + \beta_1 \text{Long term orientation}$$

β_1 in this case should be significant.

The second regression is the independent variable affecting the dependent variable. In this case, that is long-term orientation affecting financial performance:

$$(3.2) H3: \text{Financial performance} \\ = \alpha + \beta_1 \text{Long term orientation} + \beta_2 \text{SIZE} + \beta_3 \text{GROWTH} + \beta_4 \text{LEVERAGE} \\ + \beta_5 \text{INDUSTRY} + \varepsilon$$

β_1 in this case should be significant.

The last regression is the mediator together with the independent variable influencing the dependent variable:

$$(3.3) H3: \text{Financial performance} \\ = \alpha + \beta_1 IR + \beta_2 \text{Long term orientation} + \beta_3 \text{SIZE} + \beta_4 \text{GROWTH} \\ + \beta_5 \text{LEVERAGE} + \beta_6 \text{INDUSTRY} + \varepsilon$$

β_2 should be significant. β_2 should be smaller in absolute terms than the original mediation effect of β_1 in equation 3.2. If this is the case, then culture acts as a mediator in publishing an integrated report (Baron & Kenny, 1986).

Hypothesis 4 tests for the moderation effect between culture and integrated reporting on financial performance.

$$H4: \text{Financial performance} \\ = \alpha + \beta_1 \text{Long term orientation} + \beta_2 IR + \beta_3 \text{Long term orientation} * IR \\ + \beta_4 \text{SIZE} + \beta_5 \text{GROWTH} + \beta_6 \text{LEVERAGE} + \beta_7 \text{INDUSTRY} + \varepsilon$$

When β_3 is negative (positive), there is a substitution (complementary) effect between long-term orientation and integrated reporting. When the interaction term between IR and long-term orientation is significant (and positive) there is a moderation effect.

3.6 Data collection

The sample of the data consists of four developed countries with different cultural dimensions. These countries are: The Netherlands, Germany, Finland and Spain. These countries are chosen because their differences in culture, based on Hofstede's (1980) cultural dimensions. The different dimensions are shown in figure 6.

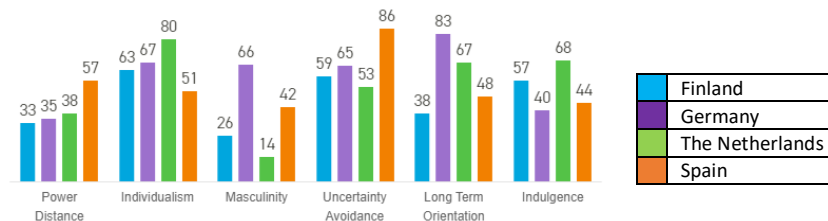


Figure 6: Hofstede Dimensions (Hofstede, 2019)

From each of the countries, the biggest listed companies, based on their market value, are taken with a maximum of 50 companies per country. Banking and financial companies are eliminated from the dataset, since the corporate structure and wealth valuations are different and not comparable to other type of companies (García-Sánchez et al, 2013). All companies publish their annual reports according to the IFRS standards. Only the companies that are still listed nowadays are part of the dataset. Companies which financial year did not end at the 31st of December 2017, were removed from the dataset, since the companies are selected on their market value on December 31, the end of their financial year. Four observations with outstanding and influencing values of Tobin's Q are also removed from the dataset. This left the dataset with 196 observations, 48 for the Netherlands, 48 for Germany, 50 for Finland and 50 for Spain. The industries are based on the 4-digit SIC1 industry code and are clustered into the eight industry groups.

For the companies there is checked if they publish an integrated report yes or no. This is done by looking into the annual reports of 2017 and see whether the annual report is integrated yes or no. The website of Corporate Register (Corporate Register, 2019), additionally, is used to check if an annual report is integrated or not. The data for the cultural dimensions in a country is taken from Hofstede Insights (2019), which is based on the four cultural dimensions of Hofstede (1980) and the two dimensions that are added to the literature later.

For the collection of the data, the year 2017 is taken. For this year there is checked if the company published an integrated annual report, yes or no. The data for the financial performance, Tobin's Q and ROA, and for the control variables are also taken for this year. The data is collected using Eikon as database.

This cross-sectional dataset will be run by Ordinary Least Square (OLS) regressions, using STATA as statistical program. Stata provides statistical tools to make different kind of analyses and is easy to use (Stata, 2018).

4. Results

This chapter explains the results of the research. It starts with a description of the data followed by a correlation matrix. After that, the tables with the results of the regression analyses are presented. Ending with a robustness check for femininity as cultural dimension and the check for different accounting principles for integrated reporting and sustainability reporting.

4.1 Descriptive statics

In table 1 the descriptive statics are presented. This table shows the number of observations, the minimum and maximum values of the variables, the mean and the standard deviation. The table shows that there is a good distribution of companies that publish an integrated report, 60 out of the sample of 196. 96 Companies came from long-term oriented country and 98 companies were located in a more feminine country.

Table 1: Descriptive Statics

Descriptive statics					
	Observations	Minimum	Maximum	Mean	Standard Deviation
Dependent variables					
ROA	196	-0.1302	0.2464	0.060623	0.052147
Tobin's Q	196	0.029544	4.789731	1.132359	0.900286
Independent variables					
IR	196	0	60	0.306122	0.462062
GRI	196	0	166	0.846939	0.360969
IIRC	196	0	41	0.209184	0.407767
GRI+IIRC	196	0	40	0.204082	0.404061
CSRseparate	196	0	89	0.454082	0.499162
CSRannual	196	0	40	0.204082	0.404061
D_FEM	196	0	1	0.5	0.50128
D_LTO	196	0	1	0.489796	0.501176
Control variables					
SIZE	196	18.15331	27.50478	22.74927	1.783025
GROWTH	196	-3.26417	2.960937	0.092563	0.395067
LEVERAGE	196	0	0.7374	0.249471	0.157266
IR*D_COLL	196	0	1	0.147959	0.355969
IR*D_FEM	196	0	1	0.158163	0.365829

Legend: This table represents the descriptive statics. The data sample contains 196 observations for the year 2017 in The Netherlands, Germany, Finland and Spain. ROA = Return on Assets short-term financial performance measure; Tobin's Q = ratio Market Value to Total Assets, long-term financial performance measure; IR = Integrated Report, dummy variable, 1 if a company publishes an integrated report, 0 if a company does not publish an integrated report; GRI = publishing according to guidelines of Global Reporting Initiative; IIRC = publishing according to guidelines of International Integrated Reporting Council. GRI+IIRC = publishing according to guideline of Global Reporting Initiative together with the guidelines of the International Integrated Reporting Council; CSRseparate = publishing a separate sustainability report; CSRannual = publishing sustainability information within the annual report, where GRI, IIRC, GRI+IIRC, CSRseparate and CSRannual are dummy variables, where 1 means yes and 0 means no. D_FEM = dummy variable for more feminine countries, 1 for countries below the median split, 0 above the median split; D_LTO = dummy variable for more long-term oriented

countries, 1 for countries above the median split, 0 below the median split; SIZE = logarithm of total assets; GROWTH = percentage change in sales of year t-1 according to year t; LEVERAGE = ratio of Total debt to total assets; IR*D_FEM = interaction term between IR dummy and the femininity dummy. IR*D_LTO = interaction term between IR dummy and the long-term orientation dummy.

4.2 Correlations

Before presenting the regression analyses, there is tested if multicollinearity is at issue. Table 2 shows the correlation matrix. The table shows that IIRC and GRI + IIRC are highly correlated. The explanation is that the variable GRI + IIRC measures if a company publishes according to the principles of the Global Reporting Initiative, together with the principles of the International Integrated Reporting Council. Where the variable IIRC measures if a company publishes according to the principles of the International Integrated Reporting Council it makes sense that the two variables are highly correlated.

Table 2: Correlation matrix

	ROA	Tobin's Q	IR	GRI	IIRC	GRI+IIRC	CSRseparate	CSRannual	D_FEM	D_LTO	SIZE	GROWTH	LEVERAGE	IR*D_FEM	IR*D_LTO
ROA	1														
Tobin's Q	0.5123	1													
IR	-0.0334	-0.0111	1												
GRI	-0.0089	-0.2966	0.1286	1											
IIRC	-0.0611	-0.1248	0.5294	0.1838	1										
GRI+IIRC	-0.0703	-0.149	0.5152	0.2153	0.9846	1									
CSRseparate	0.0538	-0.0344	-0.5835	0.1885	-0.3683	-0.3601	1								
CSRannual	0.018	0.0467	-0.3363	-0.1715	-0.1359	-0.1308	-0.4618	1							
D_FEM	0.0465	0.1628	0.0221	-0.17	-0.1129	-0.1013	-0.2152	0.2025	1						
D_LTO	-0.0221	-0.0664	0.0357	-0.037	-0.1275	-0.1416	0.0494	-0.091	0	1					
SIZE	-0.2332	-0.542	0.1261	0.2408	0.0965	0.0853	0.0813	-0.1966	-0.3601	0.3971	1				
GROWTH	0.3101	0.1246	-0.0698	0.0805	-0.057	-0.0565	0.0558	0.1149	-0.1051	-0.0611	-0.047	1			
LEVERAGE	-0.118	-0.3223	0.1225	0.0684	0.1171	0.126	-0.1237	0.0125	-0.1036	-0.0779	0.0528	-0.0859	1		
IR*D_FEM	0.018	-0.0071	0.6526	0.1454	0.224	0.2315	-0.3953	-0.2195	0.4334	0.1627	0.0139	-0.0648	0.0504	1	
IR*D_LTO	-0.0223	0.0753	0.6526	-0.0099	0.1896	0.1621	-0.3672	-0.2195	0.1538	0.4424	0.1171	-0.0674	0.039	0.6168	1

4.3 Results from the regressions

4.3.1 Results hypothesis 1

Table 3 presents the results according to hypothesis 1 of chapter 2. Hypothesis H1a states that integrated reporting has a positive association with long-term financial performance (Tobin's Q). Hypothesis H1b states that integrated reporting has no specific association with short-term financial performance (ROA).

The results in table 3 show that there is a positive, and significant, relation between the publication of an integrated report and long-term financial performance, measured as Tobin's Q. This result is shown in model 1a of Tobin's Q. There is also a positive relation between integrated reporting and short-term financial performance, measured as the Return on Assets, ROA. This is visible in model 1b of ROA. However, this result on short-term financial performance is not significant, but suggests there is a positive effect of integrated reporting and short-term financial performance. Hypothesis 1a is therefore accepted and hypothesis 1b is rejected.

This positive relation between integrated reporting and financial performance was found in previous research by Lee and Yeo (2016) and Barth et al. (2017), who find a positive relation between the quality of an integrated report and firm valuation. Where previous literature was inconclusive about the relation between short-term financial performance and integrated reporting, this research contributes to the results found by Lee and Yeo (2016) and McGuire et al. (1988), suggesting that there is a positive relation between integrated reporting and short-term financial performance.

Table 3: Results hypothesis 1

Financial performance		
	1a Tobin's Q	1b ROA
IR	0.220* (2.1)	0.00359 (0.61)
<i>Predicted sign</i>	+	+/-
SIZE	-0.248*** (-7.91)	-0.00786*** (-3.47)
GROWTH	0.178 (1.46)	0.0385*** (4.7)
LEVERAGE	-1.908*** (-5.72)	-0.0293 (-1.24)
Industry	included	included
_cons	6.850*** (8.73)	0.221*** (3.98)
Observations	196	196
adj. R-sq	0.445	0.179

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

4.3.2 Results hypothesis 2

Table 4 presents the results of hypothesis 2. Hypothesis 2 consists of part a, arguing that long-term orientation has a positive influence on long-term financial performance, Tobin's Q, and part b, arguing that long-term orientation has a negative effect on short-term financial performance, ROA.

A positive and significant relation is found between long-term orientation and long-term financial performance, Tobin's Q. This is in line with hypothesis 2a and the hypothesis is therefore accepted, stating that long-term orientation has a positive influence on long-term financial performance.

Table 4 also shows a positive coefficient between long-term orientation and short-term financial performance. This result is opposite to hypothesis 2b and the hypothesis is therefore rejected. However, the result is not significant, meaning that no conclusions can be made.

The positive relation between long-term orientation and short-term financial performance can be explained by the statement that people oriented towards the long term, have a strong tendency to save and that they have a strong tendency for thriftiness (García-Sánchez et al., 2013). Even though this statement might look contrary to the statement that long-term oriented societies want to invest, there can be argued that their investments will be overthought well. Meaning that investments are not only done in the short-term, but spread over a longer period, leading to a positive short-term financial performance. Long-term orientation is characterized by preparations for the future (Hofstede, 2019) and has an influence on the planning process (Howlett, Kees, & Kemp, 2008). If the planning processes are better, the company has a better performance (Bracker & Pearson, 1986). Van der Stede (2000) argues that if slack is removed, which can be seen as having a tighter planning process, it improves the short-term performance. This indicates that if there is a long-term vision, and the planning process is good, this can result in short-term financial profits.

Table 4: Results hypothesis 2

Financial performance		
	2a Tobin's Q	2b ROA
D_LTO	0.245* (2.24)	0.00765 (1)
<i>Predicted sign</i>	+	-
SIZE	-0.268*** (-7.58)	-0.00859*** (-3.60)
GROWTH	0.177 (1.69)	0.0387*** (4.93)
LEVERAGE	-1.767*** (-5.32)	-0.0261 (-1.09)
Industry	included	included
_cons	7.197*** (8.71)	0.234*** (4.1)
Observations	196	196
adj. R-sq	0.449	0.183

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

4.3.3 Results hypothesis 3

Table 5 shows the results of the third hypothesis. The third hypothesis tests if there is a mediation effect between IR and long-term orientation. There is expected that IR mediates the effect of long-term orientation on financial performance, where long-term orientation has a positive association with the voluntary application of IR, resulting in better long-term financial performance.

Three regressions have to be made to identify the possible mediation effect of culture on integrated reporting. The first regression shows the effect of long-term orientation on integrated reporting. This relation is presented in table 5a. To confirm the mediation effect, the coefficient of long-term orientation should be significant. The tables shows a positive effect of long-term orientation on integrated reporting, but the coefficient of LTO is not significant.

The second regression shows the effect of culture on financial performance. This step is tested with hypothesis 2, which is shown in table 4. The coefficient in this case should be significant. Table 4 shows that the effect of culture on short-term financial performance is positive, but not significant. The effect of culture on long-term financial performance is positive and significant.

The third regression in table 5b shows the effect of both long-term orientation and integrated reporting on financial performance. The coefficient of long-term orientation should be significant and to identify a mediation effect, the effect of long-term orientation on financial performance in the third regression should be less, in absolute terms, than the effect of long-term orientation on financial performance in the second regression.

The effects of long-term orientation and integrated reporting on short-term financial performance are positive, but not significant. The effects of long-term orientation and integrated reporting on long-term financial performance show positive and significant results. The coefficient of long-term orientation in table 5b is less than the coefficient of long-term orientation in table 4. This could indicate that part of the effect of integrated reporting on financial performance is due to the culture of a country. Although the results are in line with the expectations, due to insignificant results, a mediation effect cannot be confirmed. This means that hypothesis 3a and 3b are both rejected.

Because there is expected that the independent variable causes the mediator, the two variables should be correlated too. This effect should be visible in the correlation matrix in table 2. As table 2 shows, there is no correlation between long-term orientation and integrated reporting, which indicates there is no mediation effect.

The positive and significant result of long-term orientation on long-term financial performance indicates a complementary effect. This effect is tested in hypothesis 4.

Table 5a: Mediation model; Long-term orientation on integrated reporting

Integrated Reporting	
	IR
D_LTO	0.0329 (0.50)
<i>Predicted sign</i>	+
Observations	196
adj. R-sq	-0.004

t statistics in parentheses

Significance: * p<0.05, ** p<0.01,

*** p<0.001

Table 5b: Mediation model; long-term orientation and integrated reporting on

Financial performance		
	1 Tobin's Q	2 ROA
IR	0.217* (2.11)	0.00347 (0.59)
<i>Predicted sign</i>	+	+
D_LTO	0.242* (2.24)	0.0076 (0.99)
<i>Predicted sign</i>	+	+
SIZE	-0.275*** (-7.99)	-0.00870*** (-3.70)
GROWTH	0.191 (1.76)	0.0390*** (4.86)
LEVERAGE	-1.842*** (-5.41)	-0.0273 (-1.14)
Industry	included	included
_cons	7.305*** (9.01)	0.236*** (4.17)
Observations	196	196
adj. R-sq	0.458	0.179

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

4.3.4 Results hypothesis 4

Table 6 shows the results of hypothesis 4. Hypothesis 4 predicts the possibility for a complementary or substitution effect between long-term orientation and integrated reporting on financial performance. To confirm a complementary effect between IR and more long-term oriented countries (IR*D_LTO), the interaction term should be positive and significant. If the interaction term is negative and significant, there is a substitution effect.

Based on the results in table 6, the positive coefficient of IR*D_LTO on Tobin's Q might indicate a complementary effect and the negative coefficient of IR*D_LTO on ROA might indicate a substitution effect. The positive coefficient of IR*D_LTO on long-term financial performance and the negative coefficient of short-term financial performance indicate that integrated reporting is too expensive in the short run, but that it is beneficial in the longer run (Wang & Bansal, 2012). However, no significant relations are shown between the interaction term and long- and short-term financial performance. This means there is no moderation effect in this research. Hypotheses 4a and 4b are therefore rejected.

The absence of significant relations might be due to the limited size of the dataset.

Table 6: results hypothesis 4

Financial performance		
	1 Tobin's Q	2 ROA
IR	0.164 (1.06)	0.013 (1.41)
D_LTO	0.207 (1.61)	0.0139 (1.32)
IR*D_LTO	0.101 (0.43)	-0.0181 (-1.25)
<i>Predicted sign</i>	<i>+</i>	<i>+/-</i>
SIZE	-0.272*** (-7.78)	-0.00929*** (-3.80)
GROWTH	0.191 (1.72)	0.0391*** (5.04)
LEVERAGE	-1.847*** (-5.43)	-0.0263 (-1.10)
Industry	included	included
_cons	-1.847*** (-5.43)	-0.0263 (-1.10)
Observations	196	196
adj. R-sq	0.456	0.181

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

4.4 Robustness check

This section explains the two robustness checks that are done. The first robustness check investigates the effect of another cultural dimension of Hofstede (1980), femininity, on integrated reporting and short- and long-term financial performance.

The second robustness check looks into the different reporting standards and measures that can be used for sustainability reporting and the effects of them on financial performance.

These robustness checks are exploratory and are aimed to make suggestions for further research.

4.4.1 Femininity, operationalization

Another cultural dimension of Hofstede (1980) that can be of influence on integrated reporting is femininity. Where the original cultural dimension is based on masculinity, this research looks at more feminine countries.

Feminine countries take care of the weak in society and think that a good quality of life is important, where masculine countries are more competitive and driven by success (Hofstede, 2019).

The mean of the cultural dimension is calculated and there is stated if a country is located above the median split or below the median split of the dimension, using dummy variables. The use of dummy variables avoids methodological problems relating to the use of the original Hofstede numerical variables, which are constant for companies located in the same country (García-Sánchez et al., 2013). Operationalization of the femininity dummy:

Femininity (D_FEM) = 1 below the median split and 0 above the median split.

For femininity 1 is taken below the median split, since the original Hofstede (1980) dimension counts for masculinity. A high score on masculinity means that a country is very masculine. Where this research is looking at femininity, the score below the median split is important. Therefore if a country scores low on masculinity, it scores high on femininity, which means that if the score is below the median split, this country scores a 1 for the dummy.

4.4.2 Femininity and financial performance, hypothesis 2

Feminine countries think that achievement and failure are less important, prefer a good quality of the work life and good interpersonal relations (Newman & Nollen, 1996). Economic success in terms of femininity is valued as the interpersonal sensitivity based on the concern for the welfare of others (Pothukuchi et al., 2002). Dezsö and Ross (2012) argue that a high level of femininity has a positive influence on the financial performance. Economic success in terms of masculinity is valued based on the accumulation of material wealth (Pothukuchi et al., 2002). Masculine countries like achievement and dislike failure and prefer high earnings and rewards (Newman & Nollen, 1996). This is also argued by Gray et al. (2015), that if managers are influenced by the high level of masculinity in a country, the focus is on material success and financial achievement. The rewards earned by good work, lead to a higher performance (Newman & Nollen, 1996). This indicates that there is an incentive to strive for a high financial performance in masculine countries, if you get a reward for it (Jansen et al., 2009). But if people are rewarded on a basis of their short-term performances, people will act towards this short-term approach to receive the higher reward. Acting toward the short-term performance can be conflicting to the long-term objectives of the company (Falck & Heblich, 2007). Where masculine companies act more towards short-term performance, the short-term performance of these companies is expected to be higher. The short-term performance of feminine countries is therefore expected to be lower and the long-term financial performance is expected to be higher.

This leads to the following hypotheses:

H2c: Femininity has a positive influence on long-term financial performance.

H2d: Femininity has a negative influence on short-term financial performance.

4.4.3 Femininity, integrated reporting and financial performance, the mediation effect

As explained in section 2.4.1, research shows that feminine countries publish more integrated reports than masculine countries (García-Sánchez et al., 2013). Femininity is positively associated with CSR models (Fernandez-Feijoo et al., 2011) and the level of femininity of a country has a positive influence on the number of sustainability reports that are published in a country (Gallén & Peraita, 2017). Masculine countries like to get a reward when the financial performance is high (García-Sánchez et al., 2013), have a lower level of social and environmental performance (Ringov & Zollo, 2007) and therefore the publication of economic reports is preferred, meaning that there will be less focus on publishing CSR reports or integrated reports. As ethical behavior is a characteristic of a feminine culture, integrated reporting can be a mediator on the long-term financial performance. Therefore there is expected that more integrated reports are published in feminine countries.

Integrated reporting acts as a mediator between the effect of culture and financial performance, where there is expected that feminine countries publish more integrated reports.

The following hypotheses are stated:

H3c: Integrated reporting mediates the effect of culture (femininity) on long-term financial performance.

H3d: Integrated reporting mediates the effect of culture (femininity) on short-term financial performance.

4.4.4 Femininity, integrated reporting and financial performance, the moderation effect

As explained in section 2.4.2, culture can play a role in the relation between integrated reporting and financial performance and that culture moderates the relation between integrated reporting and financial performance. There is expected that more feminine countries publish more integrated reports (García-Sánchez et al., 2013) and that feminine countries give more value to ethical behavior, as stated by Maniora¹ (2017). Where femininity has a positive influence on the financial performance (Dezsö & Ross, 2012), a complementary effect is expected between the effect of publishing an integrated report on the financial performance in more feminine countries. The hypotheses become then:

H4c: Femininity and integrated reporting complement in explaining long-term financial performance.

H4d: Femininity and integrated reporting complement (substitute) in explaining short-term financial performance.

To confirm a complementary effect between IR and more feminine countries ($IR \cdot D_FEM$), these interaction terms should be positive and significant. If the interaction term is negative and significant, there is a substitution effect.

4.4.5 Results of femininity

Table 7 shows the results of the hypotheses as explained in sections 4.4.2, 4.4.3 and 4.4.4. The table shows a negative, not significant, relation between femininity and long-term financial performance and a negative, not significant, relation of femininity and short-term financial performance. This is

¹ "Internalizing new ethical norms can be initiated by more ethical reporting practices and can foster ethical management and business practices" (Maniora, 2017 pp. 783)

visible in the models 1 and 2 of table 7. With these results, hypothesis 2c is rejected and hypothesis 2d is accepted.

The negative relation of femininity on long-term financial performance can be explained by the statement that in feminine cultures it is not admired to stand out from the crowd (Hofstede, 2019), where economic success is based on a good value of life (Pothukuchi et al., 2002) and where there is less value placed on economic growth (Michels et al., 2019)

The results of hypotheses 3c and 3d are shown in table 7 and in table 8. To test for the mediation effect three steps have to be taken. The first regression is the effect of femininity on integrated reporting. This result is visible in table 8. The table shows a positive, but not significant result. The second regression is the of femininity on financial performance, which is the same as hypothesis 2. This step is tested in table 7, in models 1 and 2. Table 7 shows a negative result between femininity and long- and short-term financial performance. The possibility for the negative relation between femininity and long-term financial performance, is explained above.

The third regression shows the effect of both femininity and integrated reporting on financial performance, which is visible in the models 3 and 4 of table 8. The coefficient of integrated reporting should be significant and to identify a mediation effect, the effect of femininity on financial performance in the third regression (table 7, models 3 and 4) should be less, in absolute terms, than the effect of femininity on financial performance in the second regression (table 7, models 1 and 2). The results show a significant result of integrated reporting on Tobin's Q and no significant result on ROA. The result of femininity on financial performance in the last regression is not smaller than in the second regression. This means there is no mediation effect in this research. Hypothesis 3c and 3d are both rejected.

Because there is expected that the independent variable causes the mediator, the two variables should be correlated too. This effect should be visible in the correlation matrix in table 2. As table 2 shows, there is no correlation between long-term orientation and integrated reporting, which indicates there is no mediation effect.

The results of hypotheses 4c and 4d about the moderation effect between femininity, integrated reporting and financial performance are shown in models 5 and 6 of table 7. No significant relations are found between the interaction terms of integrated reporting and long- and short-term financial performance. This means there is no moderation effect between femininity, integrated reporting and long- and short-term financial performance. Hypotheses 4c and 4d are rejected.

The negative signs of the interaction terms IR*D_FEM on long- and short- term financial performance might indicate a substitution effect.

The absence of significant relations may be due to the limited size of the dataset.

Table 7: Results of femininity on financial performance, of the mediation effect and of the moderation effect

	Financial performance		Mediation effect		Moderation effect	
	1 Tobin's Q	2 ROA	3 Tobin's Q	4 ROA	5 Tobin's Q	6 ROA
D_FEM	-0.107 (-0.96)	-0.00206 (-0.27)	-0.13 (-1.18)	-0.00243 (-0.32)	-0.0377 (-0.31)	-0.00214 (-0.22)
<i>Predicted sign</i>	+	-	+	+		
IR			0.233* (2.22)	0.00383 (0.64)	0.387* (2.3)	0.0043 (0.44)
<i>Predicted sign</i>			+	+		
IR*D_FEM					-0.296 (-1.29)	-0.000918 (-0.07)
<i>Predicted sign</i>					+/-	+
SIZE	-0.253*** (-7.50)	-0.00796** (-3.25)	-0.263*** (-8.16)	-0.00813*** (-3.38)	-0.259*** (-8.19)	-0.00812*** (-3.38)
GROWTH	0.148 (1.22)	0.0380*** (4.56)	0.16 (1.27)	0.0382*** (4.5)	0.171 (1.36)	0.0382*** (4.48)
LEVERAGE	-1.849*** (-5.56)	-0.0284 (-1.20)	-1.932*** (-5.66)	-0.0298 (-1.25)	-1.901*** (-5.68)	-0.0297 (-1.25)
Industry _cons	included 7.114*** (8.07)	included 0.227*** (3.6)	included 7.318*** (8.6)	included 0.230*** (3.7)	included -1.901*** (-5.68)	included -0.0297 (-1.25)
Observations	196	196	196	196	196	196
R-sq	0.468	0.225	0.481	0.226	0.486	0.226
adj. R-sq	0.436	0.179	0.447	0.175	0.449	0.171

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

Table 8: Mediation model; Femininity on integrated reporting

Integrated Reporting	
	IR
D_FEM	0.0204 (0.31)
<i>Predicted sign</i>	+
Observations	196
adj. R-sq	-0.005

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

4.4.6 Different measures and accounting standards for integrated reporting and CSR reporting

There is also looked at different reporting principles or methods a company can use instead of, or in combination with integrated reporting. No hypotheses are stated for these reporting principles.

Table 9 presents the individual CSR reporting standards and options companies can take. This is shown in the models 1 till 5 of ROA and the models 1 till 5 of Tobin's Q. Instead of publishing an integrated report, companies can publish a separate CSR report (CSR separate), or they can publish their CSR information within the annual report (CSR annual). GRI are the standards of the Global Reporting Initiative (GRI, 2019), IIRC are the standards set up by the Integrated Reporting Council (IIRC, 2013a). A company can publish an integrated report or CSR report following the GRI standards, the IIRC standards, a combination of both, or no standards at all.

Where the overall assumption is that CSR publications and integrated reporting have a positive influence on financial performance, table 9 shows conflicting results. The effect of publishing according to the GRI and IIRC standards and the publication of a separate CSR reports have a positive effect on short-term financial performance. This is in line with the expectation that the publication of CSR information or an integrated report has a positive influence on financial performance. The use of GRI standards together with the IIRC standards and the publication of CSR information within the annual reports are negatively related to short-term financial performance. However, the results are not significant, so no conclusions can be made.

When there is looked at long-term financial performance, we see negative relations between the accounting standards and accounting options. This is contrary to the expectations. However, the results are insignificant, so no conclusions can be made, except for the negative relation between GRI and long-term financial performance.

The negative, significant result of GRI on long-term financial performance can be explained by the statement that separate sustainability reports are not connected to the financial information of a company (Hoque, 2017), where integrated reports connect and integrate the sustainability information with the financial information (IIRC, 2013a). Where integrated reporting shows to have a positive effect on long-term financial performance, the missing connection between GRI standards and long-term financial performance can explain why negative results are shown.

That publishing according to the GRI standards on the long run has a negative sign, can also be due to the fact that the quality of a report is important. This result indicates that only publishing according to the GRI standards is insufficient and that more is needed to positively influence the long-term financial performance. Individual CSR reports are mostly not audited by an external auditor and can be used as advertising or "greenwashing" (Wang & Bansal, 2012). Where integrated reports are mostly audited, this advertising mechanism is less likely. This indicates that the quality of a reports is also important and that just using the reporting standards is insufficient. The same argument is made by Lee and Yeo (2016), stating that a better disclosure quality leads to a better information environment, which results in a higher market valuation. Where Tobin's Q captures the market valuation, there can be argued that if the quality of a report is insufficient, this is reflected in the market valuation by stakeholder, leading to a lower long-term financial performance.

Figure 9: Different accounting standards for IR and CSR reporting

Financial performance										
	1	2	3	4	5	1	2	3	4	5
	ROA	ROA	ROA	ROA	ROA	Tobin's Q	Tobin's Q	Tobin's Q	Tobin's Q	Tobin's Q
GRI	0.000567 (0.04)					-0.464** (-3.25)				
IIRC		0.000625 (0.11)					-0.0596 (-0.57)			
GRI + IIRC			-0.0017 (-0.30)					-0.117 (-1.26)		
CSR separate				0.00452 (0.64)					-0.0625 (-0.62)	
CSR annual					-0.00834 (-0.88)					-0.202 (-1.88)
SIZE	-0.00777*** (-3.38)	-0.00776*** (-3.37)	-0.00772** (-3.34)	-0.00785*** (-3.40)	-0.00805*** (-3.59)	-0.219*** (-7.31)	-0.240*** (-7.34)	-0.239*** (-7.30)	-0.240*** (-7.14)	-0.249*** (-7.75)
GROWTH	0.0383*** (4.79)	0.0383*** (4.73)	0.0382*** (4.74)	0.0380*** (4.74)	0.0393*** (4.98)	0.202 (1.84)	0.16 (1.36)	0.157 (1.34)	0.167 (1.36)	0.187 (1.73)
LEVERAGE	-0.0282 (-1.22)	-0.0282 (-1.20)	-0.0278 (-1.19)	-0.0262 (-1.09)	-0.0276 (-1.17)	-1.787*** (-5.60)	-1.823*** (-5.61)	-1.810*** (-5.61)	-1.858*** (-5.62)	-1.821*** (-5.60)
Industry	included	included	included	included	included	included	included	included	included	included
_cons	0.220*** (3.91)	0.220*** (3.92)	0.219*** (3.89)	0.218*** (3.88)	0.227*** (4.15)	6.660*** (8.93)	6.698*** (8.31)	6.679*** (8.26)	6.748*** (8.39)	6.905*** (8.65)
Observations	196	196	196	196	196	196	196	196	196	196
adj. R-sq	0.178	0.178	0.179	0.18	0.182	0.465	0.434	0.435	0.434	0.441

t statistics in parentheses

Significance: * p<0.05, ** p<0.01, *** p<0.001

5. Conclusion

This research investigates the influence of integrated reporting on long- and short-term financial performance. The mediation effect of integrated reporting on the relationship between long-term orientation and long- and short-term financial performance is measured. The moderation effect of long-term orientation on the relationship between integrated reporting and long- and short-term financial performance is also investigated. Long-term orientation is measured as Tobin's Q and short-term orientation is measured as Return on Assets (ROA). Integrated reporting is measured as a dummy variable and checks whether a company publishes an integrated report yes or no. Long-term orientation is measured using the Hofstede (1980) indexes.

This section answers the research question:

“What is the influence of long-term orientation and integrated reporting on financial performance?”

Eight hypotheses are formulated to answer the research question. A positive relation between integrated reporting and long-term financial performance is expected, since the benefits of integrated reporting in the long run exceed the costs in the short run. Using data from four countries (i.e. Germany, Finland, Spain and The Netherlands), results show that integrated reporting has a positive and significant effect on long-term financial performance. The research also shows a positive effect between integrated reporting and short-term financial performance. This result cannot be confirmed, since the result is not significant.

A positive relation between long-term orientation and long-term financial performance and a negative relation between long-term orientation and short-term financial performance is expected. The results show a positive and significant relation between long-term orientation and long-term financial performance, Tobin's Q. This result is in line with prior research and the hypothesis is therefore accepted. The results also show a positive result between long-term orientation and short-term financial performance. However, this result is not significant. The result is also contrary to the hypothesis. The positive relation between long-term orientation and ROA can be explained by the statement that long-term oriented societies have a tendency to save and invest (García-Sánchez et al., 2013). This could indicate that investments are overthought well and spread over a longer period, leading to a positive financial performance in the short run. The planning process can also be of importance.

There is expected that integrated reporting positively mediates the relation between long-term orientation and financial performance. The effect of integrated reporting and long-term orientation on long-term financial performance indicates there is a mediation effect, but since the effect of long-term orientation on integrated reporting is not significant, this result cannot be confirmed. The results show no significant relation on short-term financial performance, which means there is no mediation effect here.

The last finding is about the moderation effect of culture. The results show a positive relation between the interaction term of integrated reporting and long-term financial performance. This indicates a complementary effect. However, the result is not significant, which means there is no moderation effect can be confirmed. The negative effect of the interaction term on short-term financial performance indicates a substitution effect. However, this result is not significant and no moderation effect can be confirmed.

The positive coefficient of $IR \cdot D_LTO$ on long-term financial performance and the negative coefficient short-term financial performance indicates that integrated reporting is too expensive in the short run, but that it is beneficial in the longer run (Wang & Bansal, 2012).

The robustness check tests for another cultural dimension that could be of influence on the relation between integrated reporting and financial performance, femininity. Because of insignificant results, the influence of femininity cannot be confirmed.

The influence of different accounting principles on financial performance is also tested in the robustness check. The results show a negative and significant result of GRI standards and long-term financial performance. This negative result can be due to the fact that the quality of a report is also important and that the publication of an integrated report or sustainability report is not sufficient (Wang & Bansal, 2012). The missing connection between the reporting standards and the financial information can also explain the negative result.

Despite these result, this study comes with several limitations which may provide fruitful areas for future research. The first limitation is that the dataset has a small number of observations, 196, out of only four European countries. Further research can extend the dataset and use more countries or more observations per country. A second limitation is that the study is limited to only one year, 2017. By using only one year, trends cannot be corrected and one-time events can influence the results. A panel-data analysis concerning more than one year, can overcome this potential problem. The third limitation is that the cultural dimension long-term orientation is acquired using the Hofstede (1980) indexes. Where the four original cultural dimension are dated from 1980 and long-term orientation is added later in 1991, there can still be argued that the dimension is old and can be out of date (Michels et al., 2019). Last limitation is that most of the data on the interpretation if a company published an integrated report was “self-reported” en not based on a checklist or specificatin an integrated report should agree to. This self-constructed score has the disadvantage that it is difficult to replicate (Lee & Yeo, 2016). Further research should report in detail why an annual report is an integrated report, since this removes the possibility of free interpretation of the researcher.

The insignificant results can be due the limited dataset of this research. This gives options for future research to investigates the relation between the mediation and moderation effect of culture, integrated reporting and long- and short-term financial performance. Future research can also dig deeper into the different accounting measures for sustainability information and the effect of it on long- and short-term financial performance.

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