



Article

# Why Do Firms in Emerging Markets Report? A Stakeholder Theory Approach to Study the Determinants of Non-Financial Disclosure in Latin America

Ignacio J. Duran 1,\* and Pablo Rodrigo 2 and Pablo Rodrigo 2

- Institute for Social Innovation, ESADE Business School Ramon Llull University, Av. Torre Blanca 59, Sant Cugat del Vallès, 08172 Barcelona, Spain
- Strategy Department, Escuela de Negocios, Universidad Adolfo Ibáñez, Av. Padre Hurtado 750, Viña del Mar 2562340, Chile; prodrigo@uai.cl
- \* Correspondence: ignacio.duran@alumni.esade.edu

Received: 13 August 2018; Accepted: 28 August 2018; Published: 31 August 2018



Abstract: Even though literature studying the determinants of non-financial disclosure (NFD) is pervasive, Latin America has been overlooked in this tradition. In this sense, scholars have not evidenced which factors compel companies in this context to report this information despite its voluntary nature. Drawing on Stakeholder Theory as a basis, we derive eight possible antecedents of NFD from extant literature and test them in a sample of 643 Latin American firms for a 10 year span (2006–2015). Using a logit panel model, our evidence indicates that firm size, market-to-book ratio, systematic risk, and industry membership are factors that pressure companies to report. However, contrary to our conceptual development we find that profitability and regulatory quality inversely affects NFD. This leads us to posit that Latin America is unique in terms of reporting because agency costs may arise when disclosing data and also that feeble regulations could summon firms to fill this void through NFD. We thus contribute to this strand by revealing that stakeholders in this milieu are essentially different than in developed countries, and therefore the underlying reasons to engage in NFD also differ.

**Keywords:** determinants; Latin America; logit panel regression analysis; non-financial disclosure; Stakeholder Theory

#### 1. Introduction

The strand studying the determinants of non-financial disclosure (NFD) has greatly evolved in the past decades [1–3]. Even though Haller et al. [4] evidence that there is no unique understanding of NFD, as it has been conceived and interpreted differently throughout the years, they propose that this type of information usually encompasses revealing non-monetary aspects of companies. For instance, it could refer to 'integrated reporting' or to the European Union's 'directive 2014/95/EU'. Within these various conceptualizations, scholars have oftentimes studied what causes corporations to disclose reports that specifically focus on environmental, social, and governance (ESG) data that communicates how firms address stakeholders' concerns [5,6]. Although literature has utilized several labels to refer to these type of publications—for instance, 'corporate social responsibility reports' or 'sustainability-related reports' (see [1,3])—following Skouloudis et al. [7] in this article we regard NFD as companies' annual reports containing ESG-related information for different parties, for example in terms of energy use, pollution, biodiversity, employees' safety/health, gender equality, education, among other issues [8].

Sustainability **2018**, *10*, 3111 2 of 20

Scholars conceive at least three main reasons to investigate what compels firms to engage in NFD. First, from a managerial stance, it seems a first step to better firms' ESG performance [9], given that executives can use this information to assess the entity's impact [10] and as a basis for stakeholder dialogue to subsequently reduce adverse outcomes [11–13]. In this sense, according to Manes-Rossi et al. [8] it could represent a way of showing that firm operations are within societal boundaries, and hence that their activities are legitimate. Second, public policy makers have interest in NFD because it enhances corporate transparency [14]: this way, governmental entities can more easily oversee the impact that corporations have on society and hold them accountable if necessary [15]. Third, scholars can gain insight into this complex decision-making process and how it shifts in time and across different contexts [2,16]. These points reflect the multifaceted importance of NFD, justifying the urgency to delve into its determinants (for a list of secondary reasons, see Kolk [17]).

Despite the prolificness and relevance of this tradition, conclusions are entirely based on developed settings, with a particular focus on Australia [18,19], Germany [20,21], Spain [12,22], the United Kingdom [9,23], and the United States [10,24]. In fact, Ali et al.'s [1] literature review endorses this idea, indicating that this strain has constantly neglected emerging markets. These authors argue that developing contexts are under-theorized: scholars have not yet pinpointed the conceptual reasons why companies in these milieus issue NFD in spite of their voluntary nature. Notwithstanding some precursory investigations (e.g., [25–27]), no clear consensus exists regarding this phenomenon in emerging markets. We thus lack insight concerning what compels firms to improve their impact assessment and accountability by disclosing ESG information.

Given this gap, by using Stakeholder Theory as an overarching framework [28], this article's purpose is first to conceptualize, and then test some key NFD determinants in an emerging market context. (We realize that other rationales have been proposed as well, for example, Legitimacy Theory (e.g., [6]) and Positive Accounting Theory (e.g., [21]). However, all other frameworks seem to stem or greatly relate to Stakeholder Theory (see [11,26,29])). The main underlying argument from this approach has been that firms publish ESG reports as a response to the more powerful information-seeking stakeholders they face. From a theoretical lens, this poses a challenge given that literature has upheld that major stakeholder differences exist between developed and developing countries due to institutional, historical, market, professional, and other conditions [30,31]. Therefore, we cannot necessarily extend this tradition's received wisdom to emerging markets, as parties in these settings are bound to affect differently firms' decision to release ESG reports.

For this reason, our main contribution is providing a deeper analysis to unveil why corporations in a developing context are pressured to initiate NFD. A secondary contribution is that we follow recent methodological trends and use a longitudinal approach [32] to reflect the underlying dynamics of this phenomenon. As a case in point, we focus on Latin America (LatAm) for two main reasons. First, from a practical lens, because it is an emerging region where grave socio-environmental problems persist, such as poverty and pollution [33,34], and thus there seems to be a greater need to compel firms to undertake NFD in order to inform and hold them accountable for their ESG impacts [35,36]. Second, from an academic viewpoint, the largest gap is in LatAm because only seven works exist on the matter [37–43], yet they are descriptive and/or show cross-sectional results, implying that these studies fail to capture the underlying complexity of companies' decision to report, and also overlook the evolution of stakeholder motives to demand NFD.

To achieve our goal and fill these voids, from our literature review we posit that the eight most studied determinants of NFD that stem from Stakeholder Theory may also influence Latin American firms, although in their own way. Confirming that relevant differences exist between developed and emerging markets, our findings do not always conceptually and empirically coincide with the extant consensuses. Hence, our evidence provides a promising start for scholars who wish to continue researching NFD determinants in developing countries.

Sustainability **2018**, *10*, 3111 3 of 20

#### 2. Theory and Hypotheses Development

#### 2.1. Stakeholder Theory and Non-Financial Disclosure

Stakeholder Theory has been the primary theoretical framework in NFD determinants literature: formally incorporated by Roberts [13], it continues a dominant rationale in this tradition (e.g., [23,24,44]). This theory's central tenet is that firms are naturally linked to various groups that have interests and/or are affected by organizations' activities, and managers need to somehow address their concerns and demands in order to create value and achieve long-term survival [28].

Concerning this, in the past thirty years stakeholders have increasingly urged firms to disclose information concerning ESG aspects of their operations [1] to discern how companies impact society and the environment, and if necessary to hold them accountable for any negative effects [6]. A way in which corporations often respond to these pressures and try to build meaningful relationships with stakeholders is through NFD, which generally takes the form of standalone annual reports that communicate firms' ESG performance [11,14]. According to Reverte [12] and Sierra-García et al. [45], through this practice companies convey their attempts to address non-financial concerns that constituent groups have, thus satisfying informational needs of stakeholders.

However, stakeholders' ability to scrutinize and pressure firms is heterogeneous [28]. Concerning NFD, scholars argue that managers are selective when incorporating stakeholder concerns into their accounting processes, and usually prioritize the demands of the more powerful parties [29,46]. Hence, consistent with arguments from stakeholder salience analysis [47,48], the motivation to engage in this activity—and the resulting ESG information that will be included in these reports—seems to be a function of the 'stakeholders' power' over a certain firm [11,15].

Liu and Anbumozhi [26] hint that companies are pressured to satisfy informational needs through NFD given that stakeholders possess at least one of two power sources. The first one stems from controlling resources that are vital for firms' operations (e.g., creditors lend money) and disclosing ESG information could somehow facilitate obtaining these assets [13,29,44]. The second source derives from the ability to affect value creation—for instance, through riots, boycotts, or fines—and publishing non-financial information constitutes a means in which to persuade groups (e.g., consumers or governments) that a company is being responsible and thus should not be disciplined [12,23,24]. Therefore, drawing on the classical power typology used in stakeholder analysis [47,48], power sources that compel firms to engage in NFD can be 'utilitarian' (based on material or financial resources) and/or 'coercive' (based on force or restraint), and depending on how these means are configured, stakeholders' capability of pressing companies into preparing ESG reports varies. (We are aware that stakeholder salience analysis also recognizes a third power source: 'normative', which comes from symbolic resources. However, literature in this tradition so far has not delved yet in this construct to explain how stakeholders pressure companies into disclosing non-financial information).

From this conceptual basis, we posit that the eight main determinants stemming from Stakeholder Theory may be triggering NFD in LatAm. Although we derive these factors from extant literature, in each case we conceptualize how they might affect Latin American companies in their own particular way. Concretely, the determinants we propose are: firm size, profitability, leverage, degree of internationalization, market-to-book ratio, systematic risk, industry membership, and regulatory quality. Each of these factors proxies that certain stakeholders—or a group of them—might be pressuring corporations in LatAm to divulge NFD by means of their coercive and/or utilitarian power. (Even though stakeholder salience analysis [47,48] has considered 'power', 'legitimacy', and 'urgency' as the most important variables to assess and prioritize stakeholders, consistent with our theoretical framing (Stakeholder Theory) we deliberately focus only on power-related determinants of NFD. While other works that have used Legitimacy Theory as a conceptual basis have centered on legitimacy-related factors (e.g., [14]), this tradition so far has not deemed urgency as a valid grounding). For the sake of clarity and completeness, in Appendix A we summarize these determinants and offer a brief explanation—with supporting articles—to describe how scholars so far have conceptualized

Sustainability **2018**, *10*, 3111 4 of 20

these variables' impact on NFD. In the next sections we develop them further and hypothesize their influence in Latin American companies.

#### 2.2. Stakeholder Theory and Non-Financial Disclosure in Emerging Markets

It has been vastly documented that stakeholder differences are particularly salient between developed and developing markets [31], requiring firms in emerging markets to build new sets of resources and capabilities for an effective stakeholder management [49,50]. Therefore, our view is that the determinants of NFD mentioned in the previous section and in Appendix A could be influencing firms in LatAm, but that the underlying conceptual reasons differ.

To explain and conceptualize this issue, recently Jamali et al. [30] recently provided a detailed account of how contextual differences in emerging markets shape firms' behaviors. The typology of these above authors posits six dimensions that explain why stakeholders could be innately distinct in contrast to the developed world: 'state', governments operate under more complex or corrupt schemes; 'market', stakeholders tend to have negative views on capitalism, yet expect firms to fulfill social needs; 'corporations', oftentimes they are criticized because groups deem them too powerful; 'professions', managers do not always have a sufficient background to begin responsible practices; 'family', clan-based lifestyles affect stakeholder expectations and decisions; and 'religion', diversity in terms of worship also could shape groups' actions. These attributes have led scholars to argue that emerging markets are a separate field of study in socio-environmental terms [31,51], reaffirming our claim that extant conclusions based on Stakeholder Theory concerning NFD determinants in developed countries cannot be necessarily assumed true and valid in emerging markets.

In fact, incipient evidence from Asian nations has shown significant differences from developed settings. For instance, Liu and Anbumozhi [26] argue that the centralized and stringent character of the Chinese state makes it a key stakeholder that compels companies to disclose non-financial reports, and their evidence actually suggests a positive association between regulatory quality and NFD. Muttakin and Khan [27] conjecture that because Bangladesh is the second largest exporter of clothes in the world, then international-oriented companies are more bound to disclose non-financial reports to global stakeholders. They indeed evidence a positive link between internationalization and NFD. Finally, although they do not test this assertion, Kansal et al. [25] recognize that the Indian family-centered management style could affect NFD.

These three articles uphold our claim based on Jamali et al. [30] that unique attributes from emerging markets could affect NFD. In these cases, 'state', 'market', and 'family' related reasons, respectively, are variables that influence companies' disclosure of non-financial reports.

#### 2.3. Stakeholder Theory and Non-financial Disclosure in Latin America

In the Latin American context only seven studies have been published on the matter, yet these studies have several shortcomings that limit their academic soundness. Concretely, Baskin [33], Logdson et al. [34], and Paul et al. [36] depict general characteristics and trends of reporting in this region, but do not provide a bold theoretical rationale as they do not expose the conceptual reasons why factors pressure firms into NFD. Alonso-Almeida et al. [31] and Meyskens and Paul [41] provide historical narrations of how the issuing of ESG information has evolved in LatAm, and thus the findings of these studies are mostly anecdotic. Finally, Araya [32] and Wendlandt-Amezaga et al. [37] attempt to understand the causes of disclosing non-financial information, yet their studies are based on limited samples (short timeframes and few firms), and consequently their results are precursory at best.

Hence, using the conceptual framework developed from Stakeholder Theory and emerging markets literature, we conceptualize and test eight determinants of NFD (Appendix A) for the Latin American context.

Sustainability **2018**, *10*, 3111 5 of 20

#### 2.3.1. Firm Size

Firm size is the most frequently studied NFD determinant (e.g., [9,10,14,15,17,19,21,23,52]). In general, two main rationales exist: first, larger firms are more visible and thus more prone to be pressured by the general public and stakeholders to exhibit some accountability [11,25,26,53]. Second, they interact with a greater number of groups, such as suppliers or employees [54], implying a stronger dependence and impact in ESG terms than smaller companies [7,27]. Hence, these companies could be motivated to disclose non-financial information in order to show how responsible they are with affected parties [55]. For these reasons, stakeholders are more likely to enforce their coercive and utilitarian power on bigger firms, which has led researchers to posit a positive link between firm size and NFD. Larger enterprises engage in this practice as a response to their heightened exposure and subsequent pressure from influential stakeholders that demand annual reports.

Specifically in LatAm, Fifka's [2] review reveals that firm size has been scantly tested as an antecedent of non-financial data. However, Wendlandt-Amezaga et al. [43] show that larger Mexican and Chilean companies report more, suggesting a positive association with NFD although with no conceptual framework to uphold these findings. However, recently Haslam and Tanimoune [56] argue that firm size is a predictor of corporate-stakeholder conflicts in Latin America. These authors claim that bigger companies are more prone to clash with stakeholders because large-scale projects have salient consequences in socio-environmental terms. Therefore, when exercising their coercive power to demand ESG-related information, for example through rioting or picketing, stakeholders are likely to target larger entities [3,38]. As a consequence, these Latin American firms could respond by engaging in NFD with the goal of showing responsible behaviors and try to avoid conflict with powerful stakeholders. We therefore conjecture that:

**Hypothesis 1.** A positive relationship exists between Latin American firms' size and NFD.

## 2.3.2. Profitability

Literature has ascertained that managers may influence NFD in two ways. First, if they have the skills to achieve superior economic performance, they also may have the ability to manage groups' pressures, including demands for annual reports to satisfy informational needs [7,10,57]. In this scenario, executives are skillful enough to handle multiple responsibility matters, including the disclosing of non-financial information [12]. Second, profitable companies have slack financial resources so that managers can fund the disclosure of ESG data [13,21,44], which seems to be a necessary condition to begin this type of reporting [3,52]. The common denominator of both rationales is that executives seem to depend on their ability to create wealth in order to discretionarily initiate NFD. In this sense, managers can only command the publication of ESG information insofar that they have the utilitarian power to do so, which is a function of financial resources. Hence, past works have generally predicted a positive link between profitability and NFD.

Even though this rationale is based on Stakeholder Theory, it has a connection with Agency Theory because it concerns two stakeholders that have key roles in companies: owners and managers [28]. Concretely, Agency Theory studies the relationship between a principal and an agent (i.e., usually the owner and manager, respectively) where each has its own goals, and it is costly for the principal to verify what the agent is actually doing [58]. In this interplay, agency costs arise because owners have to monitor executives' behaviors to make sure that they act in the organization's long-term best interest, and are not seeking private gain [59,60]. So, if the arguments in the previous paragraph are true, then agency costs are low or non-existent, as managers will be seeking owners' profitability goals, while also balancing this aim with satisfying other stakeholders' demands, in this case, due to the publication of ESG information [61].

Findings from emerging markets are consistent with these rationales and tend to report positive associations (e.g., [3,25,27,55]). Although this variable has never been included in Latin American

Sustainability **2018**, *10*, 3111 6 of 20

studies within this tradition [2], we believe that a positive link also exists in this case. The reason is that researchers have recognized that Latin American executives value the importance of firms' ESG responsibility in order to avoid any problems that could arise and hopefully gain a competitive edge [62,63]. Therefore, our argument is that as slack resources from profit become available, managers in this setting may allocate a portion of these assets to responsible actions such as NFD. In fact, consistent with our claim, Perez-Batres et al. [64] demonstrated that Latin American leaders have been pioneering in voluntarily adopting reporting standards (e.g., Global Reporting Initiative). Therefore, we propose that:

**Hypothesis 2.** A positive relationship exists between Latin American firms' profitability and NFD.

# 2.3.3. Leverage

Creditors may constitute a powerful stakeholder when companies heavily rely on debt [13,52]. In this scenario, reports constitute a way of conveying a solid ESG performance to lenders [10,12,15], who desire this information because it allows for a better screening of companies' risks in non-financial terms, reducing any potential information asymmetries [25,26,55]. In fact, according to Stanny and Ely [53], firms with external financing are more closely monitored by creditors, and consequently more prone to disclose non-financial data. Thus, highly-leveraged companies have the incentive to keep debt-holders' expectations optimistic in ESG terms through NFD because otherwise a greater risk implies a steeper cost of debt [3,24], which could raise financial expenses and/or limit the ability to obtain future loans. Firms then disclose non-financial information as a response to creditors' utilitarian power because financial resources are at play.

Although Latin American studies in this strain have not studied leverage as an antecedent of NFD [2], Sá de Abreu et al. [63] evidence that, despite being an emerging region, LatAm possesses developed financial markets, where companies have vast access to credit. In this context, Céspedes et al. [65] argue that enterprises have the tendency to greatly rely on debt, despite the fact that they lack tax benefits and have higher bankruptcy costs in comparison to developing countries. The reason is that shareholders favor a concentrated ownership to avoid sharing control rights, deliberately increasing the amount of liabilities in their firms' capital structure to precisely avoid new shareholders [66]. This growth in obligations could increase lenders' utilitarian power, implying that highly-leveraged Latin American companies should consider this stakeholder in their NFD to avoid any unwanted outcomes when obtaining money from creditors, such as higher costs of debt or not being able to obtain fresh financial resources [37,50,61]. So, we posit that:

**Hypothesis 3.** A positive relationship exists between Latin American firms' leverage and NFD.

# 2.3.4. Degree of Internationalization

Fortanier et al. [5], Gamerschlag et al. [21], and Muttakin and Khan [27] posit that when companies internationalize they are scrutinized by more stakeholders, particularly foreign governments and multinational buyers. While the former might legally coerce firms—for example, through laws or regulatory bodies—to be more transparent and hence present annual reports [17,67], the latter could boycott products and services that do not have a certain global ESG standard [10,12]. This implies that foreign governments and international customers could have significant levels of coercive and utilitarian power, respectively. Accordingly, as companies increase their exposure to these third parties overseas, they might be more likely to publish NFD to show these two key stakeholders a superior ESG performance. In fact, this argument has been supported by studies from both emerging and developed markets (e.g., [7,22,27,67]).

Sustainability **2018**, *10*, 3111 7 of 20

Latin American evidence concurs with this view: Araya [38] reports that corporations with international sales are up to 4.7 times more likely to report in contrast to counterparts that only sell locally. While surveying Mexican firms, Meyskens and Paul [41] concur with this view, as they find that entities respond to pressure from global stakeholders by publishing non-financial reports. Furthermore, Perez-Batres et al. [64] show that when Latin American companies are exposed to international markets, this raises the chance of reporting to show responsible behaviors to stakeholders worldwide. Following Schmidheiny [68] and Delai and Takahashi [69], the reasoning is that NFD allows firms in LatAm to convey solid ESG performance and show that goods and services are fit to be sold in developed settings such as Europe and the United States, where stakeholders are stricter concerning firm responsibility and accountability. These groups could coerce Latin American companies by boycotting their good/services [3], and NFD could persuade international buyers otherwise. We then propose that:

**Hypothesis 4.** A positive relationship exists between Latin American firms' degree of internationalization and NFD.

#### 2.3.5. Market-to-Book Ratio

Some works have emphasized the importance of market-to-book ratio (MBR) as a relevant determinant because it proxies information asymmetries for investors [24,70]. High levels of this variable might indicate that aspects of firms' operations might be concealed from stakeholders seeking investment opportunities [3,52]. For example, Forte et al. [71] argue that MBR could estimate the aptness of companies' intangible assets, given that markets reward entities for the good quality of their intellectual capital (e.g., knowledge, brands, patents), and this is made evident when their capitalization value positively differs from their accounting book value (i.e., a high MBR exists). Because this scenario entails the existence of information asymmetries, potential investors might demand NFD in order to holistically screen companies and determine if firms have an adequate intellectual capital gauged toward a good ESG performance that could explain the enhanced levels of MBR [61]. Therefore, entities in this case could be prompted to report non-financial information with the goal of revealing to potential investors the actual assets that allow for the actualization of responsible outcomes. In this sense, these possible financers possess a utilitarian type of power because companies depend on these resources, so enterprises have an incentive to report non-financial information to make it easier to obtain these investors' money.

In the case of LatAm, evidence has shown that investors have a harder time compiling information about companies [36,50,65], which might deter the efficiency of investments. According to Khoury et al. [66], weak legal systems in Latin America—where penalties and fines are typically not enforced—usually fail to protect investment decisions. This scenario might lead investors to be proactive and seek other sources of corporate information, and thus be extra cautious when deciding where to invest their money, especially in settings of higher uncertainty due to any information asymmetries that could exist [64]. NFD therefore plays a key role because in LatAm investors may depend even more on ESG data to get a better assessment of corporations. Because money is at play, investors continue to possess a significant level of utilitarian power that could pressure companies in this region to report non-financial information. Hence, we posit that:

**Hypothesis 5.** A positive relationship exists between Latin American firms' MBR and NFD.

# 2.3.6. Systematic Risk

Systematic risk (Beta) is a measure of companies' sensitivity to changes in the market. In this context, authors have argued that when companies have higher Beta levels then stakeholders may have

Sustainability **2018**, *10*, 3111 8 of 20

trouble estimating economic returns [25,57]. In this situation, groups that want to invest in riskier firms might demand ESG to accurately assess these risks [3,18,20]. Hence, generally a positive association is proposed between Beta and NFD. Similar to the prior determinant, investors are the main stakeholder, as they are deciding where to put their resources and thus have a utilitarian power, which explains why they could compel companies to engage in NFD.

Latin American companies face turbulent market conditions and weak institutional frameworks, which usually leads to higher volatility and uncertainty in market returns [34,66]. Consequently, under higher levels of systematic risk, possible investors could be more prone to seek other sources of information to obtain a completer understanding of other risk factors, particularly those related to socio-environmental reasons (e.g., riots or pollution). In this sense, NFD constitutes a way that these stakeholders could assess any potential threats in ESG terms. Actually, consistent with this proposition, in a sample that includes Brazilian companies, Garcia et al. [50] evidence that sectors with a higher Beta rating are generally more prone to report non-financial information to try to reduce any other sources of risk, and hence attract financiers. It is relevant to clarify that although investors are also a key stakeholder in this determinant, reasons differ from the previous variable (MBR). Hence, we posit that:

**Hypothesis 6.** A positive relationship exists between Latin American firms' Beta and NFD.

## 2.3.7. Industry Membership

Literature has evidenced significant differences in reporting across industrial sectors because certain segments are more heavily scrutinized than others given their salient features that heighten their exposure (e.g., [7,9,15,17,52]). For instance, high-impacting industries such as mining, oil, or forestry/paper generally tend to report more due to their negative socio-environmental effects [67]. Concretely, the repercussions in ESG terms of some of these sectors seemingly attract more stakeholder attention, which makes certain companies more likely to engage in NFD given the risk of riots or boycotts [6,12,26,27], implying a high level of coercive power. In this scenario, non-financial reporting would then constitute a way that certain segments utilize to reassure their salient stakeholders, and hence convey a positive image regarding ESG matters [3,16].

Regarding LatAm, industry membership has received some evidence. Araya [38] and Paul et al. [42] indicate that some industries in this region, for example, those that saliently pollute, are subject to higher levels of stakeholder scrutiny. In fact, recent works claim that stakeholders in LatAm evaluate some sectors with a more critical eye because they represent large portions of these nations' gross domestic product [33], yet they pose grave socio-environmental impacts such as community displacements, resource depletion, waste disposal, among others [36,56]. Due to this salience, we believe that certain industries in LatAm are more pressured than others to engage in NFD to convey their responsible efforts [50]. Therefore, we believe that:

**Hypothesis 7.** *In LatAm, significant differences exist across industries regarding NFD.* 

#### 2.3.8. Regulatory Quality

According to extant theory, the rigorousness of local regulatory quality is bound to affect NFD [9,10,13]. The contention is that governments and enforcing bodies may be powerful stakeholders that pressure and discipline companies, and this coercive stance could increase a firm's proclivity to divulge non-financial information to show legal compliance and good ESG performance [1,3,72]. The firm's willingness to provide this information is in order to avoid any retaliation, such as fines or operation bans [17,26]. Consistent with this view, empirical findings show that this variable positively affects NFD (e.g., [13,15,18]).

Sustainability **2018**, *10*, 3111 9 of 20

In LatAm, Araya [38] and Baskin [39] incipiently evidence that stronger government regulation leads to more NFD. This echoes the findings of Rodrigo et al. [33] who report that as institutional quality rises, firms' socio-environmental performance improves, with Chile being perhaps the best example in this specific context [72]. Even though weak regulations mar LatAm, affecting how firms function in these countries [34,66], Barkemeyer et al. [73] argue that corporations have responded to stronger regulatory regimes through NFD. The reason is that it constitutes a credible way to show stringent governments and controlling entities that a firm is not only complying, but also undertaking socio-environmental actions beyond what is required by law [50]. This way, enterprises can avoid coercive actions from the state (e.g., penalties, levies). We then suggest that:

**Hypothesis 8.** A positive relationship exists between regulatory quality and Latin American firms' NFD.

### 3. Methodology

#### 3.1. Data Sources and Sample

Data availability is a serious obstacle in LatAm due to the lack of large, thorough datasets. We thus constructed our sample from public sources in several steps. First, we chose six Latin American nations that according to Perez-Batres et al. [64] and Rodrigo et al. [33] are the ones where NFD is pervasive: Argentina, Brazil, Chile, Colombia, Mexico, and Peru. Second, we accessed the financial information of all companies in these countries that are listed in Bloomberg, with the goal of having the most representative sample possible. This amounted to 1920 firms for a 10 year period (2006–2015). Third, we depurated this database to eliminate duplicated items. Fourth, when Bloomberg did not have the required data, it was extracted from the firm's annual ESG report, their website, and/or financial statements. If we were not able to obtain all necessary information, that particular firm was discarded. Fifth, we cross-referenced the extracted information with the World Bank database to acquire other needed variables.

After this process, the final sample was structured as a balanced panel of 643 firms for the whole 10 year span (Appendix B presents its distribution by country and industry).

#### 3.2. Model and Measures

We utilized a binary outcome (logit) panel data model [32,74]. We used as a basis cross-sectional econometric models from extant literature (e.g., [5,38]), but following Frías-Aceituno et al. [70] we extended them to fit a longitudinal regression analysis with random effects. The benefit of doing this was that it allowed us to control for individual unobserved heterogeneity, given that companies are studied across time. With this guide, we specified the following model (below we explain each term):

$$\begin{split} NFD_{it} = & \beta_1 Assets_{it} + \beta_2 Revenue_{it} + \beta_3 ROA_{it} + \beta_4 ROE_{it} + \beta_5 Leverage_{it} + \beta_6 DegInter_{it} \\ & + \beta_7 MBR_{it} + \beta_8 Beta_{it} + \sum_{j=9}^{17} \beta_j IndMember_j + \beta_{18} RegQ_{kt} + \gamma_0 + \gamma_1 Local_{it} \\ & + \gamma_2 GDPPC_{kt} + \epsilon_{ijkt} \end{split}$$

Please note that the subscript letters indicate the following: *t*, year; *i*, firm; *j*, industry; *k*, country. Also, in this specification we are deliberately omitting one industry membership dummy variable to avoid perfect multicollinearity.

## 3.2.1. Dependent Variable

To measure NFD, we used Bloomberg's ESG dataset to determine if a firm disclosed this type of information or not. If it did, we represented this with a one, otherwise we represented this with a zero. Four dependent variables were constructed: the composite ESG score, if reporting was done

Sustainability **2018**, *10*, 3111 10 of 20

in all three dimensions; and its subcomponents: environmental, social, and governance disclosure, if reporting was made in one of these subcategories.

# 3.2.2. Independent Variables

The first independent variable was *firm size*, and following Fortanier et al. [5], Kansal et al. [25], and Ortas et al. [55] we used the natural logarithm of both total assets (Assets) and revenue (Revenue). To represent *profitability*, we used two commonly utilized variables: return on assets (ROA) and return on equity (ROE). They were calculated as earnings before interests and taxes divided by total assets and total equity, respectively [7,52]. *Leverage* was evaluated as the debt-to-asset ratio [26,27].

Following Echave and Bhati [22], degree of internationalization (DegInter) was estimated as the natural logarithm of export revenues. The measures of market-to-book ratio (MBR) and systematic risk (Beta) are straightforward financial measures from Bloomberg. Consistent with most articles [12,21,55], dummy variables were used to represent industry membership (IndMember). We followed Bloomberg's economic sector classification, which considers 10 different sectors (see Appendix B). We assigned a one if a firm belonged to a particular sector, and a zero if otherwise. To measure regulatory quality (RegQ), we used Marano et al. [35] and Rodrigo et al.'s [33] suggestion and used as a proxy measure the mean of two World Bank Governance Indicators that measure regulatory bodies' capacity to formulate and enforce polices: 'government effectiveness' and 'regulatory quality' [75].

#### 3.2.3. Control Variables

Because our investigation considers six different Latin American countries, we have to control for differences among them. To this end, previous research has included two relevant factors: local versus multinational enterprises [5,7], and individuals' purchasing power [33]. For the former, we used a dummy variable (Local), where one indicated a Latin American company, and a zero if otherwise; for the latter, we used gross domestic product per capita (power purchase parity; GDPPC).

## 3.3. Pre-Estimation Considerations

Three main issues must be taken into account before estimation. First, we must determine if there is a serious risk of collinearity among the variables, which could distort our results [35]. According to Hair et al. [76], it is a problem if Pearson correlation coefficients have an absolute value over 0.9. When analyzing our correlation matrix (Appendix C), the only variables that could have posed an issue were the measures of firm size (Assets and Revenue), as their value is 0.883. Even though it is below the suggested threshold, we tested them separately to avoid any chance of collinearity. Therefore, we ran eight models in total: one for each dependent variable (four)  $\times$  two separate measures of firm size (see Table 1).

Firm Cin Manage	Dependent Variable (disclosure)						
Firm Size Measure	ESG	Environment	al Social	Governance			
Assets	Model I.1	Model II.1	Model III.1	Model IV.1			
Revenue	Model I.2	Model II.2	Model III.2	Model IV.2			

**Table 1.** Model distribution. ESG: environmental, social, and governance.

Second, following Baltagi [32] and Cameron and Trivedi [74], we used panel-robust standard errors to correct for heteroskedasticity and assure estimator consistency and efficiency. Third, we removed one industry membership dummy variable to avoid perfect multicollinearity. In this case, we chose as a benchmark the 'financials' sector because it is the largest industry in our final sample, therefore allowing a good point of comparison (see Appendix B).

Sustainability **2018**, *10*, 3111 11 of 20

#### 4. Results

Table 2 presents the estimates of the eight logit panel models. All have a significant Wald chi-squared statistic, suggesting good fit. Hypothesis 1 is strongly supported, as all measures of *firm size* are positive and significant. Therefore, larger Latin American firms are more prone to disclose non-financial data. Hypothesis 2 is rejected: contrary to our conjecture, in models II–IV the significant ROA/ROE coefficients are negative, implying an inverse relationship between *profitability* and NFD. Hypothesis 3 is also rejected, as there is always a non-significant link between *leverage* and reporting, implying that debt in LatAm does not have any influence.

Hypothesis 4 is not supported, as *degree of internationalization* is always non-significant. Hence, international stakeholders do not compel Latin American companies to engage in NFD. *Market-to-book ratio* and *Beta* receive partial support because in models I–III some coefficients are positive and significant. This implies that the existence of information asymmetries and systematic risk triggers NFD, supporting Hypotheses 5 and 6. Regarding *industry membership*, evidence shows significant differences among sectors as the consumer, energy, industrial, and materials industries report significantly more, upholding Hypothesis 7. Finally, Hypothesis 8 is strongly rejected: coefficients for *regulatory quality* are all significant, yet negative. This indicates that weaker regulatory contexts lead companies to disclose ESG information.

**Table 2.** Estimates (standard errors) of the logit panel regressions.

	Dependent Variable (disclosure)									
Indep. Variables and Controls	ES	G	Environ	ımental	Soc	cial	Governance			
	Model I.1	Model I.2	Model II.1	Model II.2	Model III.1	Model III.2	Model IV.1	Model IV.2		
Assets	3.250 *** (0.251)		1.415 *** (0.353)		1.433 *** (0.350)		1.470 *** (0.256)			
Revenue		2.686 *** (0.456)		2.131 *** (0.346)		2.206 *** (0.340)		1.797 *** (0.283)		
ROA	-0.021 (0.033)	-0.020 (0.017)	-0.002 (0.021)	-0.019 (0.015)	0.002 (0.021)	-0.016 (0.016)	-0.027 * (0.014)	-0.032 ** (0.014)		
ROE	-0.004 (0.010)	-0.004 (0.007)	-0.009 * (0.005)	-0.010 * (0.133)	-0.013 * (0.007)	-0.014 ** (0.006)	0.002 (0.007)	0.001 (0.008)		
Leverage	-0.009 (0.012)	-0.003 (0.008)	0.002 (0.009)	0.005 (0.011)	0.004 (0.008)	0.008 (0.011)	-0.003 (0.006)	$-5.94 \times 10^{\circ}$ (0.006)		
DegInter	0.138 (0.1531)	-0.017 (0.1370)	0.141 (0.1589)	-0.117 (0.1528)	0.209 (0.1393)	-0.061 (0.1484)	0.163 (0.1313)	-0.050 (0.1275)		
MBR	0.001 (0.003)	-0.001 (0.005)	<b>0.002</b> ** (0.001)	0.002 (0.002)	<b>0.002</b> ** (0.001)	0.002 (0.002)	$-2.53 \times 10^{-5}$ (9.20 × 10 <sup>-4</sup> )	-0.001 (0.001)		
Beta	$7.84 \times 10^{-4} * (4.70 \times 10^{-4})$	0.001 (0.006)	$4.34 \times 10^{-4} *$ (2.16 × 10 <sup>-4</sup> )	$9.05 \times 10^{-5}$ $(4.97 \times 10^{-4})$	$3.99 \times 10^{-4} * (1.10 \times 10^{-4})$	$8.13 \times 10^{-5}$ $(4.81 \times 10^{-4})$	$4.16 \times 10^{-4}$ $(4.01 \times 10^{-4})$	$-2.74 \times 10$ (5.47 × 10		
Cons. disc.	3.650 ** (1.485)	1.090 * (0.717)	-0.189 (1.659)	<b>2.496</b> * (1.663)	-0.791 (1.590)	3.263 * (1.776)	0.901 (0.913)	1.276 * (0.705)		
Cons. staples	3.236 ** (1.466)	1.510 * (0.909)	0.771 (1.102)	<b>1.641</b> * (1.061)	0.432 (1.067)	2.074 * (1.044)	1.560 * (0.889)	0.651 (0.871)		
Energy	0.426 (2.207)	<b>4.440</b> *** (1.480)	0.173 (1.934)	2.845 * (1.554)	0.907 (1.856)	3.748 ** (1.570)	1.457 (1.640)	3.807 ** (1.590)		
Health	3.753 (2.380)	-1.881 (1.439)	2.151 (1.651)	-0.336 (1.495)	1.579 (1.643)	-0.978 (1.510)	0.581 (1.516)	-1.989 (1.451)		
Indust.	2.657 * (1.369)	1.302* (0.786)	-1.554 (1.973)	3.489 * (2.016)	-0.951 (1.411)	2.882 ** (1.254)	0.838 (0.854)	1.027 * (0.700)		
Info. tech.	13.183 *** (2.343)	7.262 *** (1.880)	5.878 *** (2.060)	3.967 ** (2.016)	<b>6.959</b> *** (1.870)	5.345 ** (2.069)	7.032 *** (1.250)	<b>4.904</b> *** (1.303)		
Mat.	<b>4.940</b> *** (1.539)	0.343 (0.991)	<b>3.112</b> *** (1.163)	1.327 (1.040)	<b>2.606</b> ** (1.119)	0.824 (1.012)	1.632 * (0.968)	-0.458 (0.890)		
Telecom	1.107 (4.677)	-1.397 (3.908)	2.562 (2.502)	0.503 (2.816)	1.912 (2.578)	-0.288 (2.963)	0.762 (2.572)	-0.824 (2.662)		
Utilities	<b>6.337</b> *** (1.977)	3.546 *** (1.236)	<b>4.411</b> *** (0.935)	3.367 *** (0.969)	<b>3.919</b> *** (0.899)	<b>2.805</b> *** (0.965)	<b>3.526</b> *** (0.806)	<b>2.477</b> *** (0.811)		
RegQ	6.258 *** (1.091)	5.174 *** (0.811)	3.154 *** (0.685)	2.825 *** (0.723)	3.617 *** (0.696)	3.385 *** (0.734)	<b>4.194</b> *** (0.625)	<b>4.044</b> *** (0.635)		

Sustainability **2018**, *10*, 3111 12 of 20

- 1 1		o .
Tabl	9	Cont

Indep. Variables and Controls	Dependent Variable (disclosure)									
	ESG		Environmental		Social		Governance			
	Model I.1	Model I.2	Model II.1	Model II.2	Model III.1	Model III.2	Model IV.1	Model IV.2		
Local	0.900 (1.141)	1.008 (0.825)	0.352 (0.849)	0.684 (0.848)	0.751 (0.887)	1.114 (0.883)	0.574 (0.698)	0.806 (0.635)		
GDPPC	<b>16.983</b> *** (2.857)	15.582 *** (2.484)	<b>9.274</b> *** (1.690)	8.866 *** (1.702)	9.536 *** (1.647)	9.187 *** (1.645)	<b>11.657</b> *** (1.637)	11.770 *** (1.732)		
Constant	-244.56 *** (35.764)	-211.36 *** (26.381)	-129.66 *** (18.484)	-133.89 *** (19.047)	-133.51 *** (17.948)	-139.22*** (18.466)	-152.24 *** (16.366)	-154.08 *** (18.932)		
Wald chi-squared	159.13 ***	181.61 ***	132.40 ***	138.83 ***	147.90 ***	142.65 ***	212.08 ***	205.63 ***		

Note: \*  $p \le 0.10$ ; \*\*  $p \le 0.05$ ; \*\*\*  $p \le 0.01$ .

#### 5. Discussion

Consistent with our theoretical development, results show that *firm size*, *MBR*, *Beta*, and *industry membership* are NFD determinants in LatAm, whereas *leverage* and *degree of internationalization* have no influence whatsoever. (Because our evidence suggests that leverage and degree of internationalization have no impact on NFD in Latin American companies, we deliberately do not address these variables in the discussion section of our article). However, the most intriguing finding is that profitability and regulatory quality are contrary to received wisdom, and hence we will attempt to expand our reasoning to try to explain this particularity of ESG reporting in LatAm. Subsequently, we further discuss how the other significant variables affect companies in this setting, consistent with our conceptual development above.

Our evidence concerning *profitability* challenges worldwide findings (e.g., [3,25,44,55]). Apparently, lower financial performance is a factor that triggers publishing ESG information in LatAm, which leads us to posit that managers' role in NFD is more complex that in other regions. We propose two possible explanations for a negative link between profitability and NFD: first, following Reverte [12], following poor results Latin American managers could disclose ESG data to distract or justify bad performance. It could be argued that annual reports and investments presented in these documents will pay in the long-term, and hence low profitability is expected when companies commence NFD. Echoing findings by Bae et al. [61], Cormier et al. [20], and Ortas et al. [55], this suggests that in LatAm agency costs might arise, given that there is no certainty if NFD is indeed a source of competitive advantage. Hence, contradicting works by Koljatic and Silva [62] and Sá de Abreu et al. [63], managers in this setting do not always value responsibility in ESG for the 'correct' motives, as they could use reporting as an excuse or justification for poor returns (i.e., increasing agency costs). This could be deemed as the 'reporting opportunism' hypothesis.

The second possible interpretation stems from the fact that in models II-II the ROE coefficient is negative. Given that this measure generally interests owners, we believe that in LatAm this stakeholder might be involved as well. As ascertained by Prado-Lorenzo et al. [15], because shareholders are interested in long-term results they are likely to demand NFD in order to increase firms' accountability and avoid any possible problems in the future. Contrary to our arguments in the previous paragraph, owners could be seeing reports as a way to reduce information asymmetries, and hence agency costs (see [20,55,61]). To this end, they might consider NFD a first step, implying that shareholders in this region could foster moving towards reporting. Considering both accounts regarding profitability, it puts managers and owners in an intricate scenario, as both initiate NFD but for different reasons: while the former tries to hide poor performance (i.e., increasing agency costs), the latter tries to enhance corporate ESG transparency (i.e., trying to reduce agency costs).

It was also unexpected to find a negative and significant association between *regulatory quality* and NFD in LatAm. Contrary to worldwide evidence (e.g., [1,10,13,17,26]), companies in this region are more prone to report in nations with weaker regulations, suggesting that this regulators' influence on NFD is more complex than conjectured. To interpret this matter, we use Gray et al.'s [9] work as

Sustainability **2018**, *10*, 3111 13 of 20

a starting point, as these authors report that in some cases as governments pull back, companies fill this gap by divulging NFD.

To further explain that claim, use as a basis literature on 'institutional voids', which has proposed that under feebler regulatory environments companies could take the initiative and self-regulate in order to 'fill-in' these voids and build new and beneficial regulations [35]. Rathert [77] has coined this as the 'institutional substitute hypothesis', given that as firms might take advantage of weak regulations to take a positive role in improving societal welfare. We believe that this might be the case, because LatAm is plagued by regulatory deficiencies [33,34,66,72], yet firms publish ESG reports to show key stakeholders the correctness of their operations. Sooner or later NFD could be a requirement in LatAm, and our position is that, given its institutional voids, firms have taken a proactive stance and self-regulated themselves in order to anticipate regulations that might be passed in years to come.

Regarding *firm size* as a general indicator of stakeholder pressure, we concur with Latin American specific [38,43] and worldwide [1,2] evidence, as larger companies in this context do tend to engage more in NFD. This resonates with the notion proposed by Haslam and Tanimoune [56], which posits that Latin American firms with large-scale projects are more prone to engage in social conflict because not only are they likely to cause greater impacts but also affect a bigger number of stakeholders. In fact, this coincides with the explanations posited by virtually all of the extant literature (e.g., [14,21,23]), which leads us to conclude that even in LatAm bigger firms—due to their enhanced visibility—respond to stakeholder pressure by issuing ESG information to try to show an adequate performance and adherence to societal expectations.

Investors also seem to have a certain impact on NFD in LatAm, as expected, as some coefficients for *market-to-book ratio* and *systematic risk* were positive and significant. This implies that at least under two circumstances potential financiers would seek to screen ESG information. First, and in relation to MBR, it indicates that when information asymmetries exist then these stakeholders try to explain them by examining more closely a Latin American firm's non-financial information. In fact, echoing what Forte et al. [71] proposed, it could even entail that investors try to use these reports to investigate if entities possess any significant intangible assets that could eventually lead them to having outstanding ESG performance, with the aim of making better investment decisions.

Second, concerning Beta as a determinant, given that the volatile market conditions and weak institutional frameworks that characterize LatAm trigger unstable market returns [34,66], NFD constitutes a valuable source to assess companies' liabilities beyond what systematic risk entails. Therefore, we concur with the arguments presented by Garcia et al. [50] that indicate that those companies that have a higher Beta tend to divulge non-financial information with the goal of reassuring investors that, despite having an inherent systematic risk, any other risks that could surge for ESG-related reasons are being controlled, thus presenting a good investment opportunity. In sum, this account and the one exposed in the previous paragraph leads us to ascertain that investors in LatAm do require and are in search of more information (i.e., NFD) due to this setting's uncertainty.

Ultimately, we wish to address findings concerning the *industry membership* variable, as due to data availability we used Bloomberg's classification. This implies that we are unable to report which particular sub-industries are reporting more in relative terms. Nonetheless, a quick tally of our sample shows that various oil/gas firms are included in the "energy" category, and forestry/paper and mining companies in the "materials" classification. Given this, consistent with past Latin American evidence [36,38], we could conjecture from our data that extractive industries are among the firms that report the most in LatAm.

This is a plausible assumption because, as Rodrigo et al. [33] show, extractive industries are particularly scrutinized in LatAm due to their enhanced socio-environmental impacts, such as air/water pollution, community displacements, resource depletion, among others. Also, generally these sectors could easily represent around 12–19% of Latin American countries' gross domestic product, hence being essential to these nations' wealth generation [78]. Due to the economic importance, yet sometimes negative socio-environmental impacts of these industries, they are seemingly more

Sustainability **2018**, *10*, 3111 14 of 20

salient in the eyes of different stakeholders, and groups that are powerful enough to do so could be pressuring firms to raise their transparency and accountability [79]. Otherwise, as Haslam and Tanimoune [56] show, extractive companies in LatAm could be subject to protests, lawsuits, or other coercive behaviors. It thus seems that these industries in LatAm tend to report first and more in comparison to other industrial sectors as a way keep these powerful stakeholders informed on firms' efforts to reduce impacts in ESG terms. For instance, the Chilean mining company Codelco was among the first enterprises to report under the Global Reporting Initiative guidelines in 2000 in order to show stakeholders how they dealt with indigenous communities and environmental issues. After that, Latin American mining firms apparently began engaging in NFD following Codelco's example.

#### 6. Conclusions

Our article's main contribution is drawing on Stakeholder Theory to determine some determinants of NFD in LatAm. Specifically, we found that out of the eight proposed determinants of non-financial reports in this scenario, only six have a significant influence: firm size, profitability, market-to-book ratio, systematic risk, industry membership, and regulatory quality. Consequently, from a conceptual standpoint this confirms our assertions that stakeholders in LatAm affect companies differently in comparison to developed settings; as such, we are able to make a valuable contribution to the discipline from the viewpoint of Stakeholder Theory. This is particularly true for profitability and regulatory quality, given that results did not support our hypotheses, so we had to propose rather new interpretations so that future research can further delve into these phenomena. Finally, we also contribute by using a more robust methodology (logit panel model) that corrects for firms' unobserved heterogeneity and also takes into consideration how this decision-making process varies through time.

This study has two main practical implications. First, from a managerial standpoint, it allows executives in LatAm to better comprehend not only which stakeholders pressure companies to disclose non-financial information but also which are the mechanisms or rationales through which this process occurs. For instance, we show that bigger firms, those that may have information asymmetries, a higher systematic risk, and also that belong to certain industrial sectors, will have a stronger demand from information-seeking groups. Consequently, managers with this information can assess their salient stakeholders and determine if and when commencing to divulge NFD is appropriate. Second, from a public policy lens, Latin American governmental enforcing entities can rest assured that companies have slowly begun reporting ESG data despite the institutional weaknesses present in this setting. However, this does not mean that governing bodies should not be more stringent. In fact, we propose that nations should develop actual mandatory guidelines to help companies in LatAm deepen their disclosure efforts and make NFD a pervasive activity so that corporate transparency is fostered throughout this part of the globe.

From our findings, we propose a research agenda in three distinct directions to address our article's limitations. First, using Haller et al. [4] as a starting point, we have focused on one particular understanding of NFD (i.e., ESG information). Therefore, we summon scholars to delve into the determinants of other variants of non-financial data in LatAm, such as Integrated Reporting. Second, we have deliberately proposed NFD determinants from Stakeholder Theory as a first step, although we acknowledge that other frameworks have been proposed as well (e.g., Legitimacy Theory, Positive Accounting Theory). Therefore, using these groundings, future research should attempt to test other determinants that we might have omitted. Third, given that data is scarce in LatAm, scholars should attempt to expand and refine our findings with broader, more thorough datasets. For example, as aforementioned, given Bloomberg's industry classification we were unable to delve into which particular sub-industries (e.g., oil, mining) are the ones that report the most.

We hope that practitioners and investigators find our work engaging and essential in guiding future decisions and research. It might constitute a cornerstone in improving firms' ESG accountability and reducing their impacts on society.

Sustainability **2018**, 10, 3111 15 of 20

**Author Contributions:** Both authors contributed equally to the development of this article, specifically in its conceptualization, conceptual framing and hypotheses construction, methodology design, data analysis, and writing-reviewing-editing.

Funding: This research received no external funding.

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

# Appendix A

**Table A1.** Summary of the main determinants of NFD that stem from Stakeholder Theory.

Determinant	Power Type	Rationale	Some Supporting NFD Literature				
Firm size	Coercive	Larger firms are more visible and thus heavily scrutinized by information-seeking stakeholders, who could coerce companies into engaging in NFD.	Belkaoui and Karpik [57]; Cormier et al. [20]; Gamerschlag et al. [21];	Liu and Anbumozhi [26]; Prado-Lorenzo et al. [15]; Reverte [12]; Roberts [13]; Skouloudis et al. [7]; Tagesson et al. [44]; Thorne et al. [14]			
	Utilitarian	Bigger firms have a greater dependence on other stakeholders, and also a larger impact on society. NFD occurs as a mechanism to dialogue with these stakeholders.	Gray et al. [9]; Haddock-Fraser and Fraser [23]; Ho and Taylor [10]; Kolk [17]; Lee [19]				
Profitability	Utilitarian	If managers have the ability to achieve superior performance, then they also have the skill to disclose NFD. Profitable companies have slack resources to respond to more stakeholder demands, including NFD.	Belkaoui and Karpik [57]; Gamerschlag et al. [21]; Hahn and Kühnen [3]; Ho and Taylor [10]; Muttakin and Khan [27]	Ortas et al. [55]; Prado-Lorenzo et al. [15,52]; Reverte [12]; Roberts [13]; Skouloudis et al. [7]; Tagesson et al. [44]			
Leverage	Utilitarian	For highly leveraged companies, creditors are a powerful stakeholder because debt-holders are interested in ESG information to assess non-financial risks. As a response, firms engage in NFD to reduce the cost of capital.	Belkaoui and Karpik [57]; Ho and Taylor [10]; Kansal et al. [25]; Prado-Lorenzo et al. [15]; Ortas et al. [55]	Reverte [12]; Roberts [13]			
Degree of	Coercive	As companies go international, they are visible to a greater number of stakeholders that could pressure them to engage in NFD.	Echave and Bhati [22]; Gamerschlag et al. [21];	Lokuwaduge and Heenetigala [6]; Muttakin and Khan [27]; Reverte [12]			
internationalization	Utilitarian	NFD could be a tool to present themselves as a good corporate citizen internationally, and hence, enter new markets.	Hahn and Kühnen [3]; Ho and Taylor [10]; Kolk [17]				
Market-to-book ratio	Utilitarian	A high market-to-book ratio could entail information asymmetries, and investors could require NFD in order to reduce these differences.	Goettsche et al. [24]; Hahn and Kühnen [3]; Prado-Lorenzo et al. [52				
Systematic risk (beta)	Utilitarian	Firms in risky markets are generally more visible, and thus, they have incentives to signal stakeholders a good public image. NFD might help in this endeavor.	Belkaoui and Karpik [57]; Cormier Kansal et al. [25]	et al. [20]; Hahn and Kühnen [3];			
Industry membership	Coercive	Extractive sectors, due to their enhanced socio-environmental impact, are subject to a higher stakeholder scrutiny. This increases the likelihood of NFD.	Gamerschlag et al. [21]; Gray et al. [9]; Haddock-Fraser and Fraser [23]; Ho and Taylor [10]; Kansal et al. [25]; Kolk [17]; Liu and Anbumozhi [26]	Lokuwaduge and Heenetigala [6]; Muttakin and Khan [27]; Prado-Lorenzo et al. [15,52]; Reverte [12]; Roberts [13]; Skouloudis et al. [7]			
Regulatory quality	Coercive	Governments and regulatory bodies can affect companies through political interference. NFD acts as a tool to show that the firm is being properly managed in ESG terms, and government influence is not necessary.	Gray et al. [9]; Hahn and Kühnen [3]; Ho and Taylor [10]; Kolk [17]; Liu and Anbumozhi [26]	Prado-Lorenzo et al. [15]; Reverte [12]; Roberts [13]			

# Appendix B

**Table A2.** Number of firms in the final sample by country and industry.

	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Total
Consumer discretionary	5	24	34	7	13	18	101
Consumer staples	1	7	32	9	9	8	66
Energy	3	7	2	4		6	22
Financials	8	44	46	10	24	71	203
Health care		8	4	2	2	1	17
Industrials	6	18	31	8	7	23	93
Information technology		5	1				6
Materials	5	6	20	13	6	18	68
Telecommunication services		2	2	1	1	1	7
Utilities	4	12	21	7		16	60
Total	32	133	193	61	62	162	643

Sustainability **2018**, 10, 3111

# Appendix C

**Table A3.** Correlation matrix and descriptive statistics for all non-dummy variables.

	1	2	3	4	5	6	7	8	9	10
1. Assets	1									
2. Revenue	*** 0.883	1								
3. ROA	*** -0.069	*** -0.037	1							
4. ROE	* 0.027	*** 0.068	*** 0.655	1						
5. Leverage	*** -0.335	*** -0.268	** -0.035	**-0.033	1					
6. DegInter	*** 0.732	*** 0.847	*** -0.061	*** 0.055	*** 0.066	1				
7. MBR	*** -0.106	*** -0.082	-0.009	0.014	*** 0.232	0.012	1			
8. Beta	** 0.033	*** 0.039	-0.008	-0.004	-0.002	*** 0.041	-0.004	1		
9. RegQ	*** 0.124	*** 0.054	-0.006	*** 0.059	***-0.065	*** 0.058	*-0.023	-0.012	1	
10. GDPPC	*** 0.055	*** 0.043	** -0.029	*** -0.050	** 0.029	*** 0.088	-0.007	0.007	*** 0.629	1
Mean	18.981	18.030	0.061	0.217	0.408	17.750	17.722	0.566	0.211	14.764.2
SD	2.716	2.940	0.146	0.163	0.123	2.162	4.279	4.694	0.633	4379.99
Min	5.298	4.441	-0.453	-0.739	0.039	3.993	$1.27 \times 10^{-6}$	0.107	-0.468	7404.29
Max	25.136	23.499	0.769	0.839	0.914	22.979	29.544	17.723	1.214	23,266.5

Note: \*  $p \le 0.10$ ; \*\*  $p \le 0.05$ ; \*\*\*  $p \le 0.01$ .

Sustainability **2018**, *10*, 3111 17 of 20

#### References

1. Ali, W.; Frynas, J.G.; Mahmood, Z. Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: A literature review. *Corp. Soc. Responsib. Environ. Manag.* **2017**, 24, 273–294. [CrossRef]

- 2. Fifka, M.S. Corporate responsibility reporting and its determinants in comparative perspective—A review of the empirical literature and a meta-analysis. *Bus. Strategy Environ.* **2013**, 22, 1–35. [CrossRef]
- 3. Hahn, R.; Kühnen, M. Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *J. Clean. Prod.* **2013**, *56*, 5–21. [CrossRef]
- 4. Haller, A.; Link, M.; Groß, T. The term 'non-financial information'—A semantic analysis of a key feature of current and future corporate reporting. *Account. Eur.* **2017**, *14*, 407–429. [CrossRef]
- 5. Fortanier, F.; Kolk, A.; Pinkse, J. Harmonization in CSR reporting: MNEs and global CSR standards. *Manag. Int. Rev.* **2011**, *51*, 665–696. [CrossRef]
- 6. Lokuwaduge, C.S.D.S.; Heenetigala, K. Integrating environmental, social and governance disclosure for a sustainable development: An Australian study. *Bus. Strategy Environ.* **2017**, *26*, 438–450. [CrossRef]
- 7. Skouloudis, A.; Jones, N.; Malesios, C.; Evangelinos, K. Trends and determinants of corporate non-financial disclosure in Greece. *J. Clean. Prod.* **2014**, *68*, 174–188. [CrossRef]
- 8. Manes-Rossi, F.; Tiron-Tudor, A.; Nicolò, G.; Zanellato, G. Ensuring more sustainable reporting in Europe using non-financial disclosure—De facto and de jure evidence. *Sustainability* **2018**, *10*, 1162. [CrossRef]
- 9. Gray, R.; Kouhy, R.; Lavers, S. Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Account. Audit. Account. J.* **1995**, *8*, 47–77. [CrossRef]
- 10. Ho, L.C.J.; Taylor, M.E. An empirical analysis of triple bottom-line reporting and its determinants: Evidence from United States and Japan. *J. Int. Financ. Manag. Account.* **2007**, *18*, 123–150.
- 11. Gallego-Alvarez, I.; Ortas, E.; Vicente-Villardón, J.L.; Álvarez-Etxeberria, I. Institutional constraints, stakeholder pressure and corporate environmental reporting policies. *Bus. Strategy Environ.* **2017**, 26, 807–825. [CrossRef]
- 12. Reverte, C. Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *J. Bus. Ethics* **2009**, *88*, 351–366. [CrossRef]
- 13. Roberts, R.W. Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Account. Organ. Soc.* **1992**, *17*, 595–612. [CrossRef]
- 14. Thorne, L.; Mahoney, L.S.; Manetti, G. Motivations for issuing standalone CSR reports: A survey of Canadian firms. *Account. Audit. Account. J.* **2014**, 27, 686–714. [CrossRef]
- 15. Prado-Lorenzo, J.M.; Gallego-Álvarez, I.; García-Sánchez, I.M. Stakeholder engagement and corporate social responsibility reporting: The ownership structure effect. *Corp. Soc. Responsib. Environ. Manag.* **2009**, *16*, 94–107. [CrossRef]
- 16. Cho, C.H.; Michelon, G.; Patten, D.M.; Roberts, R.W. CSR disclosure: The more things change? *Account. Audit. Account. J.* **2015**, *28*, 14–35. [CrossRef]
- 17. Kolk, A. Trajectories of sustainability reporting by MNCs. J. World Bus. 2010, 45, 367–374. [CrossRef]
- 18. Deegan, C.; Rankin, M. Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority. *Account. Audit. Account. J.* 1996, 9, 50–67. [CrossRef]
- Lee, K.H. Does size matter? Evaluating corporate environmental disclosure in the Australian mining and metal industry: A combined approach of quantity and quality measurement. Bus. Strategy Environ. 2017, 26, 209–223. [CrossRef]
- 20. Cormier, D.; Magnan, M.; van Velthoven, B. Environmental disclosure quality in large German companies: Economic incentives, public pressures or institutional conditions? *Eur. Account. Rev.* **2005**, *14*, 3–39. [CrossRef]
- 21. Gamerschlag, R.; Möller, K.; Verbeeten, F. Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Rev. Manag. Sci.* **2011**, *5*, 233–262. [CrossRef]
- 22. Echave, J.O.; Bhati, S. Determinants of social and environmental disclosures by Spanish companies. In Proceeding of the GSMI Third Annual International Business Conference, Michigan, MI, USA, 2–4 December 2010.

Sustainability **2018**, *10*, 3111 18 of 20

23. Haddock-Fraser, J.; Fraser, I. Assessing corporate environmental reporting motivations: Differences between 'close-to-market' and 'business-to-business' companies. *Corp. Soc. Responsib. Environ. Manag.* **2008**, *15*, 140–155. [CrossRef]

- 24. Goettsche, M.; Steindl, T.; Gietl, S. Do customers affect the value relevance of sustainability reporting? Empirical evidence on stakeholder interdependence. *Bus. Strategy Environ.* **2016**, 25, 149–164. [CrossRef]
- 25. Kansal, M.; Joshi, M.; Batra, G.S. Determinants of corporate social responsibility disclosures: Evidence from India. *Adv. Account.* **2014**, *30*, 217–229. [CrossRef]
- 26. Liu, X.; Anbumozhi, V. Determinant factors of corporate environmental information disclosure: An empirical study of Chinese listed companies. *J. Clean. Prod.* **2009**, *17*, 593–600. [CrossRef]
- 27. Muttakin, M.B.; Khan, A. Determinants of corporate social disclosure: Empirical evidence from Bangladesh. *Adv. Account.* **2014**, *30*, 168–175. [CrossRef]
- 28. Freeman, R.E.; Harrison, J.S.; Wicks, A.C.; Parmar, B.; de Colle, S. *Stakeholder Theory: The State of the Art;* Cambridge University Press: Cambridge, UK, 2010.
- 29. Van der Laan Smith, J.; Adhikari, A.; Tondkar, R.H. Exploring differences in social disclosures internationally. *J. Account. Public Policy* **2005**, 24, 123–151. [CrossRef]
- 30. Jamali, D.; Karam, C.; Yin, J.; Soundararajan, V. CSR logics in developing countries: Transition, adaptation and stalled development. *J. World Bus.* **2017**, *52*, 343–359. [CrossRef]
- 31. Jamali, D.; Karam, C. Corporate social responsibility in developing countries as an emerging field of study. *Int. J. Manag. Rev.* **2018**, *20*, 32–61. [CrossRef]
- 32. Baltagi, B.H. Econometric Analysis of Panel Data, 5th ed.; John Wiley & Sons: Chichester, UK, 2013.
- 33. Rodrigo, P.; Duran, I.J.; Arenas, D. Does it really pay to be good, everywhere? A first step to understand the corporate social and financial performance link in Latin American controversial industries. *Bus. Ethics Eur. Rev.* **2016**, *25*, 286–309. [CrossRef]
- 34. Vassolo, R.S.; de Castro, J.O.; Gomez-Mejia, L.R. Managing in Latin America: Common issues and a research agenda. *Acad. Manag. Perspect.* **2011**, 25, 22–36. [CrossRef]
- 35. Marano, V.; Tashman, P.; Kostova, T. Escaping the iron cage: Liabilities of origin and CSR reporting of emerging market multinational enterprises. *J. Int. Bus. Stud.* **2017**, *48*, 386–408. [CrossRef]
- 36. Murguía, D.I.; Böhling, K. Sustainability reporting on large-scale mining conflicts: The case of Bajo de la Alumbrera, Argentina. *J. Clean. Prod.* **2013**, *41*, 202–209. [CrossRef]
- 37. Alonso-Almeida, M.D.M.; Marimon, F.; Llach, J. The use of sustainability reporting in Latin America: Territorial and sectorial analysis. *Estud. Gerenc.* **2015**, *31*, 139–149. [CrossRef]
- 38. Araya, M. Exploring terra incognita: Non-financial reporting in corporate Latin America. *J. Corp. Citizsh.* **2006**, 21, 25–38. [CrossRef]
- 39. Baskin, J. Corporate responsibility in emerging markets. J. Corp. Citizsh. 2006, 24, 29–47. [CrossRef]
- 40. Logsdon, J.M.; Thomas, D.E.; van Buren, H.J. Corporate social responsibility in large Mexican firms. *J. Corp. Citizsh.* **2006**, 21, 51–60. [CrossRef]
- 41. Meyskens, M.; Paul, K. The evolution of corporate social reporting practices in Mexico. *J. Bus. Ethics* **2010**, 91, 211–227. [CrossRef]
- 42. Paul, K.; Cobas, E.; Ceron, R.; Frithiof, M.; Maass, A.; Navarro, I.; Palmer, L.; Serrano, L.; Deaton, L.Z. Corporate social reporting in Mexico. *J. Corp. Citizsh.* **2006**, 22, 67–80. [CrossRef]
- 43. Wendlandt-Amezaga, T.R.; Valdés-Cuervo, A.A.; Carlos-Martínez, E.A.; Ochoa-Silva, B. Large corporate organizations in Mexico and Chile: An analysis of profiles with respect to their communications on social responsibility. *Cuad. Adm.* **2015**, *31*, 59–67.
- 44. Tagesson, T.; Klugman, M.; Ekström, M.L. What explains the extent and content of social disclosures in Swedish municipalities' annual reports. *J. Manag. Gov.* **2013**, *17*, 217–235. [CrossRef]
- 45. Sierra-García, L.; Zorio-Grima, A.; García-Benau, M.A. Stakeholder engagement, corporate social responsibility and integrated reporting. *Corp. Soc. Responsib. Environ. Manag.* 2015, 22, 286–304. [CrossRef]
- 46. Fernandez-Feijoo, B.; Romero, S.; Ruiz, S. Effect of stakeholders' pressure on transparency of sustainability reports within the GRI framework. *J. Bus. Ethics* **2014**, *122*, 53–63. [CrossRef]
- 47. Mitchell, R.K.; Agle, B.R.; Wood, D.J. Toward a theory of stakeholder identification and salience. *Acad. Manag. Rev.* **1997**, 22, 853–886. [CrossRef]
- 48. Neville, B.A.; Bell, S.J.; Whitwell, G.J. Stakeholder salience revisited: Refining, redefining, and refueling an underdeveloped conceptual tool. *J. Bus. Ethics* **2011**, *102*, 357–378. [CrossRef]

Sustainability **2018**, *10*, 3111 19 of 20

49. Doh, J.P.; Littell, B.; Quigley, N.R. CSR and sustainability in emerging markets. *Organ. Dyn.* **2015**, *44*, 112–120. [CrossRef]

- 50. Garcia, A.S.; Mendes-Da-Silva, W.; Orsato, R.J. Sensitive industries produce better ESG performance. *J. Clean. Prod.* **2017**, 150, 135–147. [CrossRef]
- 51. Jain, T.; Aguilera, R.V.; Jamali, D. Corporate stakeholder orientation in an emerging country context. *J. Bus. Ethics* **2017**, *143*, 701–719. [CrossRef]
- 52. Prado-Lorenzo, J.M.; Rodríguez-Domínguez, L.; Gallego-Álvarez, I.; García-Sánchez, I.M. Factors influencing the disclosure of greenhouse gas emissions in companies worldwide. *Manag. Decis.* **2009**, 47, 1133–1157. [CrossRef]
- 53. Stanny, E.; Ely, K. Corporate environmental disclosures about the effects of climate change. *Corp. Soc. Responsib. Environ. Manag.* **2008**, *15*, 338–348. [CrossRef]
- 54. Gallo, P.J.; Christensen, L.J. Firm size matters: An empirical investigation of organizational size and ownership on sustainability-related behaviors. *Bus. Soc.* **2011**, *52*, 315–349. [CrossRef]
- 55. Ortas, E.; Gallego-Álvarez, I.; Álvarez-Etxeberría, I. Financial factors influencing the quality of corporate social responsibility and environmental management disclosure. *Corp. Soc. Responsib. Environ. Manag.* 2015, 22, 362–380. [CrossRef]
- 56. Haslam, P.A.; Tanimoune, N.A. The determinants of social conflict in the Latin American mining sector. *World Dev.* **2016**, *78*, 401–419. [CrossRef]
- 57. Belkaoui, A.; Karpik, P.G. Determinants of the corporate decision to disclose social information. *Account. Audit. Account. J.* **1989**, 2, 36–51. [CrossRef]
- 58. Eisenhardt, K.M. Agency theory: An assessment and review. Acad. Manag. Rev. 1989, 14, 57–74. [CrossRef]
- 59. Jensen, M.C.; Meckling, W.H. Theory of the firm: Managerial behavior, agency costs and ownership structure. *J. Financ. Econ.* **1976**, *3*, 305–360. [CrossRef]
- 60. Rashid, A. Revisiting agency theory: Evidence of board independence and agency cost from Bangladesh. *J. Bus. Ethics* **2015**, 130, 191–198. [CrossRef]
- 61. Bae, S.M.; Masud, M.A.K.; Kim, J.D. A cross-country investigation of corporate governance and corporate sustainability disclosure: A signaling theory perspective. *Sustainability* **2018**, *10*, 2611. [CrossRef]
- 62. Koljatic, M.; Silva, M. Do business schools influence students' awareness of social issues? *J. Bus. Ethics* **2015**, 131, 595–604. [CrossRef]
- 63. Sá de Abreu, M.C.; da Cunha, L.T.; Barlow, C.Y. Institutional dynamics and organizations affecting the adoption of sustainable development in the United Kingdom and Brazil. *Bus. Ethics Eur. Rev.* **2015**, 24, 73–90. [CrossRef]
- 64. Perez-Batres, L.A.; Miller, V.V.; Pisani, M.J. CSR, sustainability and the meaning of global reporting for Latin American corporations. *J. Bus. Ethics* **2010**, *91*, 193–209. [CrossRef]
- 65. Céspedes, J.; González, M.; Molina, C.A. Ownership and capital structure in Latin America. *J. Bus. Res.* **2010**, 63, 248–254. [CrossRef]
- 66. Khoury, T.A.; Junkunc, M. Mingo, S. Navigating political hazard risks and legal system quality. *J. Manag.* **2015**, *41*, 808–840.
- 67. Vormedal, I.; Ruud, A. Sustainability reporting in Norway—An assessment of performance in the context of legal demands and socio-political drivers. *Bus. Strategy Environ.* **2009**, *18*, 207–222. [CrossRef]
- 68. Schmidheiny, S. A view of corporate citizenship in Latin America. J. Corp. Citizsh. 2006, 21, 21–24.
- 69. Delai, I.; Takahashi, S. Corporate sustainability in emerging markets: Insights from the practices reported by the Brazilian retailers. *J. Clean. Prod.* **2013**, *47*, 211–221. [CrossRef]
- 70. Frías-Aceituno, J.V.; Rodríguez-Ariza, L.; García-Sánchez, I.M. Is integrated reporting determined by a country's legal system? *J. Clean. Prod.* **2013**, *44*, 45–55. [CrossRef]
- 71. Forte, W.; Tucker, J.; Matoni, G.; Nicolò, G. Measuring the intellectual capital of Italian listed companies. *J. Intellect. Cap.* **2017**, *18*, 710–732. [CrossRef]
- 72. Rodrigo, P.; Muñoz, P.; Wright, A. Transitions dynamics in context: Key factors and alternative paths in the sustainable development of nations. *J. Clean. Prod.* **2015**, *94*, 221–234. [CrossRef]
- 73. Barkemeyer, R.; Holt, D.; Preuss, L.; Tsang, S. What happened to the 'development' in sustainable development? Business guidelines two decades after Brundtland. *Sustain. Dev.* **2014**, 22, 15–32. [CrossRef]
- 74. Cameron, A.C.; Trivedi, P.K. *Microeconometrics: Methods and Applications*; Cambridge University Press: New York, NY, USA, 2005.

Sustainability **2018**, *10*, 3111 20 of 20

75. Kaufmann, D.; Kraay, A.; Mastruzzi, M. The worldwide governance indicators. *Hague J. Rule Law* **2011**, *3*, 220–246. [CrossRef]

- 76. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis*, 7th ed.; Prentice Hall: Upper Saddle River, NJ, USA, 2010.
- 77. Rathert, N. Strategies of legitimation: MNCs and the adoption of CSR in response to host-country institutions. *J. Int. Bus. Stud.* **2016**, *47*, 858–879. [CrossRef]
- 78. CEPAL. Databases and Statistical Publications: Country Profiles. 2016. Available online: http://estadisticas.cepal.org/cepalstat/PerfilesNacionales.html?idioma=english (accessed on 9 March 2018).
- 79. Hilson, G. Corporate social responsibility in the extractive industries. *Resour. Policy* **2012**, *37*, 131–137. [CrossRef]



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).