

THE EFFECT OF PRESS VISIBILITY ON VOLUNTARY DISCLOSURE: CROSS-COUNTRY EVIDENCE

*Maria Prokofieva**, *Colin Clark***

Abstract

The study investigates the effect of press coverage on voluntary disclosure in the narrative sections of annual reports of Australian and Chinese listed companies. A combination of the legitimacy theory and media agenda setting theory is employed to examine their application in the context of different country-level governance mechanisms, in particular in Anglo-Saxon (Australia) and Asian (China) economies. The study is based on a sample of 200 listed companies and employs multiple regression analyses. The findings show that press coverage is positively and significantly associated with voluntary disclosure suggesting that closer media attention increases voluntary disclosure. The effect of press coverage is mediated by country-level governance mechanisms, suggesting stronger association in countries with stronger legal enforcement mechanisms.

Keywords: Voluntary Disclosure, Media, Agenda Setting Theory, Legitimacy Theory

* Centre for Strategic Economic Studies, College of Business, Victoria University, PO Box 14428, Melbourne, Victoria 8001, Australia

Tel: 61 03 9919 4039

Fax: 61 03 9919 5417

E-mail: maria.prokofieva@vu.edu.au

** College of Business, Victoria University, Australia

1. Introduction

In recent years there has been increased attention to the voluntary disclosure of listed companies as a means to improve efficient allocation of resources (Xiao et al., 2004), ensure investors' rights protection (Akhtaruddin and Haron, 2010) and increase transparency of corporate affairs (García-Meca and Sánchez-Ballesta, 2010). As a market intermediary, press is seen as a powerful force that reduces information asymmetry and ensures investors' protection (Bushee et al., 2010). The study aims to explore the impact of media coverage on voluntary disclosure decision in listed companies and investigate the role of media in improving voluntary disclosure. Prior studies on voluntary disclosure show inconsistent results across countries for various factors (García-Meca and Sánchez-Ballesta, 2010), thus a cross-country approach is adopted by investigating media effect on voluntary disclosure in China and Australia. The inter-country approach considers the organization view of the entity's voluntary disclosure and allows analysing the importance of the country's legal environment for disclosure (Ernstberger and Grüning, 2013). Further, while empirical research on mature markets is well established, there are limited studies on voluntary disclosure development in emerging economies, particularly in Asia (Gao and Kling, 2012). Prior research

indicated low development of voluntary disclosure in Asia (Choi et al., 2010; Xiao et al., 2004; Xue, 2008), however recent changes in regulatory frameworks, including adoption of international accounting standards, put emphasis on improvement of the level of voluntary disclosure in the region and further research in this area (ASIFMA, 2013).

Our study contributes to the literature in several ways. First, the study adds to the existing literature on voluntary disclosure by extending research on a combination of the legitimacy theory and the media agenda setting theory by investigating the effect of media exposure on voluntary disclosure in annual reports of listed companies. Secondly, the study provides insights on the mediating effect of country-level governance mechanisms on the role of media in voluntary disclosure decisions. Finally, the study answers the call of Ernstberger and Grüning (2013) for further investigation of the interaction of firm-level and country-level governance mechanisms in Anglo-Saxon and Asian economies.

The remainder of the paper is organised as follows. The next section provides an overview of voluntary disclosure studies, reviews the media agenda setting theory research and develops hypotheses. The following next section presents the data collection methods and research design. A

discussion of the results and conclusions completes the paper.

2. Literature review

2.1 Voluntary disclosure and media agenda setting theory

Voluntary disclosure is defined as disclosure outside the financial statements required by specific country rules or accounting standards (Garcia-Meca and Sanchez-Ballesta, 2010). The decision to disclose additional information is reviewed within a cost-benefit approach where benefits of increased disclosure are perceived to exceed the costs of this disclosure. Prior research demonstrated that voluntary disclosure is associated with a number of benefits for the firm, including reduced information asymmetry (Jiang et al., 2011) and cost of capital (Sengupta, 1998), increased stock liquidity and analyst following (Healy et al., 1999). Increased voluntary disclosure has been associated with higher stock price correlation with future earnings (Gelb and Zarowin, 2002) and improved stock performance (Healey et al., 1999). In recent years, several countries have attempted to secure these potential benefits of increased disclosure by imposing stricter disclosure requirements on firms or as part of listing rules (Ernstberger and Grüning, 2013).

Aerts et al. (2008) identifies three types of concerns that affect management choice of voluntary disclosure, including competition concerns, public pressures through media, and capital markets. Voluntary disclosure may disadvantage the firm by providing sensitive information to competitors (Healy and Palepu, 2001). However, providing additional disclosure may decrease information asymmetry in the capital market and provide investors with more accurate information to facilitate their decision making (Jiang, 2011).

In comparison with the first two factors, the effect of society's pressure on voluntary disclosure is less explored. Legitimacy theory assumes that firms operate within the bounds and norms of their society and are bound by a 'social contract' between them and those affected by their operations (Brown and Deegan, 1998). If the firm does not operate in a manner consistent with expectations of the society, the organisation will be penalised. The firm can narrow and possibly close the 'legitimacy gap' by informing the society about actual or perceived changes in the firm's performance and activities, deflect the attention of the public to other related issues or change external expectations of its performance (Lindblom, 1994). Thus, management can use annual reports as a tool to legitimise the ongoing operations of the firm (Patten, 2002).

Brown and Deegan (1998) argue that society's expectations can be affected by the media. This assumption forms the basis of the media agenda setting theory that has been widely utilized in journalism literature (Ader, 1995; McCombs and Shaw, 1972). This theory argues that there is a relationship between the relative emphasis brought by the media to various topics and the degree of salience they possess to the public (Ader, 1995). The role of the media is not to reflect community expectations, but to shape and drive public awareness and create public concern. The basic assumption of the theory is that if a news item is covered frequently and prominently the audience will regard the issue as more important (Patten, 2002).

The media agenda theory has been used in combination with other theories to address voluntary disclosure issues. For example, Brown and Deegan (1998) combined the media agenda theory with the legitimacy theory to investigate social and environmental concerns. Their results suggest that the media raise the community's social and environmental concerns, the firms respond by increasing the extent of their disclosure in these areas in order to retain/regain community support. Redmayne et al. (2010) identified the positive association between press coverage and audit fees expressed through audit hours.

Based on the discussion,

H1: There is a positive association between the press coverage and the level of voluntary disclosure in annual reports of listed companies

2.2 Country-level characteristics affecting voluntary disclosure

Garcia-Meca and Sanchez-Ballesta (2010) argue that results of voluntary disclosure studies are inconclusive across countries. La Porta (1998) assumes that a country's legal origin is one of the main reasons since the origins of most legal systems are several centuries old and such systems were developed through occupation and colonization. Choi et al. (1996) and Millar et al (2005) suggest classifying economies as Anglo-Saxon, Communitarian and Asian economies. These systems differ in terms of national culture, legal and regulatory environment, business-government relationships and the role of financial institutions (Garcia-Meca and Sanchez-Ballesta, 2010).

Garcia-Meca and Sanchez-Ballesta (2010) argue that Anglo-Saxon economies are characterised by widely dispersed ownership and thus increased conflict of interest between shareholders and management. Communitarian systems feature an increased role of the government in economic and social matters and a conflict of

interest between holding companies, banks and families. The different regulatory environment in Asian countries is reflected in less disclosure requirements, lower transparency, weaker investor protection and capital market development. Traditionally, business systems in Asian economies favour concentrated ownership and family control when financial information is disseminated through family-based channels of influence (Millar et al., 2005). Most listed firms are family- or individual-controlled with appointments of board members being controlled by families with major ownership rights (Garcia-Meca and Sanchez-Ballesta, 2010). Further, Nam et al. (1999) identify Asian economies as bank-centered capital markets with firms being less motivated to provide disclosure to potential outside shareholders. Millar et al. (2005) suggest that voluntary disclosure in Asian firms is primarily a means to strengthen their competitive position in the market.

The differences among different types of economies have been the focus of attention of a number of recent studies. Based on a sample of European countries, Ernstberger and Grüning (2013) found substitutive relationship between corporate governance and the regulatory environment in when strong corporate governance serves as a bonding mechanism in a weak legal environment. They argue that voluntary disclosure is a response to a combination of factors including country-level and firm-specific characteristics when firms may respond to a weak legal environment by improving voluntary disclosure in order to gain legitimation and thus to be competitive in capital markets.

Based on the discussion,

H2: The association between the media coverage and the level of voluntary disclosure is affected by country-level governance mechanisms.

3. Research design

3.1 Sample selection

To investigate the effect of media exposure in different governance settings in this study the sample is limited to include companies from two countries representative of Anglo-Saxon (Australia) and Asian (China) economies that are located in the same geographic area (Asia-Pacific). This limitation allowed us to ensure that the required minimum level of disclosure is the same for all of the examined companies.

The sample used in the study consists of 200 publicly listed non-finance companies, including 100 Chinese listed companies and 100 Australian listed companies as at the end of 2012. Restricting our study to these two countries ensures that the required minimum level of disclosure is controlled

for all of the sample companies, as well as allowing the investigation of the role of the country's legal framework on disclosure (Ernstberger and Grüning, 2013). The sample size is consistent with prior research (e.g. Botosan, 1997; Chau and Gray, 2010; Guo et al. 2004; Wang et al. 2013) and is limited due to the time-intensive nature of manual data collection for disclosure items. A random selection of 200 representative firms based on their stock codes was undertaken. Banks and other financial companies were excluded since they are subject to additional reporting requirements and inclusion of these firms would have introduced differences in the voluntary disclosure measure in the sample. The data were collected from the following sources: 1) annual reports; 2) China Securities Market and Accounting Research (CSMAR) database for corporate governance and press coverage data for Chinese companies; 3) MINT Global database for financial and corporate governance data for Australian companies and financial data for Chinese companies; 4) Factiva database for press coverage data. The study follows Chau and Gray (2010) in assuming that disclosure in annual reports is positively correlated with firm's disclosure in other media and thus, serves as a proxy for the general level of corporate financial disclosure provided by a firm.

The year 2011 was selected for the following reasons. Though both Australia and China largely escaped the Global Financial Crisis (GFC), in 2008-2009 Australia was affected by the world-wide recession (Wang et al. 2013). This was reflected in negative GDP growth (World Bank, 2014) that was reverted in 2010. Thus, year 2011 was rather stable for economies of both countries. Further, since 2007 China mandated International Financial Reporting Standards (IFRS) conversion for all listed companies (ASIFMA, 2013), thus 2011 was a year of rather stable application of the new accounting rules.

3.2 Measurement

Table 1 summarizes the measures and data sources of all variables, which are described in detail below.

Voluntary disclosure is measured as the log of voluntary disclosure scores adopted from Wang et al. (2013). The index has been used extensively in prior studies to investigate the relationship between voluntary disclosure and various corporate governance mechanisms (Cheng and Courtenay, 2006; Garcia-Meca et al., 2010), ownership structures (Chau and Gray, 2010), firm value (Wang et al., 2013) and Asian and Australian studies (Wang and Claiborne, 2008). The list of voluntary disclosure items was carefully reviewed against requirements of listing rules to remove any items that are mandatory for disclosure.

Table 1. Variables definition

Variable	Measurement	Source of data
Experimental variables		
VDS	Voluntary disclosure index with 40 items across 5 information dimensions	Individual annual reports
Press	natural log of number of press mentions for each firm within the reporting period	Factiva/ CSMAR
Reg	The mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index.	Garcia-Meca and Sanchez-Ballesta (2010)
Control variables		
IndBD	Proportion of independent non-executive directors to the total number of directors on the board of directors	Individual annual reports/ MINT Global
Size	Firm size measured as market capitalization	MINT Global
Lev	The leverage defined as total debt divided by book value of equity	MINT Global
Crosslist	The number of countries in which the firm is listed	MINT Global
ROA	The return on assets defined as net income divided by the total book value of assets of the firm	MINT Global
Industry	The dummy variable based on industry groups formed in accordance with the SIC of the primary segment of the firm. The variable equals 1 when the firm belongs to Drugs (SIC 2833-2836), R&D Services (8731-8734), Programming (7371-7379), Computers (3570-3577), or Electronics (3600-3674), and 0 otherwise	MINT Global

Following Robbins and Austin (1986), once all the voluntary disclosure items were scored, an index was created to measure the relative level of disclosure. The scores for each item were added and equally weighted to derive a final voluntary disclosure index. The total score (TS) was calculated using the following:

$$TS = \sum_{i=1}^n d_i$$

Where,

$d = 1$ if the item d_i is disclosed, 0 if the item d_i is not disclosed

$n =$ the number of items which the company is expected to disclose

Disclosure was measured in 5 distinctive information dimensions, including employee-related issues, management-related issues, projected information, stakeholder interests, and historical data.

Following Ernstberger and Grüning (2013), the disclosure measures for 40 items across 5 information dimensions were aggregated using factor analysis ($KMO=0.91$). In robustness tests, the unweighted sum and logarithmic transformations were used to combine the 5 information dimensions.

Following Aerts et al. (2008) and Redmayne et al. (2010), press coverage is proxied by the total number of articles about the firm that appeared in major Australian and Chinese newspapers respectively. For Australian data the Factiva database was employed, while for Chinese data the CSMAR database was used. Both databases have

similar coverage for the main Australian and Chinese newspapers. To obtain the press coverage data, the databases were manually searched for news articles on each of the 200 companies. Following Bushee et al. (2010), press coverage data were defined as news wires (e.g. Reuters, Dow Jones, and the AP) because these sources execute editorial control over their content. Following Da et al. (2011), ticker symbols were employed to identify firms since ticker symbols (e.g., "WOW") are less ambiguous than company names and are more likely to reflect announcements related to financial information.

The country-level governance mechanism is measured through the legal enforcement variable *Reg* which is a proxy for investor protection and law enforcement regimes that affect disclosure choices (Chau and Gray, 2010; Durnev and Kim, 2005; Ernstberger and Grüning, 2013; La Porta et al., 1998; Lim et al., 2007). This variable is calculated as the mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index. The measurement was adopted from Allen et al. (2005), La Porta et al. (1998) and Garcia-Meca and Sanchez-Ballesta (2010).

Prior studies indicate that voluntary disclosure practices are affected by firm-level corporate governance mechanisms (Ernstberger and Grüning, 2013; Garcia-Meca and Sanchez-Ballesta, 2010; Wang et al. 2013). As one of the main corporate governance characteristics, existing literature suggests using the proportion of independent directors on the board, i.e. professionals without a

management role or ownership relationships with the company (Garcia-Meca and Sanchez-Ballesta, 2010). Patelli and Prencipe (2007) and Xiao and Yuan (2007) argue that independent directors have incentives to build and keep their reputation and, as a result, they may use disclosure to signal to the financial market that they are fulfilling their roles effectively. However, other studies show mixed results with no significant support for this relationship (Brammer and Pavelin, 2006; Cheng and Courtenay, 2006; Garcia-Meca and Sanchez-Ballesta, 2010; Hannifa and Cooke, 2005). As a measure of independence of the board of directors the *IndBD* variable was included in the model to investigate interaction of firm-level governance and disclosure practice.

Other control variables in the study are size *Size* (Chavent et al., 2006; Depoers, 2000; Ernstberger and Grüning, 2013), leverage *Lev* (Ernstberger and Grüning, 2013), internationality of firm financial market activities *Crosslist* (Olibe, 2006; Ramnath, 2002) and performance measures *ROA* (Ahmed and Courtis, 1999; Akhtaruddin, 2005; Chavent et al., 2006; Marston, 2003; Marston and Polei, 2004; Patten, 2002), however, prior research indicates mixed results in regards to these variables. Xiao et al.'s (2004) findings show that voluntary disclosure of listed Chinese companies are affected by firm size and leverage, but are not affected by firm performance and proportion of fixed assets. In other studies leverage and profitability are shown as significant factors (Garcia-Meca and Sanchez-Ballesta, 2010). Ahmed and Courtis (1999) argue that such inconclusiveness of results is due to differences in socio economic and political environments between countries.

Following Xu and Zhang (2013) and Guo et al. (2004), the model also includes a dummy variable *Industry*. Kasznik and Lev (1995) indicate that companies in high-tech industries are likely to employ aggressive accounting techniques. Thus, they are likely to attract an increased risk of shareholder lawsuits and may be motivated to disclose more information to prevent litigation. *Industry* variable equals 1 when the company belongs to high technology related industries, including Drugs (SIC 2833-2836), R&D Services (8731-8734), Programming (7371-7379), Computers (3570-3577), or Electronics (3600-3674), and 0 otherwise. *Reg* variable equals 1 when the firm belongs to Telephone (SIC 4812-4813), TV (4833), Cable (4841), Communications (4811-4899), Gas (4922-4924), Electricity (4931), Water (4941), or Financial sectors (6021-6023, 6035-6036, 6141, 6311, 6321, 6331), and 0 otherwise.

3.3 Method

To test the hypotheses the study employed the following ordinary least squares (OLS) regression model to examine the relationship between voluntary disclosure and the explanatory variables:

$$VDS = b_0 + b_1 Press + b_j Control_j$$

(Model 1)

$$VDS = b_0 + b_1 Press * Reg + b_j Control_j$$

(Model 2),

where

VDS is the disclosure index for each sample company; *Press* is the press coverage proxied via a number of press mentions during the reporting period; *Reg* is the country-level governance variable as described above; *Control_j* are control variables described above.

The regression coefficient *b₁* in Model 2 measures the interaction of press coverage and the legal environment with respect to affecting corporate disclosure. If the regression coefficient is not significant, this indicates that the impact of media on disclosure does not vary with the legal environment. If the regression coefficient is positive and significant, this indicates a complementary effect between these two factors. A significant negative coefficient indicates a substitutive effect between these two factors.

4. Results and discussion

4.1. Descriptive statistics

Following Cheng and Courtenay (2006), an audit of the voluntary disclosure items was performed on a sample of 20 randomly selected companies (10%) from the original sample of 200 firms to ensure that *VDS* is robust. The audit was administered by different personnel and the results were compared with the original scores. A Wilcoxon paired sign ranked test between the original scores and the audited scores demonstrated no significant difference (p-value=0.302), indicating the *VDS* measure is relatively robust to the subjectivity of individual scorers.

Descriptive statistics for the variables are reported in Table 2. The data was examined for possible outliers. The data were statistically distributed within reasonable ranges, suggesting no effect of extreme values. The data were also checked against the results of prior studies by Lo and Wong (2011), Redmayne et al. (2010); Wang et al. (2013), Wang et al. (2008).

Table 2. Descriptive statistics

Variable	Mean	Std. Dev
VDS	33.69	8.41
Press	2.21	1.44
IndBD	0.40	0.16
Size	6.20	1.49
Lev	1.10	2.23
Crosslist	2.41	1.96
ROA	5.40	12.11
Industry	0.15	0.36
<i>Notes:</i>		
Dependent variable:		
VDS	= voluntary disclosure index	
Independent variable:		
Press	= natural log of number of press mentions for each firm within the reporting period	
Reg	= mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index	
Control variables:		
IndBD	= proportion of independent directors on the board of directors	
Size	= firm size measured as market capitalization	
Lev	= total debt divided by book value of equity	
Crosslist	= number of countries in which the firm is listed	
ROA	= return on assets	
Industry	= dummy variable, 1 if the firm is in a high-tech industry, 0 otherwise	

Table 3. Pearson correlation results

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)VDS								
(2) Press	.058							
(3) Reg	-.360**	.395**						
(4) IndBD	-.075	.009	.115					
(5) Size	.163*	.455**	.202**	-.042				
(6) Lev	.052	-.009	.038	.063	.029			
(7) Crosslist	-.227**	.446**	.661**	.152*	.405**	-.033		
(8) ROA	.111	-.047	.074	-.113	.078	.004	-.104	
(9) Industry	.006	-.135	-.219**	-.036	-.096	-.021	-.188**	.036

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

<i>Notes:</i>	
Dependent variable:	
VDS	= voluntary disclosure index
Independent variable:	
Press	= natural log of number of press mentions for each firm within the reporting period
Reg	= mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index
Control variables:	
IndBD	= proportion of independent directors on the board of directors
Size	= firm size measured as market capitalization
Lev	= total debt divided by book value of equity
Crosslist	= number of countries in which the firm is listed
ROA	= return on assets
Industry	= dummy variable, 1 if the firm is in a high-tech industry, 0 otherwise

The results show that sampled companies publish 49.48 per cent of the list of voluntary

disclosure items. The data are consistent with the prior research of Wang et al. (2013) and show a

slight increase in voluntary disclosure since 2007-2010.

Table 3 presents the correlation matrix for the variables in the model. The results show that voluntary disclosure is positively correlated with company's size *Size*, corporate governance characteristics *IndBD*, crosslisting at international stock exchanges *Crosslist*, and is negatively associated with ownership structure *Own*. The highest absolute correlation coefficient between the independent variables is 0.661 between *Crosslist* and *Reg*, suggesting that multicollinearity does not

constitute a major problem (Cooper and Schindler, 2011).

4.2 Multivariate analysis

To address hypotheses *H1* and *H2* the study employed OLS regression. Table 4 summarises the coefficients and t-statistics (in parentheses) from using an OLS regression with heteroscedasticity-robust standard errors to estimate Model 1 and Model 2. The models explain approximately 25% of the variation in corporate disclosure for each of the model, Model 1 and Model 2.

Table 4. Regression results

Variable	Model 1			Model 2		
	Beta	p-value	VIF	Beta	p-value	VIF
Press	.16	.041	1.506			
Press*Reg				.17	.038	1.556
Reg	-.50	.000	2.645	-.50	.000	2.645
IndBD	.09	.910	1.037	.01	.910	1.037
Size	.16	.049	1.490	.16	.049	1.490
Lev	.07	.308	1.015	.07	.308	1.015
Crosslist	.02	.884	2.677	0.2	.888	2.677
ROA	.15	.030	1.123	.15	.030	1.123
Industry	-.06	.346	1.055	-.06	.345	1.055
Adj R ²	0.20			0.25		
<i>Notes:</i>						
Dependent variable:						
VDS	= voluntary disclosure index					
Independent variable:						
Press	= natural log of number of press mentions for each firm within the reporting period					
Reg	= mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index					
Control variables:						
IndBD	= proportion of independent directors on the board of directors					
Size	= firm size measured as market capitalization					
Lev	= total debt divided by book value of equity					
Crosslist	= number of countries in which the firm is listed					
ROA	= return on assets					
Industry	= dummy variable, 1 if the firm is in a high-tech industry, 0 otherwise					

Since regression analyses assume a normal distribution of variables, Mahalanobis' (1936) distance was calculated to ensure that all required logarithmic transformations were performed and all outliers were excluded. The results showed no significant outliers. To address multicollinearity concerns, variance inflation factors (VIF) were calculated. All of the VIF values are less than 2.7 which is below the acceptable level of 10, indicating no multicollinearity concerns in the dataset (Myers, 1990).

The coefficient of *Press* is significant and positive (p-value= .041) indicating positive effect of media coverage on voluntary disclosure level. This supports the hypotheses *H1* that there is a positive association between the press coverage and

the level of voluntary disclosure in listed companies. This finding is supported by the media agenda setting theory that assumes that the active role of media in society. The result shows that the closer attention of media may lead not only to an increased level of disclosure of environmental and social responsibility information (Aerts et al., 2008; Brown and Deegan, 1998; Islam and Deegan, 2010), but also to a higher level of voluntary disclosure in annual reports. Closer media attention puts pressure on management (Patten, 2002) who use additional voluntary disclosure in annual reports to legitimise the ongoing operations of the company.

The coefficient of *Press *Reg* (p-value= .038) is significantly positive, indicating that the impact

of media on voluntary disclosure is higher in countries with strong legal protection. The sign of this coefficient indicates a complementary relationship between media and country-level governance with respect to affecting corporate disclosure (*H2*).

The coefficient of *Reg* (p-value= .000) is significant and negative, supporting Ernstberger and Grüning (2013) in that voluntary disclosure is a bonding mechanism employed by firms in a weak legal environments.

The coefficient for *IndBD* is positive but not significant (p-value= .910). This is consistent with the prior research of Garcia-Meca and Sanchez-Ballesta (2010) who argue that association between board independence and voluntary disclosure is non-significant in Anglo-Saxon and Asian countries.

Consistent with prior research (Chavent et al., 2006; Depoers, 2000; Ernstberger and Grüning, 2013), the coefficient for *Size* is positive and significant (p-value= .049) which indicates that larger companies are more likely to provide a higher level of voluntary disclosure.

The coefficient of *Lev* is positive and not significant (p-value= .308). Prior research shows mixed results in relation to leverage *Lev*. Garcia-Meca and Sanchez-Ballesta (2010) identifies Asian economies as bank-centred while Anglo-Saxon economies are equity-oriented, thus the insignificance of the coefficient can be explained by the nature of our sample which includes entities from both economies.

The coefficient for ROA is significant and positive (p-value= .030), indicating that better performing firms show a higher level of voluntary disclosure since management is motivated to disclose detailed information to ensure the

continuance of their positions and remuneration (Chavent et al., 2006).

The results show no significant relationship for *Industry* (p-value= .346) and *Crosslist* (p-value= .884). Prior research shows mixed results for these variables with more recent studies indicating no significant importance of industry type and listing at international stock exchanges (Ernstberger and Grüning, 2013; Wang et al, 2013).

Overall, our findings support the media agenda theory suggesting a significant role of media in management decisions to disclose voluntary information. However, the link between corporate disclosure and media is not universal. It is mediated by the legal environment in which the company operates. This finding indicates that a decision to disclose is not only affected by firm-specific characteristics, but also is a response to external factors to maintain organisation's legitimacy.

4.3 Robustness tests

Several sensitivity tests were performed to test the robustness of the findings.

To test robustness of the results, the model was tested with alternative independent variables. First, sensitivity of press coverage measure was investigated. The model was tested using additional specifications of press coverage. *PressSrc* variable is calculated as the log of number of unique press sources that cover a firm during the reporting period (Bushee et al., 2010). *IndAdj* is a dummy variable equal to 1 if *Press* is greater than the median *Press* for the company's industry (Redmayne et al., 2010). *SizeAdj* is equal to *Press* divided by total assets (Redmayne et al., 2010).

Table 5. Regression statistics for alternative measures of press visibility

Variables	Beta	p-value	Adj R ²
Press	.16	.041	0.20
Press*Reg	.17 .17	.038	0.25
PressSrc	.15	.040	0.20
IndAdj	.14	.043	0.21
SizeAdj	.15	.042	0.21

Notes:

Press	= natural log of number of press mentions for each firm within the reporting period
Reg	= mean score across three legal variables, including the efficiency of the judicial system, an assessment of rule of law and the corruption index
PressSrc	= natural log of number of unique press sources that cover a company during the reporting period
IndAdj	= 1 if <i>Press</i> is greater than the median <i>Press</i> for the company's industry.
SizeAdj	= natural log of number of press mentions divided over the natural log of total assets

Table 5 presents the results of the regression models with the alternative press coverage measures. The results for *Press* and *Press*Reg* are

shown as per Table 4 for benchmarking purposes. The F-statistic for each regression is significant.

The results show that the findings are not sensitive to the way the press coverage is measured.

Further, to mitigate endogeneity concerns the development of voluntary disclosure index was analysed over time for several firms. The analysis showed the index to be fairly stable. Further, the countries' governance regime proxy was measured as anti-directors' rights index (Allen et al., 2005; Garcia-Meca and Sanchez-Ballesta, 2010). Alternative specifications for profitability, leverage and crosslisting were employed (Wang et al, 2013). The results of these regression analyses (not reported) were structurally identical to the results reported in this paper.

5. Conclusion

The purpose of this study is to investigate the effect of press coverage on voluntary disclosure in annual reports of listed companies. Using a sample of 200 listed companies in Australia and China and following the approaches of the prior literature, the disclosure variable was regressed on the press coverage variables as well as several company and country-level characteristics adopted from prior literature, including a proxy for the strength of the legal environment. An interaction term was also included between the proxies for press coverage and the strength of the legal environment. It was found that voluntary disclosure is affected by press coverage indicating that closer media attention encourages management to disclose additional information in annual reports. The results indicate that press is a powerful instrument that can be used not only for dissemination of corporate information (Bushee et al., 2010), but also as an instrument to encourage voluntary disclosure. However, the effect of the press coverage is mediated by country-level characteristics since the magnitude of the effect of media is affected by country-level governance mechanisms. The effect is stronger in countries with higher legal enforcement environment (Australia) and is less pronounced when legal enforcement is weak (China). The findings are corroborated by several robustness tests.

The paper contributes to the existing literature by providing further evidence that media is a source that affects voluntary disclosure practices in listed companies. Management decisions to disclose additional information are an attempt to legitimise company's operations when attention of the society is drawn to the company by increased press coverage. Further, the effect of media coverage is not uniform in different governance regimes. The results of the study suggest that it is more significant when legal enforcement is higher, so management can expect a stronger reaction in case of a legitimacy gap. Our findings indicate some potential differences in regards to Anglo-Saxon and

Asian economies require further investigation. Additionally, the results of our study suggest some propositions of practical importance for further consideration by policy makers, media representatives and companies' management.

5.1 Limitations and Future Research

The findings are limited due to the sample size which reduces the power of our tests. Sensitivity tests showed robustness of the results and confirmed significance of our findings. Thus, this limitation is not considered to be severe. Further, the sample is based on two geographical areas, Australia and China, which may limit generalizability of the results for other Anglo-Saxon and Asian countries. Further research is suggested to extend the findings to other countries, including countries in the Communitarian system. Further research is encouraged in regards to media exposure measures. In particular, magnitude of the press coverage may differ in regards to positive and negative news, different types of media as well as engagement with social media.

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