Use of Public Accountability Index (PAI) to assess the accountability practices of New Zealand Universities

Chenbo Guo, Zahir Uddin Ahmed, Humayun Kabir, Anil Narayan
Auckland University of Technology

Paper presented at the 8th Asia-Pacific Interdisciplinary Research in Accounting (APIRA) Conference, 13 – 15 July 2016, RMIT, Melbourne

Abstract:

This study explores the trends in public accountability of New Zealand universities. It applies the Public Accountability Index (PAI) developed by Coy and Dixon (2004) to eight New Zealand universities' annual reports from years 2000 to 2012 to assess the development of public accountability in this public sector. Coy and Dixon (2004) applied the PAI to New Zealand universities for the period 1985-2000. This study extends their study to explore the changes of accountability practices in New Zealand universities over the last 12 years. It finds that the information disclosed in annual reports of universities has changed over the years in terms of format, content, and length. However, the overall public accountability disclosures have not significantly changed for the period 2000 to 2012 compared to the previous study of 1985-2000. The study concludes that the changes of accountability practices is somewhat motivated by the legislative changes.

1 Background of the study

This study examines the accountability practices of New Zealand universities. The importance of accountability is always emphasized when talking about the effective operation of public sectors (Coy, Fischer & Gordon, 2001; Kluvers, 2003). Accountability plays a critical role in performance and in the decision making process (Kluvers, 2003). Stakeholders and citizens cannot manage large sized institutions directly, because of the complexity of the public sector. Previous research concentrated on the trends in New Zealand university accountability from the 1980's to 2000 (Coy & Dixon, 2004). There have been important developments in the university sector since 2000. However, there is no recent research focused on the more recent developments in public accountability in New Zealand. This research applies the Public Accountability Index (PAI) developed by Coy and Dixon (2004) to eight New Zealand public universities' annual reports from years 2000 to 2012 to assess the recent trends in public accountability in New Zealand. As mentioned by Van der Laan (2009), legitimacy theory may "provide greater insights into managerial motivation for disclosure" (p. 6). Legitimacy theory implies that organizations are bound by a social contract to perform socially desirable actions. However, no study has been conducted to study the relationship between legitimacy theory and accountability in New Zealand. Considering the background and motivation of the study above, this study addresses the following research question: What are the recent trends in accountability for universities in New Zealand?

This paper is organized as follows: the next section examines previous literature on accountability related to the public sector. The third section provides a short background on the New Zealand reporting system and legislation. The fourth section provides an oversight of the legitimacy theory framework. The fifth section describes the research methodology adopted by this research. The final section discusses the results of the analysis and explains how legitimacy theory links to these results. The final section gives a summary of this research and its limitations.

2 Literature review

2.1 The role of annual report in accountability

The meaning and scope of accountability keeps expanding all the time. Earlier accountability was mainly articulated to account for one's actions Such accountability has the following characteristics: it is external, it involves exchange and social interaction, and it involves rights of authority (Perrone & Strandberg, 1972; Finer, 1941).. Accountability is external because it makes organizations accountable to other people or bodies outside the organization. Moreover, it involves the process of seeking rectification from the other side, i.e., of being held accountable (Mulgan, 2000). Accountability also implies rights of authority. Superior authority attempts to assert the right to impose legislation and to demand information.

In recent years, the concept of accountability has been extended from those central concerns. Nowadays, accountability is related primarily to responsibility in the relevant literature. It also implies a moral obligation. Bovens (1998) pointed the distinction between accountability and responsibility. Accountability is concerned with external functions, such as imposing sanctions and calling to account. Responsibility is concerned with individual professional ethics and morality. Another extension of accountability is imposing control over organizations. Superiors use accountability as a mechanism to make agents do what the public and their superiors want. Thus, the problem of accountability becomes how public organizations do their bidding. Therefore, there are some other institutions involved, like legislation courts and other statutory institutions. On a narrow point of view, legal organizations such as administrative tribunals, ombudsmen and auditors are institutions of accountability, because they can call public organizations to account. Accountability may be associated with certain procedures in the modern legislature when government enquires members to explain their actions and decisions.

The annual report is considered a primary medium for accountability in the relevant literatures (Boyne & Law, 1991; Dixon et al., 1991； Steccolini, 2004). Nelson, Banks & Fisher (2003) identify two main purposes of annual reports as decision usefulness and accountability. It has been argued that public accountability is a more complex concept than private accountability (Sinclair, 1995). The relationships involved in public accountability are in between citizen and public organization; public sector and government; government and legislation sector, and citizen and government (election). Some research has tried to classify the different types of accountability and argues that different accountability relationships affect the information given by entities. Sinclair (1995) identified five different types of accountability, including “public accountability”. When talking about public accountability, information is directed to the public and interested groups. It emphases on that the public have the right to know how execution processes and decisions have been made (Coy & Pratt, 1998).

The presentation of annual reports is a cycle of accountability. It begins with a report of intention, and ends with reports showing the results. Boyne and Law (1991) assert that annual reports are comprehensive statements of “stewardship” for the public. However, it has been argued that there is little public interest in the financial report as a part of an annual report (Jones, 1992). Patton (1992) suggested that many individuals do not use governmental financial reports. Users of annual reports are interested in different parts of information, for example, government and managers are interested only in compliance with policies and efficiency of operation. Steccolini (2004) studied the recipients of government annual reports and found that the internal members, not the citizen, are the main users of annual reports. Even though arguments have arisen on how useful the annual report is, the annual report is still important. As illustrated in Coy et al. (2001), a wide range of information is summarized in annual reports and all stakeholders are enabled to have a comprehensive knowledge of the goals and performance of universities. Annual reports are un-substitutable because no other single document can provide stakeholders with access to as much comprehensive information in financial and non-financial terms. Thus, the annual report is an important reporting medium for accountability.

2.2 Public accountability Index

Accountability makes organizations accountable to external parties. The annual report is a primary medium for accountability as it provides comprehensive information on an organization’s operation (Boyne & Law, 1991; Dixon et al., 1991； Steccolini, 2004). Annual reports of tertiary institutions have changed significantly due to the changes in governance, funding allocation and reporting environment since the 1980’s (Coy & Dixon 2004). However, it is a complex task to measure accountability through annual reports. This suggests that a broad view on reporting is necessary, rather one concerned with limited issues, such as assessing financial information or performance scorecards (Coy et. al., 2001). To assess public accountability of universities, the researcher needs to consider comprehensive information about the performance, activities, and condition, along with social, political and economic interests. A parametric disclosure index, the Public Accountability Index (PAI) is used in this study to understand how accountability is discharged by the New Zealand universities.

The primary research that examined public accountability in tertiary institutions through assessing annual reports with a dichotomous index was done in 1991. Dixon et al. (1991) sampled annual reports from seven universities from 1985 to 1989. All annual reports were analyzed for 45 items, which were chosen using NZSA's (New Zealand Studies Association) requirements. The 45 items can be divided into eight categories: statement of objectives; service performance; cost of services; cash flows; financial position; resources; commitments; accounting policies and other items. Each item was given a score of one or zero. A score of one means that item was disclosed in the annual report regardless how favorable the disclosure. A score of zero was given if there was no disclosure about that item in the annual report.

However, this method was replaced by the Accountability Disclosure Score (hereafter AD-Score), because of the deficiency of the previous method (Coy, Tower & Dixon, 1993). The old index gave equal weight to all items. In this way, unimportant information was assigned the same weight as important information. Consequently, imbalance in annual reports was not considered. Coy et al. (1993) reduced the disclosure index items from 45 to 43. In the AD-index, all items were evaluated using a four-point ordinal scoring system and weighted differently according to their importance from public perspective. Excellent disclosure was scored at 3 points. Non- disclosure of that item was scored as 0 points. Each item was weighted on a three-tier scale. The more important an item is, the higher the score. The AD score disclosure level of each item is integrated with the importance of that disclosure in the public's mind. Consequently, the rank of accountability for tertiary institutions had been changed. This method was modified in 1994. Timeliness was added to the disclosure index. The 43 items were reduced into 25 items with a broader scope. The ordinal scoring scale was extended to 6 points instead of 4 points (Coy & Dixon, 2004).

Coy and Dixon (2004) developed a new disclosure index named the Public Accountability Index (PAI) to test the quality of public accountability in universities. The researchers sent out a survey to the annual report audience. The survey included questions about the information of importance for the audience and the relative importance of the items from a public perspective. The index captured public ideas about what information should be disclosed and how important that information is. A Delphi opinion-seeking exercise was carried out when deciding the importance and relevance of disclosure items. Participants were asked for their interests and opinions in turn. Multiple rounds allowed participants to reconsider their opinions. This should improve the reliability of responses over the “one round only” method. Thirty-nine participants were involved in the Delphi test and their opinions were transformed into a 58 items index. The 58 items were classified into eight categories. The PAI also adopted 100 as the total weighting of 58 items. Different items were weighted differently. The more important items from a public perspective were assigned a higher weighting score.

3 New Zealand Legislation background

3.1 Legislation in 1980s and 1990s

To investigate the change in public accountability, it is important to look at the New Zealand legislation environment for reporting. In late 1980s, the New Zealand Society of Accountants 1987, State-owned Enterprise Act, the Statement of Public Sector Accounting Concepts and the Public Finance Act 1989 were released. Consequently, universities were required to disclose much more financial and non-financial information in New Zealand. The reform of legislation lead to better reporting practices from the late 1980’s to the mid-1990’s. Dixon et al. (1991) support the improvement in accountability during this period. The word “accountability” was first used in the State-owned Enterprises Act of 1986. All State-Owned enterprises were required to publish a statement of intent (to cover the next three years), an annual report and an auditing report every year.

As the professional body which set accounting standards, New Zealand Society of Accountants (NZSA) made some effort to improve accountability. The Statement of Public Sector Accounting Concepts was released to set up an accountability framework. Universities were encouraged by the Audit Office to comply with the pronouncement of the NZSA. However, the pronouncement discussed a basic accountability framework only. Other information, such as employee information, was not included. Therefore, the accountability of universities was limited at that time. Similarly, in the Education Amendment Act 1990, universities are required to provide an operating statement that should include the yearly income and expenses of the university. A breakdown of non-financial information was not discussed in that Act.

3.2 Recent changes of provision

TEC (Tertiary Education Commission) requires all TEO (Tertiary Education Organization) reports to include some key requirements, as follows:

-Reporting on the investment plan

-Reporting on funding as described in funding agreements delivered outside an investment plan

-Any reporting related to relevant sections under Education Act of 1989.

The Education Act, 1989, section 220, (4), clearly states the responsibility to provide an annual report: "…council of the institution shall report on the operation of the institution to council as soon as possible after the end of the academic year". In addition, the auditing report and statement of responsibility should be included in annual reports under both Section 154, Crown Entities Act, 2004 and Section 220 of the Education Act of 1989. According to the regulations, not only is the content of annual reports standardized but also the timeline for producing annual reports is required to comply with the regulations. Furthermore, annual reports should include items: equal opportunities employment summary and account, an account of how council removes barriers to the progress of students, an account of how council develops programs to attract students from different groups in the community, and a service performance statement to compare outcomes with the plan. It highlights a brief framework for annual reports designed to make sure that tertiary education organizations provide enough information for governance and the public. It also answers queries as to why universities have programs, such as Chinese and Pacific student tuition programs. These make sure all students have an equal study chance. In other words, the annual reporting can affect the actions of organizations by compulsorily requiring reports on specific programs. This confirms Bovens (2007) contention that annual reporting can improve performance. One important amendment of the Education Act 1989 is a new section 100 substituted in 2010. It specifically required that annual reports should be available for inspection by members of public during school open hours. The new section highlighted the importance of public accountability and transparency.

As well as the non-financial information, departments must provide the annual financial statement according to section 45B under Public Finance Act 1989. Departments must also provide a report of intention on future operations as well. The requirement for the intention report implies that government controls universities and the method of control might involve funding distribution.

3.3 Crown Entities Act 2004

This act aims to reform the legislation relating to Crown entities to "provide a consistent framework for the establishment, governance and operation of Crown entities and to clarify the accountability relationship between Crown Entities, their board members, their responsible Ministers on behalf of the Crown, and the House of Representatives" (Crown Entity Act 2004, section 3, 175). One of the main purposes of this act is to set out reporting and accountability requirements. Sections 150 to 156 require Crown Entities, including universities, to prepare annual reports according to the law.

The Crown Entities Act 2004 section 151, (2) also states "…the annual report must be provided with relevant information to enable an informed assessment of the operation and performance of that entity". Section 150, (1) states that a Crown entity must prepare annual report "…as soon as practicable after the end of each financial year." This section clearly emphasizes timeliness in preparing annual reports. Section 153 states set out the statutory requirements for preparing a statement of service performance. A statement of service performance must comply with GAAP; describe the outputs of each class supplied by the entity and include the standard of delivery performance achieved by the entity and the income and expenses incurred. Section 154, (3) requires the annual financial statement to comply with GAAP. The responsibility of the Auditor-General is clearly stated in section 156, (2) as well.

Section 3 gives an overview of the relevant legislation on annual reporting. It is important to look into the changes in legislation, as they are an important factor in the reporting environment, and help to explain the results. In summary, all financial information needs to comply with GAAP as stated in the Crown Entity Act, 2004, and the Public Finance Act, 1989. Accounting standards set up the framework and presentation for financial information clearly. The availability of the annual report has been emphasized since the 1990's by law. In the Crown Entity Act, 2004, the timeliness of annual report publication was clearly stated. The education Act, 1989, required the disclosure of community information. However, there was no detailed standard for community information disclosure. Compared with the old regulations, the new regulations clearly define some blurry concepts. For example, the Crown Entity Act listed what statements should be included in annual reports and what procedures should be followed when preparing annual reports, and defined each statement in annual reports. One big difference is that the timeframe for preparing annual reports and their required publication date are stated in the act.

4 Theoretical Framework: Legitimacy Theory

Legitimacy theory has been widely used by accounting researchers in social and environmental accounting areas. Previous literature states that the reporting environment affects the level of annual report disclosure. Legitimacy theory is an explanatory factor for environment disclosures (O'Donovan, 2002). Legitimacy theory comes from political economy theory and agrees that an organization is a part of society (Deegan, 2006). The meaning of organizational legitimacy can be described as from point of view of organization: "Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" stated in (Suchman, 1995). In terms of Lindblom (1993), legitimacy always keeps dynamical with changing expectation for interrelated corporate output, methods and good. According to Hogner (1982), corporate social disclosures should be taken as legitimated activities. In this way, the reaction to community expectations can be managed or handled with legitimacy theory. This theory can be applied to varieties of corporate strategies, especially for strategies related to public information in an organization's disclosure, and can be utilized to account for voluntary disclosure in corporate annual reports (Deegan, 2006). Legitimation provides a chance to increase the awareness and concerns of the community, so that firms will take actions to make sure that the community can accept their performance and actives, and engage in social and environmental disclosure activities (Archel, Husillos, Larrinaga & Spence, 2009; Wilmshurst, 2000). Ahmad and Sulaiman (2004) list earlier reasons for disclosure from a legitimacy perspective. Respondents received a survey asking them to indicate important reasons for disclosures in annual reports. The results show that the most important reason was meeting legal obligations. The subordinate reason is to provide a "true and fair" view of their operation and to give shareholders free access to information.

Legitimacy will be influenced when organizations do not follow the expectations of society or the public (Deegan, 2006). Sometimes, organizations may not handle the disclosure information very well, which means the information does not represent society's expectation. As a result, from another perspective, a desire for legitimacy, rather than the operation of the corporation or organization may affect the disclosure message. However, there is a lack of evidence that disclosures can influence a change in the organization's perceived legitimacy. The expectations of communities should be considered in relation to legitimacy disclosures. This is because the organizations' disclosures are consistent with the communities' expectations, or may be made in order to change those expectations. Besides, to reinforce or to mend legitimacy is more difficult than to control or maintain it (Ashforth & Gibbs, 1990; O' Donovan, 2002). The tactics of maintaining legitimacy and the strategies for mending legitimacy were introduced in Suchman (1995) and O'Donovan (2002) respectively. Based on the community viewpoint of organizations' actual work, legitimacy is introduced. It is always affected or controlled by the way corporate disclosure operates (Deegan, 2006).

The central idea or concept of legitimacy theory is the social contract, which is utilized to explain a group of expectations of how organizations manage their activities for a society (Deegan, 2006). As mentioned above, it is expected that organizations can or will abide by the rules of social contract. In addition, different managers have different understandings for the expected behavior of organizations, so that the details in any social contract will be different (Deegan, 2006). This concept of the social contract was proposed by philosophers formerly, and has been applied to accounting research recently (Deegan, 2006).

Society and its relevant expectations are important to legitimacy theory. However, in reality, society is comprised of different groups that have different powers and different effects on other groups' actions (Deegan, 2006). This unbalance will influence the applications of legitimacy theory. Meantime, stakeholder theory has contributed to help to deal with this problem. It emphasizes the power diversity of different stakeholders. In this way, a set of social contracts from a variety of stakeholder groups will be provided to organizations. The power of stakeholder groups is going to decide how the organizations would like to follow the contact. Different stakeholder groups may offer legitimacy that contributes to the expectations of society, but not all entities need the organization's legitimacy. This not only offers precise consideration to society and the public's expectations, but also predicts whether the related organizations will comply with the expectations of society or not. By applying legitimacy theory, some environmental issues are addressed and discussed through the annual report, thus enhancing perceptions of management's responsiveness to the community (Deegan & Rankin, 1996; Wilmshurst, 2000). An empirical test of legitimacy theory for Ullmann's hypothesis examines the annual report for strategic position, financial performance and environmental disclosure information (Magness, 2006).

There are still many researchers who doubt whether legitimacy theory can provide an explanation for corporate voluntary disclosures. This theory is still developing (Bebbington, Larrinaga & Moneva, 2008; Deegan, 2002; de Villiers & Staden, 2006), and needs to be self-perfecting and further developed in the future (Deegan, 2007; Neu, Warsame & Pedwell, 1998). Even though it has various applications, it cannot to deal with the bigger system problems, like the ability of capitalism to supply the needs of sustainable development. However, it is useful for this research, and related to the analysis of university annual reports. Some published papers addressed the possibility that the issues caused by voluntary disclosures may not be solved by government intervention (Adams, Coutts & Harte, 1995; Criado, Fernandez, Husillos & Larrinaga-Gonzalez, 2008; Larrinaga, Carrasco, Correa, Llena

& Moneva, 2002). Based on these, there are two connotations for legitimacy theory: the demand for reworking the hypothesis so that firms can contribute to its development for their activities, and the role of government in progressing business legitimacy. Deegan et al., (2002) examines the positive relationship between the concerns of the media and the volume of disclosure of social and environment issues from the annual reports of BHP between 1983 and 1997. The effect of legitimacy theory on disclosures in organizations in Jordan has been analyzed and discussed using a linear regression model (Ismail & Haddaw, 2014). By applying different dependent variables, like the continuity of the organization, media and closure organization, legitimation of the organization has been demonstrated by the relationship between mean and variance for different independent and dependent variables. With legitimacy theory, the relationship between the performance of mandatory environmental disclosure and actual environmental performance has been examined (Luft Mobus, 2005). The results show that mandatory disclosure may offer a poor representation of real environment performance.

5 Research Method

5.1 Data collection

In this research paper, quantitative content analysis methodology is used to analyze annual reports by coding text data into 45 categories concerning issues of public accountability. The data collected for this study includes all full-length annual reports for all New Zealand universities from 1996 to 2012. The public accountability Index is employed when scoring the information in annual reports. The PAI scores were examined to analyze recent trends in accountability for universities.

Content analysis has been widely used in accounting research. It provides a flexible way to analyze text data (Cavanagh, 1997). Hsieh and Shannon (2005) describe content analysis as various analytic approaches ranging from interpretive analysis to systematic analysis. Content analysis may be classified as either a quantitative or a qualitative approach. This research employs quantitative content analysis (sometimes called quantitative analysis of qualitative data). Riff and Lacy (2014) provide a brief definition of quantitative content analysis as “a systematic assignment of communication content to categories according to rules, and analysis of relationships involving these categories using statistical methods”. This technique involves the processes of drawing samples of content, coding the content using category rules and measuring reliability when applying rules. Then the data are analyzed statistically to present the relationships between the content examined. Quantitative content analysis can help the researcher to obtain insight into historical change over time by the analysis of texts. It interprets texts into numbers according to rules. Complexities of language used in annual reports can be simplified by employing quantitative content analysis. Quantitative content analysis uses inductive reasoning that works from bottom to top. As described by Thomas (2015), inductive analysis is an approach that uses raw data to derive concepts. This research begins with the analysis of annual reports to explore the recent trends in accountability and relationships between legitimacy theory and public accountability. There is no assumption or hypothesis at the beginning. It builds on raw data (annual reports) to investigate what is the recent trend for universities’ public accountability in New Zealand.

The analysis focuses on annual reports from 2000 to 2012 at four yearly intervals. Coy and Dixon (2004) analyze the annual report from 1985 to 2000. So to investigate the trend of accountability of New Zealand universities in more recent years, reporting period 2000-2012 were chosen. The study initiated from 1996 to check the reliability of the coding process used in previous study. Data collection is a process of preparing and collecting data. Data is analyzed and interpreted after collection (Bryman & Bell, 2007). According to Riff and Lacy (2014), quantitative content analysis involves the processes of drawing sample, coding and analyzing data statistically. This research focuses on public accountability for all universities in New Zealand. The sample was drawn from all eight public universities in New Zealand (including the University of Auckland, AUT University, Massey University, Lincoln University, University of Canterbury, University of Otago, University of Waikato and Victoria University of Wellington). The focus of this research is annual reports. All annual reports for universities are easy to access online and are available to the public.

The annual reports examined in this study cover a period of 12 years from 2000 to 2012. This period was chosen for the following reasons:

1. In Coy and Dixon 2004, they apply the PAI to annual reports from 1985 to 2000. This study focuses on the recent changes of public accountability in universities.
2. To ensure the coding process is in accord with the rules (PAI), we apply the PAI to annual reports in 1996 and 2000, and compare the results with Coy and Dixon's. If the results are consistent between those two results, the coding process is reliable. If the results are different, we adjust the coding benchmark to make sure that the logic used for scoring in this research is consistent with Coy and Dixon's research.

5.2 Data Analysis: Applying the PAI to annual reports

As explained earlier, when developing the PAI, Coy and Dixon (2004) carried out an opinion-seeking exercise: the Delphi exercise. Thirty-nine selected participants filled in a questionnaire asking about the relative importance of different features of annual reports. Three major categories were identified in the PAI: Overview, Financial and Services disclosures. Those three board categories were subdivided into eight specific categories. In addition, these eight categories were subdivided into 58 items.

As explained in Coy and Dixon (2004), all information in annual reports is categorized into 58 items, including timeliness, financial, servicing, etc. Following the scoring method in Coy and Dixon (2004), all information was scored from 0- 10 according to how well the information is provided to public. 0-10 likert scale was used when scoring the disclosure items. The benchmark is 5. The item would be scored as 0 if there were no disclosure for that item. The item would be scored as 5 if the disclosure just meets the benchmark set by Coy and Dixon. The better the disclosure is, disclosure item is assigned a higher mark. The item would be scored as 10 if the disclosure were sufficient according to the criteria set by Coy and Dixon. Benchmarks were set up when evaluating the disclosure levels. The benchmark is not an average score but a score considered a quality disclosure that annual reports should achieve from a public perspective. A higher mark means better accountability. A disclosure would be scored as 6 if it disclosed 10- 29% more than the benchmark. A disclosure would be scored as 4 if it disclosed 10-29% less than the benchmark. Each category was allocated a different weight according to how important the information is from public perspective. One hundred is the total weighting score and it was spread out among the different categories as follows:

Table 5.1 PAI weighting for eight categories

Timeliness	10
Overview: report	7
Overview: university	10
Financial	25
Service: general	8
Service: teaching	25
Service: research	13
Service: community service	2

As shown in the diagram above, the total weight for all categories is 100. The weight of timeliness is 10 out of 100. The weight of overview: report is 7 out of 100， Overview: university is 10 out of 100, financial is 25 out of 100, etc. As shown in the diagram: the most important categories are financial and teaching services from a public perspective. The financial information shows how universities use the funding. Teaching services are highly linked to the teaching quality of universities. The weighting above shows the importance for eight categories. At the same time, within each category, a total weighting of 100 was allocated to each disclosure item. The detailed weightings are listed in the Appendix.

By multiplying the score for a given informational category by its weight and dividing by the benchmark a comprehensive accountability score is calculated. A higher comprehensive accountability score for a specific information category means valuable, “good quality” information is disclosed to the public, and the information disclosed meets the public demand. For example, the table below shows partial weighting and PAI scores for Overview: report category of University of Auckland for year 2004.

Table 5.2 PAI for each item and category*

Overview: report	Weighting	Score	PAI for item

Auditors' report	*25*	6	30
Statement of accounting policies	*25*	5	25
Directory information	*20*	6	24
Statement of managerial responsibility	*20*	5	20
Brief summary	*10*	0	0
PAI for category			99

**PAI weighting for items are listed in Appendix*

As explained earlier, the weight for overview: report is 7 out of 100. When calculating the comprehensive PAI score, a total weighting of 100 was allocated to each disclosure item. In the table listed above, there are five items included in Overview: report category. The total weighting of those five items is 100. The weighting for Auditors' report is 25 out of 100 in this category. The disclosure level for this item is scored as 6.

The PAI for Auditors' report item is calculated as: (25 x 6)/5=30

In this case: the PAI for Overview: report category is: 30 +25+24+20+0=99

The date on which annual reports were posted was recorded for scoring timeliness. The benchmark for timeliness is 12 to 13 weeks. The score for timeliness reduces by 1 point if the annual report was published two weeks later. If annual report was published within 14 days of the balance date, a score of 10 is given. If annual report was published after 23 weeks after the balance date, the lowest score of zero will be given.

The finding in table 1 lists the PAI scores for eight universities in New Zealand for years 1985 to 2012. (The figures from 1985 to 1996 are from previous research by Coy and Dixon 2004, and the figures from 2000 to 2012 were measured by the researcher using the PAI index.) A line diagram was drawn according to the PAI scores from1985 to 2012 according to the analysis result to give a broad view of public accountability changes in annual reports. This allows some predictions to be made for public accountability in next few years. This research focuses on the period of 12 years (2000– 2012). The PAI scores for each sub- category were listed and analyzed individually, in order to explore the changes in PAI scores for each sub-category.

5.3 Validity and Reliability of Data

In this study, one researcher scores all annual reports. The reliability of data may be questionable. To improve the reliability of data, we examine the PAI score for year 1996 and 2000 as well. In Coy and Dixon (2004), the annual reports from the 1980s' to 2000 were scored by PAI. This study applies PAI to annual reports for eight for year 1996 and 2000 and compares the result with the result in Coy and Dixon (2004). By comparing the overall score and the score for sub- categories, the result in this study in 1996 and 2000 were shown to be consistent with the result in Coy and Dixon (2004). Correlation coefficient between our PAI score and PAI score from Coy and Dixon (2004) is calculated. The result is shown as table below:

Table 5.3 Correlation between this study and Coy & Dixon (2004) in 1996 and 2000:

	1996	2000
Auckland	0.95628	0.97945
AUT	0.96987	0.98742
Canterbury	0.98677	0.97125
Lincoln	0.97829	0.97107
Massey	0.97973	0.98014
Otago	0.97625	0.97743
Victoria	0.97725	0.98348
Waikato	0.98129	0.98207

All of the correlation figures are very close to 1. As shown in the table above, the lowest correlation is 0.95628 and the highest correlation is 0.98742. The result implies that the PAI we got for the years 1996 and 2000 are very similar to Coy and Dixon's (2004) data for those two years. In addition, this research follows exactly the same measurement when scoring the information in annual reports to get consistency of measurement.

To make sure the analysis is as inclusive as possible the researcher read through the annual reports and allocated each part of information into different items (all statements, diagrams and pictures were evaluated as well). The page number for that information was recorded at the same time. After all the information was scored, the researcher reviewed the page number to make sure that every single page had been recorded.

Section 5 explained the research method employed in this study and how to apply PAI to get data. To summarize, content analysis is selected in this research as the most appropriate method of analysis as this study explores the incidence of discourse in annual reports. As explained in Wilmshurst and Frost (2000), the activities of an organization are related to disclosures. This study selected annual reports for eight universities from years 2000 to 2012 to investigate the recent trend of public accountability. This research applies the PAI developed by Coy and Dixon (2004). To check the data validity, we applied the PAI from the years 2000 and 2012, and calculated the correlation of our data with the data of Coy and Dixon (2004).

6 Results and discussion

6.1 The overall PAI from years 1985 to 2012

Table 6.1: Overall PAI for eight universities from 1985 to 2012

NZ University Annual Reports								
Public Accountability Index Score Scores, 1985-2012								
Year	1985	1988	1992	1996	2000	2004	2008	2012
Auckland	11	13	35	54	71	66	68	69
AUT		12	41	70	68	68	69	70
Canterbury	11	11	42	58	65	62	56	57
Lincoln	10	11	44	67	54	52	56	59
Massey	11	20	49	66	64	70	74	74
Otago	11	12	42	70	83	82	86	87
Victoria	10	12	54	84	61	61	60	61
Waikato	8	40	58	72	58	58	60	61
Mean	10	16	46	68	66	65	66	67

The PAI scores from 1985 to 1996 are cited from Coy and Dixon, (2004)

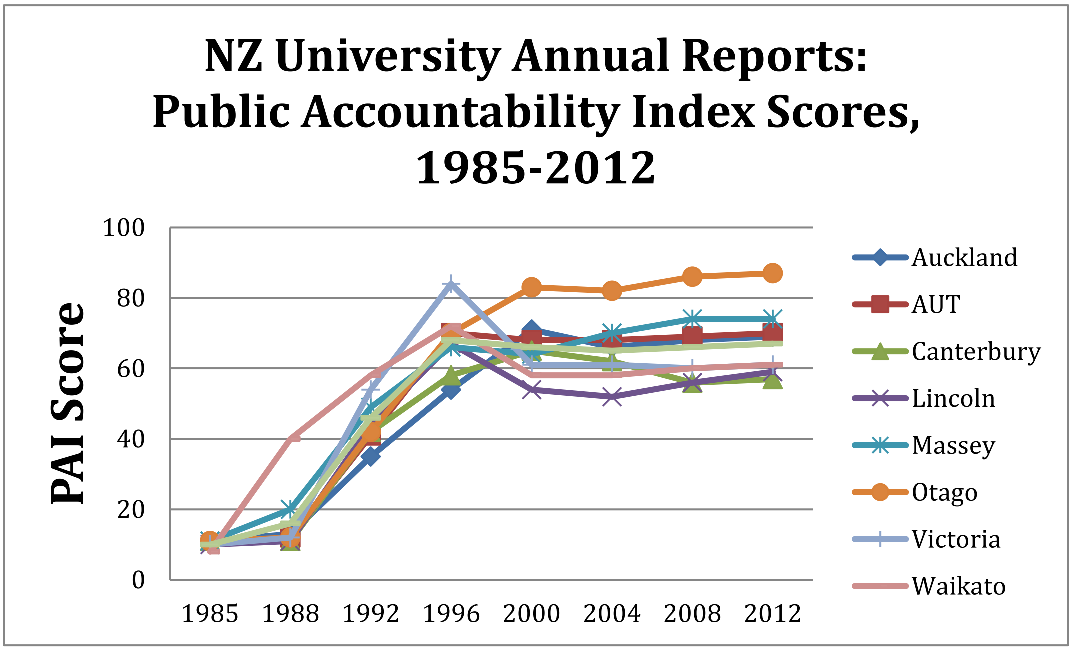
Table 6.1 lists the PAI scores of eight Universities from years 1985 to 2013 in New Zealand.

The index above is described as a single number that represents the score of all items. The data accountability score for eight universities from 1985 to 1996 are cited from Coy and Dixon （2004）. This research reapplies the PAI to annual reports from 2000 to 2012.

Means of the PAI for eight universities were calculated to examine the overall accountability of tertiary education institutions in New Zealand. The diagram below shows the trend of public accountability from 1985 to 2012. The average PAI score for 2012 is 67 and that is considered as acceptable reporting quality and disclosure compared with the PAI score in previous years. One thing to bring to researchers' attention is that annual reports were getting longer and longer from 1985 to 2012. However, accountability did not improve significantly after 2000. In other words, the length of annual reports does not necessary represent their quality.

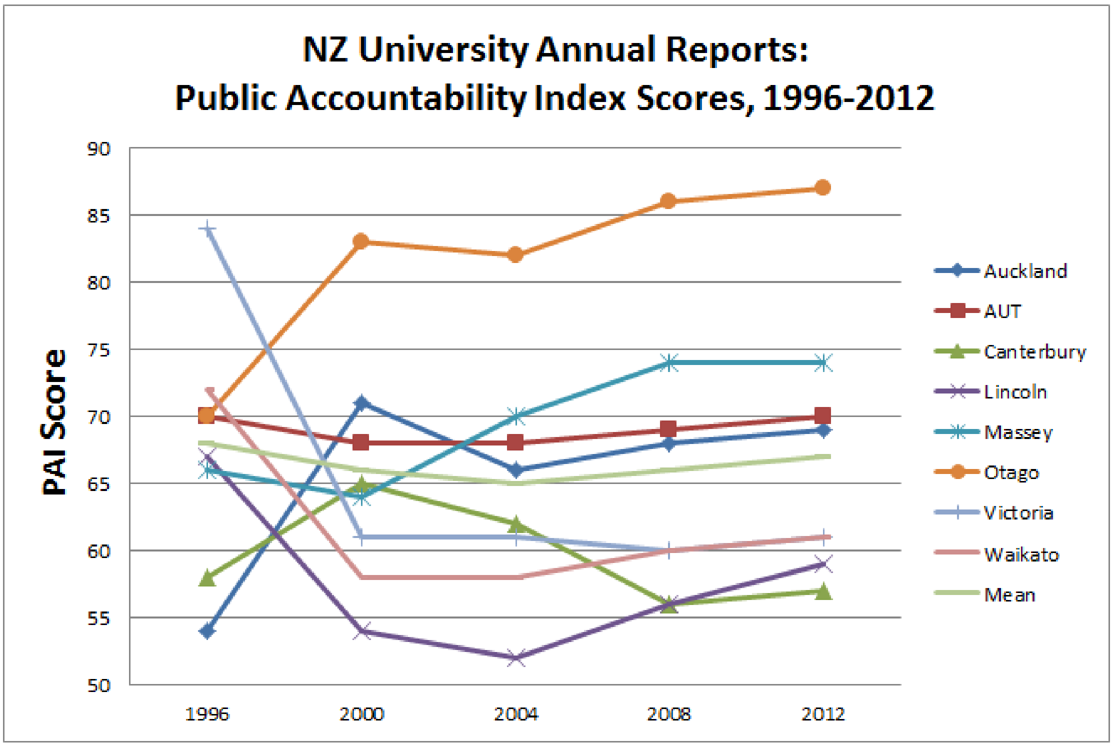
To focus on the reporting quality in this research, three levels of reporting are revealed. The first level (bottom level) includes all annual reports with a total PAI score below 40. As shown in the table above, none of the PAI scores for annual reports between 1985 and 1988 is in excess of 40 points. The disclosures during this period are associated with the provision of financial statements only with little reporting of non-financial activity. The annual reports during that period are very short and non-uniform. Different universities present annual reports in different ways, such as length, order of chapters and contents. Annual reports are considered as an accounting tool in that period as they mainly report the financial activities in earlier annual reports. The second level coincides with reports with PAI scores between 40 and 80. This is an acceptable level of disclosure. All annual reports after 1992 are in this level. The annual reports in this period contain a broader range of information, instead of just financial statements. More components are added into annual reports, such as the vice chancellor's report, and the service report on performance, research and community. More information is available for the public that allows prediction on the future movement of the university. The availability of both a statement of intent and annual reports allows the public to track whether universities have done what they promised, or intended, to do. The third level (top level) coincides with reports with PAI over 80. This level reflects a high level of disclosure from the public perspective. Victoria University was given 84 in1996 as overall PAI, and Otago maintains a high quality of annual reports after 2000.

Figure 6.1 trends for overall PAI from 1985 to 2012



This diagram shows that how overall public accountability changes since 1985 to 2012 using four yearly intervals. The results show that public accountability increased dramatically from year 1985 to year 1996. From year 1996 to year 2000, the change in accountability is non-uniform. Lincoln, Victoria and Waikato universities show significant decreases in overall PAI between 1996 and 2000. On the contrary, Auckland, Canterbury and Otago show significant increases in PAI between 1996 and 2000. The Overall PAI for the remaining two universities: AUT and Massey; remain at a similar level. However, from years 2000 to 2012, the PAI scores for eight universities remain a similar level. The overall PAI represents the average accountability of universities only, but not the change in each category. For example, a big improvement in 'timeliness' and a big decrease in 'service: financial' may happen in the same year and may cause the overall PAI remain the same. In other words, overall PAI cannot address what happened exactly. It is necessary to study the change in each category over the years. As showed in the diagram above, the disclosure level of Otago was ranked as Number one after the year 2000.

Figure 6.2 recent trends from 1996 to 2012



The magnified diagram above shows overall PAI scores from years 1996 to 2012. It enlarges the changes in PAI scores. The PAI scores change differently from 1996 to 2000.

Even though the mean of eight universities remains at the same level: between 65 and 70; from years 2000 to 2012, the trend for each university is different. Canterbury dropped from 65 to 57 from year 2000 to year 2012. Otago improved gradually from 83 to 87. Massey improved from 64 to 74 during 12 years. The PAI for both Lincoln and Auckland dropped in 2004 and increased after 2004. Otago has the highest score in 2012 while Lincoln has the lowest point. That means the disclosure quality of Otago is excellent in 2012 while the disclosure quality of Lincoln is relatively low in 2012.

6.2 Report quality and disclosure level for sub-categories

Universities may disclose some information poorly and some other information well. This section divides the PAI into different categories to find out why the total public accountability score changes.

Table 6.2 Timeliness PAI score for annual reports

	1985	*1988*	*1992*	*1996*	*2000*	*2004*	*2008*	*2012*
Auckland	0	0	0	0	100	120	120	120
AUT	0	0	60	40	40	100	100	100
Canterbury	0	0	20	20	40	80	80	100
Lincoln	0	0	0	80	20	60	40	100
Massey	0	0	0	40	40	60	80	120
Otago	0	0	0	80	120	120	100	120
Victoria	0	0	40	80	140	140	140	100
Waikato	0	100	20	0	80	100	100	100
Mean	0	13	18	43	73	105	95	108

The table above lists PAI score for the 'Timeliness' category from 1985 to 2012. As mentioned above, the weighting of timeliness is 10 out of 100. This implies that the publishing date of annual report is relatively important in public's mind when talking about accountability. In addition, information validity is questionable when annual reports are published too late. The mean is calculated to show the average time annual reports published depart from the balance date of each year. A higher score shows that the publishing date for annual reports is closer to balance date. As illustrated in methodology section, the benchmark is five which is equivalent to an adjusted PAI score 100. As shown in the table above, seven universities get zero for timeliness in 1985. According to Coy and Dixon (2004), the annual reports for most universities were published after one or two years from the balance date of 1985. Their information accuracy is questionable, as there are concerns over the problem remembering the operation activity of universities after such a long time.

As shown in the figure, the average timeliness PAI is increased dramatically from 73 to 105 between years 2000 and 2004. The average of timeliness remains at a relatively high level after year 2004. The possible reason could be the introduction of Crown Entity Act 2004. As explained in the legislation background, Section 150 (1) of Crown Entity 2004 states that a Crown entity must prepare an annual report "as soon as practicable after the end of each financial year, but in any case not later than 10 working days after the annual report is received by the Minister”. The regulation of the publishing date could be a possible reason of the improvement in the ‘Timeliness’ category. As listed in the table above, most universities published their annual reports within 13 weeks after the balance date from year 2004. However, Lincoln, Massey and Otago have lower PAI score on timeliness on 2004 and 2008. This may be because the regulation did not appoint a specific date for annual report publication, allowing flexibility.

Table 6.3 PAI score for overview report

Overview Report	*2000*	*2004*	*2008*	*2012*
Auckland	90	99	93	90
AUT	90	100	100	101
Canterbury	90	104	71	81
Lincoln	92	102	100	81
Massey	91	96	97	88
Otago	99	100	99	97
Victoria	82	86	80	81
Waikato	86	96	89	90
Mean	90	98	91	89

Table 6.3 shows PAI score for Overview: report category from year 2000 to year 2012. Universities change differently from 2000 to 2012. However the mean of PAI for this category remain the same level. Overall the disclosure this category is high as most of PAI score is over 80. All information included in this category is general information. Well disclosure for this part well can improve the image in public..

Table 6.4 PAI score for overview: university

Overview: university	*2000*	*2004*	*2008*	*2012*
Auckland	77	83	80	84
AUT	81	84	88	85
Canterbury	88	85	90	77
Lincoln	75	62	70	61
Massey	88	101	98	87
Otago	81	79	85	87
Victoria	84	68	51	51
Waikato	63	54	65	72
Mean	80	77	78	76

Table 6.5 PAI score for financial category

Financial	*2000*	*2004*	*2008*	*2012*
Auckland	76	68	72	69
AUT	81	79	78	76
Canterbury	59	58	62	57
Lincoln	52	55	53	58
Massey	71	78	83	81
Otago	88	89	83	75
Victoria	55	74	65	60
Waikato	58	58	63	61
Mean	67	70	70	67

Table 6.5 shows the PAI score for financial category. The PAI scores are high compare with PAI in other categories. As explained earlier, financial statements have to follow GAAP and other accounting standards. Accounting standards set up the framework and presentation for financial information clearly. That is why this category assigned high PAI scores.

Table 6.6 Service: General

Financial	*2000*	*2004*	*2008*	*2012*
Auckland	76	68	72	69
AUT	81	79	78	76
Canterbury	59	58	62	57
Lincoln	52	55	53	58
Massey	71	78	83	81
Otago	88	89	83	75
Victoria	55	74	65	60
Waikato	58	58	63	61
Mean	67	70	70	67

Table 6.6 shows the PAI scores for service: general category. This category includes information such as targets and achievements of university, equal employment opportunity and heath and safety. Universities report this category in different way. Some universities do not include disability in equal opportunity employment report.

Table 6.7 PAI score for service teaching category

Service: teaching	*2000*	*2004*	*2008*	*2012*
Auckland	44	41	43	44
AUT	75	51	53	60
Canterbury	58	31	60	54
Lincoln	46	28	46	41
Massey	53	52	51	53
Otago	76	74	76	85
Victoria	45	32	38	52
Waikato	44	44	46	48
Mean	55	44	52	55

The table above shows the PAI scores for Service: teaching category. The PAI score is low compare with PAI score in other categories. Low scores are assigned because lack of discourse of staff satisfaction and student satisfaction.

Table 6.8 PAI score for service: research

Service: research	*2000*	*2004*	*2008*	*2012*
Auckland	67	44	45	53
AUT	40	48	52	58
Canterbury	76	38	43	49
Lincoln	57	57	67	65
Massey	60	58	68	62
Otago	63	72	75	78
Victoria	22	28	55	60
Waikato	61	61	50	51
Mean	56	51	57	60

Table 6.8 lists PAI scores for service: research category. Victoria and Canterbury have low PAI scores because breakdowns for sub-units for research information is not disclosed well in their annual reports.

Table 6.9 PAI score for service: community

Service: community service	*2000*	*2004*	*2008*	*2012*
Auckland	84	72	76	73
AUT	66	46	53	55
Canterbury	58	38	35	33
Lincoln	40	40	45	33
Massey	80	100	70	65
Otago	86	100	86	100
Victoria	60	40	41	43
Waikato	74	26	16	18
Mean	69	58	53	53

Table 6.9 shows the PAI scores for service: community. The result implies that universities disclose this category very differently. Lacking relevant regulations may cause highly difference in reporting. Section 6.4 uses legitimacy theory to discuss why those PAI changed.

6.3 The most recent reporting status

Table 6.10 partial public accountability scores for annual reports in 2012

Universities	*Overview: report*	*Overview: university*	*Financial*	*Service: general*	*Service: teaching*	*Service: research*	*Service: community service*
Auckland	100	90	67	70	41	44	66
AUT	104	84	81	56	50	50	46
Canterbury	104	85	60	73	32	38	38
Lincoln	108	62	58	60	27	57	40
Massey	96	106	64	83	51	58	100
Otago	96	91	89	80	76	77	100
Victoria	91	78	71	58	37	29	40
Waikato	100	72	61	39	48	51	18
Mean	100	84	69	65	45	50	56
Standard Deviation	5	13	11	14	15	14	30

As is shown in the table above, 'Overview: report' was assigned the highest PAI of 100, compared with other categories. This category includes items such as the auditor's report, directory information, statement of accounting policy and managerial responsibility. Those items are mainly descriptive information that helps readers of the annual report to understand the information. It also explains the meaning of professional terms. For example, 'Statement of accounting policy' includes explanations of accounting professional terms such as inventory, tuition fees received, etc. High scores for this category indicate universities' willingness to explain what they are reporting to public. Readers have to understand what they are reading first. However, the information included in this category is mostly neutral information that has little relevance to performance. Universities provide very similar information with a slightly different presentation style. Linking with legitimacy theory, this finding supports Ahamd and Sulaiman's (2004) opinion that organizations want to build up a responsible environment by purely providing descriptive information without monetary and comparative information. In other words, universities provide neutral information and good news to build up a good public image.

It has also been noticed that 'Teaching service' was assigned a relatively low PAI score of 45. The researcher gives a low score to this category as all universities fail to disclose teaching performance by sub–departments. In other words, public are unable to know how those teaching resources are allocated among different departments. As exported in Coy and Pratt (1998), the management team in universities may hide some information such as how to allocate funds among departments so that they can allocate resource in the way they personally prefer. Another reason could be that universities do not have the obligation to disclose how they allocate resources by law. There is no uniformity in allocating resources a certain way. However, 'Service: research' items are disclosed better than 'Service: teaching'. The reason behind this could be that university funding is largely dependent on research. Universities' better disclosure of research services could benefit their revenue.

As shown in figure 6, standard deviations were calculated to investigate the variation in report quality among different universities for each category.   All universities get a high score for this category because the items need to be disclosed in the 'Overview: report' category as stated clearly in the Crown Entity Act 2004. The relevant legislation may help to unify the disclosure of specific information. In addition, as discussed above, the information included in the 'Report: overview' category is neutral information. Universities disclose overview information very well to build up a good image from the legitimacy theory perspective.

'Financial disclosure' has a relatively low variation because all financial statements should comply with GAAP under the Financial Act 1993. This indicates that accounting standards can lead to low variation in reporting among different universities. Moreover, universities disclose community service information very differently. Consequently, the standard deviation is very high for this category. Lack of relevant legislation may be the reason behind this phenomenon.

6.4 Accountability and Legitimacy Theory

Accountability can be defined as "…a social relationship in which actors feel an obligation to explain and justify their conduct to someone else" (Day & Klein, 1987, p.152). The actor could be an individual or an organization such as university. The social relationship contains three stages: Firstly, the organization feels obliged to report its behavior by providing all sorts of data such as statements and performance. Secondly, the information can be used to question the legitimacy of its conduct. Thirdly, judgment on the conduct is formed.

As discussed, universities are obliged to be accountable to the public under law. In this study, annual reports are the medium for providing information on the operation of universities. Public have access to the information. In other words, the preparation of annual reports makes universities qualify their social relations. As explained in the legitimacy theoretical framework, organizations are bound by a social contract to behave properly. The social contract involves the social relationship between the public and universities.

In this research, public accountability is discussed as a part of the social contract existing between universities and the public/government. As discussed in the Results, the average of PAI scores for eight universities changed from 10 to 46 from years 1989 to 1992. The average PAI scores from 1996 to 2010 were 68, 65, 65, and 67. That means university accountability improved rapidly in late 1980s' to mid-1990s'. As mentioned in the Legislation section, regulation for annual reporting was reformed in the late 1980s' and the 1990s'. The word" accountability" was starting to be written in legislation by 1987. The improvement in PAI scores from years 1989 to 1992 supports the expected positive relationship between legislation and accountability. From years 2000 to 2012, the regulation of annual report preparation did not change much in terms of content and processes and the PAI score did not change much during that period either.

Even though the overall average PAI remained at the same level, the timeliness score changed rapidly from years 2000 to 2010. The timeliness score indicates the time for preparing and publication of the annual report. The improvement implies that universities prepare and publish annual reports closer to the financial date. As mentioned in the Legislation part, one of the big changes in the Crown Entity Act is the statutory timetable for annual report presentation and publication. The results imply that legislation can improve accountability by adding a specific provision in that specific area.

As mentioned above, Legitimacy theory could be one of the reasons behind the disclosure of information. Neu et al. (1998) pointed out that organizations should consider the community as a big concept instead of just investors only. In other words, this is relevant to stakeholder theory. The information is required by not only investors, such as education departments, but also by other parts of society. The community may act to remove the rights of organizations if they do not act in an appropriate way. It has been argued that it is easier for organizations to manage their public image by disclosing information (Neu et al., 1998). There are three main strategies for disclosing information for image creation: i) try to educate or inform the relevant parties about recent actions consistent with their plan; ii) try to change external stakeholders' perception; iii) try to hide the problems by changing the focus of external stakeholders. We apply the three strategies to this research. Improving university accountability is a strategy to create a better image for external stakeholders. Annual reports are a good way to inform relevant parties about what they did, how they used the funds, and whether they had a good outcome. Universities may disclose some irrelevant information to change the public focus, to hide existing problems and to create a better image. Adams (2002) argues that the annual reports are not mainly for regulation or public pressure or the investors: they may be produced for a better image.

Referring to the diagram in the previous section, the accountability of New Zealand annual reports did not change much from 2000 to 2012. However, the annual reports get longer than before. Referring to what we discussed in the last paragraph, universities may disclose some irrelevant information to make the annual reports look "prettier" in order to create a better image. However, another possibility is that universities are copying each other to increase the length of annual reports year to year. This may be relevant to institutional theory. The interesting thing that needs to be mentioned here is that the similarity of annual reports for the same university after year 2000 could be more than 70%. That means the only things changed in the annual reports are the figures in the financial reports. Not much information changed in the other sections.

7 Summary and conclusion

By applying the PAI index to the annual reports of universities from 2000 to 2012 and incorporating the data from the previous research of Coy and Dixon, 2004, this research explores the overall trends for public accountability from 2000 to 2012. This research investigates how the PAI of each sub-category changes. This research also explains why public accountability changes by incorporating legislative changes and legitimacy theory.

By employing the method of quantitative content analysis, annual reports for 8 universities from 2000 to 2012 were examined with 4 years intervals. The PAI was used to analyze the quality of these annual reports. Three major findings are summarized as follows:

- The results show that public accountability improved significantly from 1985 to 1996. However, overall public accountability remained at the same level from 2000 to 2012. The trends in public accountability are various among the different universities. For example, from 2004 to 2008, the overall PAIs for Lincoln and Otago decrease. However, the overall PAI for Massey increases. This implies that public accountability does not always change in the same way among different universities.
- Even though the overall PAI remains the same, the sub-categories may change. For example, timeliness is improved, but the financial perspective dropped at the same time.
- The accountability changes may be related to legislative change. The release and modification of relevant legislation affects the reporting environment (Larrinaga et al., 2002) More and more, laws regulate the framework, timeliness, presentation and availability of annual reports. The change in the overall PAI from the 1980's to 2012 demonstrates how relevant legislation can help to improve accountability. Furthermore, the release of the Crown Entity Act, 2004 demonstrates how legislation can be relevant to the timeliness of annual reports.

The results may also be explained by incorporating legitimacy theory. According to legitimacy theory, organizations are bound by a social contract to act properly. The annual reports get longer and longer. More and more voluntary information is disclosed without being required by law. As discussed earlier, this response may support Adams (2002)'s idea that annual reports are not produced mainly in response to regulation pressure: they may be produced to project a better image. Universities try to improve their public accountability in order to improve their image, to build public confidence, and to attract investment from government.

This study contributes to the current understanding of public accountability for universities in

New Zealand. The incorporation of findings with both legislative change and legitimacy theory fills a gap in our knowledge. This research also explains some of the reasons for changes in public accountability. Future research in this field would be benefit from an understanding of the current status of public accountability and the current quality of annual reports.

This study gives an overview only of the current status of public accountability in universities in New Zealand. It would be ideal to repeat this research study in few years' time to clarify its findings. This research explains the changes in public accountability by incorporating the PAI results with changes in legislation and legitimacy theory. However, in this research, the relationship between legitimacy theory and public accountability was inferred using logical reasoning. To reaffirm the findings, the questions of whether legislation or theory might affect accountability should focus on "how". Quantitative research might be required in the future for detailed studies of how legislative change and legitimacy theory affect public accountability.

References:

Adams, C. A. (2002). Internal organisational factors influencing corporate social and ethical reporting: Beyond current theorising. *Accounting, Auditing & Accountability Journal*, *15*(2), 223-250.

Adams, C.A., Coutts, A. & Harte, G. (1995), "Corporate equal opportunities (non-)disclosure", *British Accounting Review*, *27*(2), 87-108

Archel, P., Husillos, J., Larrinaga, C., & Spence, C. (2009). Social disclosure, legitimacy theory and the role of the state. *Accounting, auditing & accountability journal*, *22*(8), 1284-1307.

Ashforth, B. E., & Gibbs, B. W. (1990). The double-edge of organizational legitimation. *Organization science*, *1*(2), 177-194.

Bebbington, J. (2007), "Changing organizational attitudes and culture through sustainability accounting", in Unerman, J., O'Dwyer, B. & Bebbington, J (Eds.), *Sustainability Accounting and Accountability* (pp. 345-349). Routledge, London.

Bebbington, J., Larrinaga, C. & Moneva, J.M. (2008), "Corporate social reporting and reputation risk management", *Accounting, Auditing & Accountability Journal*, *21*(3), 337-361

Boston, J. (1996). The ownership, governance and accountability of tertiary institutions in New Zealand. *New Zealand Annual Review of Education*, 6, 5-28.

Bovens, M. (2007). Analysing and assessing accountability: a conceptual framework1. *European law journal*, *13*(4), 447-468

Bovens, M. (1998). *The quest for responsibility: Accountability and citizenship in complex organisations*. Cambridge University Press.

Boyne, G., & Law, J. (1991). Accountability and local authority annual reports: The case of Welsh district councils. *Financial Accountability & Management*, *7*(3), 179-194.

Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information—a dual test of media agenda setting theory and legitimacy theory. *Accounting and business research*, *29*(1), 21-41.

Bryman, A., & Bell, E. (2015). *Business research methods* (4th ed.). United Kingdom: Oxford University Press

Cavanagh, S. (1997). Content analysis: concepts, methods and applications. *Nurse researcher*, *4*(3), 5-13.

Coy, D., & Dixon, K. (2004). The public accountability index: crafting a parametric disclosure index for annual reports. *The British Accounting Review*, *36*(1), 79-106.

Coy, D., Dixon, K., Buchanan, J., & Tower, G. (1997). Recipients of public sector annual reports: theory and an empirical study compared. *The British Accounting Review*, *29*(2), 103-127.

Coy, D., Fischer, M., & Gordon, T. (2001). Public accountability: a new paradigm for college and university annual reports. *Critical Perspectives on Accounting*, *12*(1), 1-31.

Coy, D., & Pratt, M. (1998). An insight into accountability and politics in universities: a case study. *Accounting, Auditing & Accountability Journal*, *11*(5), 540-561.

Coy, D., Tower, G., & Dixon, K. (1993). Quantifying the quality of tertiary education annual reports. *Accounting & Finance*, *33*(2), 121-129.

Criado, I., Fernandez, M., Husillos, F.J. & Larrinaga-Gonzalez, C. (2008), "Compliance with mandatory environmental reporting in financial statements: the case of Spain (2001-2003)", *Journal of Business Ethics*, *79*(3), 245-262.

Crown Entities Act 2004, s 3, s 150- s 156.

Day, P & R. Klein. (1987). *Accountability: Five public services*. London: Tavistock

Deegan, C. (2002). Introduction: the legitimising effect of social and environmental disclosures-a theoretical foundation. *Accounting, Auditing & Accountability Journal*, *15*(3), 282-311.

Deegan, C. (2006). Legitimacy Theory. In Z, Hoque (Eds.), Methodological issues in accounting research: theories, methods and issues (pp.161-181). Spiramus Press.

Deegan, C. (2007), "Organizational legitimacy as a motive for sustainability reporting", in Unerman, J., O'Dwyer, B. & Bebbington, J (Eds.), *Sustainability Accounting and Accountability* (pp. 127-149). Routledge, London.

Deegan, C. (2002), "The legitimising effect of social and environmental disclosures – a theoretical foundation", *Accounting, Auditing & Accountability Journal*, *15*(3), 282-311

Deegan, C., & Rankin, M. (1996). Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority. *Accounting, auditing & accountability journal*, *9*(2), 50-67.

Deegan, C., & Unerman, J. (2006). *Financial accounting theory*. Maidenhead: McGraw-Hill Education.

Deegan, C., Rankin, M. & Tobin, J. (2002), "An examination of the corporate social and environmental disclosures of BHP from 1983-1997: a test of legitimacy theory", *Accounting, Auditing & Accountability Journal*, *15*(3), 312-343

de Villiers, C. & Staden, C.J. (2006), "Can less environmental disclosure have a legitimating effect? Evidence from Africa", *Accounting, Organizations and Society*, *31*(8), 763-781.

Dill, D. D. (1999). Academic accountability and university adaptation: The architecture of an academic learning organization. *Higher education*, *38*(2), 127-154.

Dixon, K., Coy, D., & Tower, G. (1991). External reporting by New Zealand universities 1985–1989: *Improving accountability. Financial Accountability & Management*, *7*(3), 159-178.

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific sociological review*, *18*(1), 122-136

Education Act 1989, s 100, s 220.

Finance Act 1993

Finer, H. (1941). Administrative responsibility in democratic government. *Public administration review*, *1*(4), 335-350

Gray, R., Owen, D., & Adams, C. (1996). *Accounting & Accountability: Changes and Challenges in Corporate Social and Environmental Reporting*. Prentice Hall

Hogner, R. H. (1982). Corporate social reporting: eight decades of development at US Steel. *Research in Corporate Performance and Policy*, *4*(1), 243-250.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. Qualitative health research, 15(9), 1277-1288.

Islam, M. A. (2015). *Social Compliance Accounting: Managing Legitimacy in Global Supply Chains*. New York, Springer.

Ismail, I. K., & Haddaw, A. A. (2014). The impact of the theory of legitimacy on the disclosure of organizations in Jordan using a linear regression model. E*uropean Journal of Business and Management*, *6*(16), 190-196.

Jones, R. (1992). The development of conceptual frameworks of accounting for the public sector. *Financial Accountability & Management*, *8*(4), 249-264.

Kluvers, R. (2003). Accountability for performance in local government. Australian *Journal of Public Administration*, *62*(1), 57-69.

Larrinaga, C., Carrasco, F., Correa, C., Llena, F. & Moneva, J.M. (2002), Accountability and accounting regulation: the case of the Spanish environmental disclosure standard. *The European Accounting Review*, *11*(4), 723-740

Lindblom, C. K. (1994). *The implications of organizational legitimacy for corporate social performance and disclosure.* In Critical perspectives on accounting conference, New York.

Luft Mobus, J. (2005). Mandatory environmental disclosures in a legitimacy theory context. *Accounting, Auditing & Accountability Journal*, *18*(4), 492-517.

Magness, V. (2006). Strategic posture, financial performance and environmental disclosure:

An empirical test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, *19*(4), 540-563.

Milne, M. and Gray, R. (2007), "Future prospects for corporate sustainability reporting", in Unerman, J., O'Dwyer, B. & Bebbington, J (Eds.), *Sustainability Accounting and Accountability* (pp. 184-207). Routledge, London.

Mulgan, R. (2000). *'Accountability': An ever-expanding concept?* Retrieved from http://hdl.handle.net/1885/41945

Nazli Nik Ahmad, N., & Sulaiman, M. (2004). Environment disclosure in Malaysia annual reports: a legitimacy theory perspective. *International Journal of Commerce and Management*, *14*(1), 44-58.

Nelson, M., Banks, W., & Fisher, J. (2003). Improved accountability disclosures by Canadian universities. *Canadian Accounting Perspectives*, *2*(1), 77-107.

Neu, D., Warsame, H. & Pedwell, D. (1998), "Managing public impressions: environmental disclosures in annual reports", *Accounting, Organizations and Society*, *23*(3), 265-282.

O'Donovan, G. (2002). Environmental disclosures in the annual report: Extending the applicability and predictive power of legitimacy theory. *Accounting, Auditing & Accountability Journal*, *15*(3), 344-371.

Patton, J. M. (1992). Accountability and governmental financial reporting. *Financial Accountability & Management*, *8*(3), 165-180.

Perrone, V., & Strandberg, W. (1972). A perspective on accountability. *The Teachers College Record*, *73*(3), 347-356.

Preparing the Annual Report-Guidance and Requirements for Crown Entities (2015). Retrieved from http://www.treasury.govt.nz/publications/guidance/reporting/annualreports-ce/gce-prep-ar-15.pdf

Public Finance Act 1989, s 45B.

Riff, D., Lacy, S., & Fico, F. (2014). *Analyzing media messages: Using quantitative content analysis in research*. Routledge

Sethi, S. P. (1978). "Advocacy advertising--the American experience". *California Management Review*, *21*(1), 55-68.

Sinclair, A. (1995). The chameleon of accountability: Forms and discourses. *Accounting,* *organizations and Society*, *20*(2), 219-237.

Steccolini, I. (2004). Is the annual report an accountability medium? An empirical investigation into Italian local governments. *Financial Accountability & Management*, *20*(3), 327-350.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of management review*, *20*(3), 571-610.

Thomas, J. R., Silverman, S., & Nelson, J. (2015). *Research Methods in Physical Activity* (7th ed.). Human Kinetics.

Wilmshurst, T. D., & Frost, G. R. (2000). Corporate environmental reporting: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, *13*(1), 10-26.

Appendix:

PAI items and weighting:

ITEMS	Item Wgts
Timeliness	100
Overview : report	
Auditors' report	25
Statement of accounting policies	25
Directory information	20
Statement of managerial responsibility	20
Brief summary	10
Overview : university	
Statement of objectives	35
Descriptive report / General review	20
Financial review	20
Key facts & figures	15
Prospective information	10
Financial	
Financial performance statement	15
Statement of cash flows	15
Statement of cost of services	15
Financial position statement	12
Budget information	10
Overhead allocation	10
Depreciation	5
Financial ratios	5
Investments	5
Total value of estates	5
Commitments & contingencies	3
Service : general	
Achievements vs objectives & targets	30
Interpretive comment	20
Analysis of campus services	15
Staff training & development	15
Equal employment opportunity info.	10
Environmental related information	5
Health and safety information	5

Service : teaching	
Input (of Students & Resources)	
Student numbers	*12*
Cost per EFTS	*7*
Revenues	*7*
Staff	*6*
Equity group information	*3*
Qualification of student intake	*3*
Space	*3*
Financial aid	*2*
Process	
Student : staff ratios	*12*
Processes to ensure quality of teaching	*8*
Library service information	*6*
Computer service information	*4*
Fields of study	*4*
Output / Outcomes	
Graduates	*5*
Destination of students	*4*
Departmental reviews	*3*
Pass rates	*3*
Student satisfaction	*3*
Employer satisfaction	*2*
UG courses completed / 100 EFTS	*2*
Average time to complete programme	*1*

Service : research	
Graduates	*25*
Postgraduate students	*25*
Research income	*25*
Publications	*20*
Destination of research graduates	*5*
Community Service	
Local community service	*40*
National community service	*30*
International community service	*30*