Labour cost disclosures: have IFRSs made a difference?

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Abstract

Purpose – This paper aims to investigate changes in corporate disclosures of labour-related costs in financial statements arising from a change in the accounting regime from generally accepted accounting principles (GAAPs) to international financial reporting standards (IFRSs) in Australia.

Design/methodology/approach – An archival empirical approach is taken. Data are sampled for 160 listed companies in Australia over seven years covering Australian GAAPs (2003-2005) and Australian IFRSs (2006-2009) periods. To measure disclosures, a classification and count is made of line items for labour-related costs found on the face of and in the notes to financial statements. These disclosures are analysed against firm-specific characteristics and industry categories.

Findings – Results reveal companies disclosing "total labour costs" rose from about 60-85 per cent, and the discretionary disaggregation of "total labour costs" became more prevalent. Companies providing disaggregated information in the post-IFRSs period are characterized by lower total assets, lower sales and lower labour costs. Their return on equity and labour intensity are not found to be differentiating characteristics. Reasons for these phenomena are addressed.

Originality/value – Previous studies have not analysed the effect of IFRSs adoption on disclosures of labour-related information. This study provides new evidence about the types of firms that have responded to IFRSs with new or enhanced labour-related financial disclosures. It points to new opportunities for research and financial analysis from the enhanced availability of corporate-level labour cost data.

Keywords IFRS, Labour cost, Financial disclosure practices, Firm characteristics, Financial reporting, Australia

Paper type Research paper

1. Introduction

Several prior studies have examined the disclosure of human capital in company annual reports within a wider framework of intellectual capital disclosure. Abhayawansa and Abeysekera (2008) provide a comprehensive review of this literature on human capital disclosure. They point out that human capital disclosure scores developed by researchers (Abeysekera and Guthrie, 2004; April *et al.*, 2003; Bozzolan *et al.*, 2003; Brennan, 2001; Firer and Williams, 2005; Goh and Lim, 2004; Olsson, 2001) have been based largely on narrative information not contained in financial statements. Such scores can only provide inferences about the monetary cost or value of human capital. The poor availability of firm-wide labour cost information in financial statements, and its disaggregation, has been a barrier to empirical research in accounting areas of intellectual capital measurement and corporate productivity evaluation (Lev, 2001; Ballester *et al.*, 2002; Lajili and Zéghal, 2005, 2006; Wyatt, 2008).

Some European countries consistently require mandatory disclosure of total labour cost (e.g. the UK and France). Prior to the adoption of international financial reporting standards (IFRSs), however, disclosure of company-wide labour cost data in financial statements was largely optional to management in developed countries within North America, Asia and Oceania. For example, in the USA, where IFRSs have not yet

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been implemented, local US standards do not require companies to report labour-related costs (other than information specific to directors and top management). So research that relies on such data are dependent on voluntarily disclosed information in financial statements, and is restricted by limited and inconsistent corporate labour-related data in the USA.

In Australia, during the pre-IFRSs period, labour-related accounting standards and their disclosure requirements were centred in Australian Accounting Standard Board (AASB) 1028 Employee Benefits. Although this standard stipulated disclosure requirements for some specific components of labour cost such as defined benefit plans or equity-based compensation benefits, there was no explicit disclosure requirement for total labour costs. An alternative existed that addressed the disclosure of total labour cost information, AASB 1018 Statement of Financial Performance. This standard introduced two different formats for expense classification – the nature of expense classification and the function of expense classification. If a firm presents its expense structure by a nature approach, then the total amount of labour cost (as well as other aggregated expenses such as depreciation and interest) will be itemized in financial statements. If a firm classifies its expense according to the function approach (e.g. cost of sales, administrative costs, selling costs), then total labour cost is not separately reported unless that firm discloses additional information in the notes. This choice of "by nature" or "by function" was up to management, which basically kept the disclosure of company-wide labour cost (especially total wages and salaries) to a voluntary basis. As a consequence, empirical research on costing or valuing human capital or productivity in Australia had to rely on voluntarily disclosed of labour cost in the pre-IFRSs period. This poor corporate-level labour cost data due to soft accounting standards also obstructs industry level analysis according to Ballester *et al.* (2002) and Lajili and Zéghal (2005).

Has the adoption of IFRSs corrected the problem of inconsistent availability of labour cost information from corporations? This study considers the case of Australia. In Australia, after IFRSs adoption in 2005, several changes to labour-related cost disclosures were introduced. First, the new AABS 119 Employee Benefits, which superseded the former AASB 1028 Employee Benefits, explicitly categorises labour cost in a more systematic way, and describes related disclosure requirements corresponding to each labour cost item. Even though, the new AASB 119 still does not demand the specific disclosure of an overall labour cost, it mandates that disclosure practices shall be compliant with other standards such as AASB 101 Presentation of Financial Statements. The most critical change can be found in AASB 101, a superseded version of the former AASB 1018. As before, AASB 101 permits two different formats regarding expense classification. However, it now explicitly stipulates that if a firm classifies its expense by function, that firm should disclose additional information on the nature of expense (paragraph 93 of AASB 101). Paragraph 94 gives the reason that the nature of expense is required because it is useful in predicting future cash flows. In practice, even when management opts to classify expenses "by function" on the face of the financial statements, they should also report it "by nature" in the notes to accounts. Hence, total labour costs (also called total employee benefits or total personnel expenses) should be presented somewhere in financial statements by reporting entities in Australia in the post-IFRSs period. Interestingly, however, the disclosure of the disaggregation of total labour costs into sub-categories such as wages and salaries, bonuses, other compensation, termination benefits and post-retirement benefits, still remains optional.

There would now have been sufficient time since IFRSs adoption in Australia for corporate management to assess their options on disclosure of labour cost information in financial statements and settled on a stable disclosure pattern for their company.

2. Objectives and significance of the study

This study's first objective is to identify the pattern of change in labour cost disclosure practices of Australian firms before and after the adoption of IFRSs. Very few studies have provided evidence on the nature and extent of disclosure of firm-wide labour cost information in financial statements. In the US setting, many studies have extracted some firm-wide labour cost information from limited samples of voluntary disclosures in financial statements (Ballester *et al.*, 2002; Lajili, 2004; Lajili and Zéghal, 2005, 2006). Even though the change driven by IFRSs was expected by some researchers, there has been no substantial evidence of firm-wide disclosure of labour cost. For example, Wyatt (2008, p. 240) says:

> Separate reporting of the expenditures paid to employee is envisaged under IAS 1 Presentation of Financial Statements (paragraphs 86-95). Despite this expectation, there is no evidence of widespread reporting of labour expenditures under GAAPs.

Thus, this study will be the first to explore the effects of IFRSs adoption on labour cost disclosure.

Differences in the extent to which corporate management would change labour cost disclosure practices due to IFRSs adoption are likely to be related to the firm's prevailing profile of size of tangible assets, rate of return on equity (ROE), sales turnover and level of labour intensity. Such firm characteristics, when computed against additional disclosures about labour costs, could reveal "good" or "bad" news information about the firm's labour productivity or change in the value or effectiveness of human capital (Hansson, 2004). Management might be expected to weigh-up such consequences in deciding the extent of labour cost information to disclose. The second objective, therefore, is to analyse specific company and industry characteristics that might explain the extent of diversity in labour cost disclosure practices between firms over the pre- and post-IFRSs periods. An understanding of firm and industry characteristics associated with different labour cost disclosure outcomes can provide insights for researchers, analysts and regulators interested in improving the availability of this important accounting data.

The two specific research questions for this study are:

(1) What are the patterns of change in labour cost disclosure practices between and within the pre and post-IFRSs periods?

(2) What company-specific financial and structural characteristics and industry groupings can be attributed to the identified patterns of change in labour cost disclosure practices?

Research using Australian generally accepted accounting principles (AGAAPs) and Australian international financial reporting standards (AIFRSs) would be indicative of other IFRSs-adopting countries whose relevant accounting standards apply mandatory minimum disclosure requirements, but allow choice in reporting forms and degrees of disaggregation of labour cost information.

3. Literature review

3.1 Accounting research concerning human resources and the data availability problem

The concept for human resource accounting dates from the early 1960s and since then, models have been developed to reflect the value of a firm's labour force (Flamholtz *et al.*, 2002). According to Bontis *et al.* (1999), alternative types of human resource measurement models have been proposed, but all of them have limitations in their assumptions and implementation. Perhaps, the best known model is Flamholtz's (1971) stochastic model for valuing human resources. In more recent years, intellectual capital studies have provided a fresh impetus to human resource accounting research. Since human capital (e.g. the capability of a labour force) is deemed to be a key component of the value creation cycle in a knowledge economy, it becomes the most dominant component in intellectual capital studies (The World Bank, 2006). For example, in the Skandia Navigator model, intellectual capital is calculated as the sum of human capital and structural capital and this structural capital mainly comes from past human capital investment (Edvinsson and Malone, 1997). Despite some minor differences, other intellectual capital studies also try to reflect the concepts of skills and know-how of a labour force (Bontis *et al.*, 1999).

Apart from endeavours to directly measure human capital, the financial influence of a labour force (or labour cost) is another related research topic. Hansson (1997) explores the association between the dependence on human resources and abnormal returns. He concludes that investors are likely to underestimate investment in human resources. Darby *et al.* (1999) determine that a firm's value will increase by 7.3 per cent, if it has one paper written by a top (star) scientist or it has a star scientist as an employee. Rosett (2001) investigates the association between the labour stock and equity investment risk and suggests that there is a significant positive relationship between these two elements. According to Ballester *et al.* (2002), 16 per cent of labour-related cost (on average) could be transformed into human capital, and a third of it depreciates annually. Similarly, Lajili and Zéghal (2005) find that labour productivity and efficiency are underestimated in the market by using voluntarily disclosed labour cost and the number of employee. From a management perspective, labour cost information is also considered as a representative input factor for productivity analysis (Taussig and Shaw, 1985; Coates, 1980). Kim *et al.* (1996) use labour cost information to calculate a firm's productivity and compare the association between productivity and share returns amongst three different countries.

One of the biggest obstacles in labour cost research is the availability of labour cost information. Despite the growing importance of human capital, accounting standards in most countries did not mandate the disclosure of total labour costs. This is still the case in the USA. Ballester *et al.* (2002, p. 353) explain that the US Securities and Exchange Commission's business report form (also known as 10-K form) demands the disclosure of employee numbers, but not the amount of labour cost. They point out that the number of employee is insufficient to assess labour cost due to the wide variation of compensation and training schemes for employees. As a result, <10 per cent of listed US firms disclose consistently and voluntarily the total amount of labour-related cost (Riahi-Belkaoui, 1999). Because of limited data, the findings in the US studies by Ballester *et al.* (2002) and Lajili and Zéghal (2005) are only valid for voluntarily disclosing firms. These findings are unlikely to be representative of entire industries (or types of no disclosure firms). In this regard, the motivating factors that encourage (or do not encourage)

the voluntary disclosure of labour costs are important to understand, according to Abhayawansa and Abeysekera (2008) and Samudhram *et al.* (2010).

3.2 Research on accounting standards changes in Australia

In Australia, many researchers investigate the practical impacts of IFRSs adoption. For example, Chalmers and Godfrey (2006), Chalmers *et al.* (2008) and Cheung *et al.* (2008) study the changes in intangible assets driven by IFRSs adoption. More specifically, Carlin and Finch (2008) investigate the disclosure practices of goodwill impairment tests in Australia after IFRSs. They find that a substantial number of disclosures regarding goodwill impairment are deficient or are inconsistent with IFRSs. This finding suggests that disclosure compliance with IFRSs may differ across the adopting countries despite their uniform IFRSs.

In this study, the specific features of the changes in accounting standards in Australia concerning labour costs provide the conditions that shape the research results. Usually, several updated versions of relevant standards have been released by AASB before and after IFRSs. Typically, the release date is six months in advance of the effective date of a standard. AASB 119 Employee Benefits and AASB 101 Presentation of Financial Statements were the first versions from AASB that became effective after IFRSs adoption in 2005. Although there have been revisions to these two standards since 2005, their structures relating to labour cost disclosure have shown minor changes, and thus they have been essentially consistent.

A summary of differences between the relevant Australian standards in the pre- and post-IFRSs regimes is given in Table I[1].

As highlighted in Table I, before the adoption of AIFRSs, there were two accounting standards that related to the disclosure of labour cost: AASB 1028 Employee Benefits and AASB 1018 Statement of Financial Performance. Briefly, the structure of AASB 1028 comprised a set of classifications of employee benefits and disclosure requirements. Offsetting AASB 1028's disclosure requirements, AASB 1018 required the presentation of expenses from ordinary activities on the basis of either function or nature. Presentation by function means total labour costs from ordinary activities are not separately disclosed. While presentation "by nature" means total labour costs will be separately disclosed, it should be noted that it may not be a complete total because some labour costs may be treated as an asset not an expense. For example, some parts of labour cost might be included in inventory (e.g. direct labour costs attached to production of inventory; employee costs capitalized in plant installation). These are a period timing issue since it becomes part of labour expense under the "by nature" expense classification when inventory is sold or plant is depreciated. Such deferred labour costs would tend to average out and have minimal effect on the amount of overall labour cost reported from year to year. In summary, the pre-IFRSs period in Australia allowed total labour cost information to depend on a voluntary disclosure choice since AASB 1018 did not mandate the type of expense classification.

For the post-IFRSs period, column 2 of Table I shows AASB 119 Employee Benefits and AASB 101 Presentation of Financial Statement to be the key standards. Under AASB 119, disclosure requirements are detailed at the end of each employee benefit item, which makes it distinct from the former standards. AASB 119 also prescribes particular disclosure, and adds that some additional disclosures that may be needed if other accounting standards such as AASB 101 and AASB 124 (related party disclosure) specify it. The most

Table I.
Comparison of Australian accounting standards related to labour cost disclosure

Pre-IFRS	Post-IFRS
Labour cost disclosures under AASB 1028 employee benefits	*Labour cost disclosures under AASB 119 employee benefits equivalent to IAS 19*
Classification of employee benefits (paragraphs 4.2-4.12): Wages and salaries Compensated absence Profit sharing and bonus plan Termination benefits Post-employment benefits	Short-term employee benefits (including wages and salaries): Other accounting standards such as AASB 124 or AASB 101 may require disclosure of short-term employee benefits (paragraph 23) Post-employment benefits: Defined contribution plans: disclosure of the amount recognized as an expense. And additional disclosure for key management personnel according to AASB 124 (paragraphs 46-7) Defined benefits plans: comprehensive disclosure requirements including total expense in income statement (paragraphs 120-5) Other long-term employee benefits: other accounting standards such as AASB 124 or AASB 101 may require disclosure (paragraph 131) Termination benefits and following disclosure requirements: Contingent liability according to AASB 137 If material, additional disclosure according to AASB 101 Key personnel information by AASB 124 (paragraphs 141-3)
Disclosure requirements are separately stipulated from paragraphs 6.1-6.10: Comprehensive disclosure requirements for equity-based employee compensation and defined benefits superannuation plans (paragraphs 6.1 and 6.3-6.10) Disclosure requirement for the aggregate liabilities and assets arising from employee benefit (paragraph 6.2)	
Expense classification under AASB 1018 statement of financial performance	*Expense classification under AASB 101 presentation of financial statement equivalent to IAS 1*
All expenses from ordinary activities must be classified either: All according to their nature All according to their function (paragraph 5.2)	"An entity shall present an analysis of expenses using a classification based on either the nature of expenses or their function within the entity, whichever provides information that is reliable and more relevant" (paragraph 88)
"Expenses can be classified according to their nature such as employee expenses or depreciation. Alternatively, expenses can be classified according to their function of expenses by function. In the case of a manufacturing or retailing entity, the classification of expenses by function may involve the disclosure of cost of sales, distribution expenses and administration expense" (paragraph 5.2.2.)	"Entities classifying expense by function shall disclose additional information on the nature of expense, including depreciation and amortisation expense and employee benefits expense" (paragraph 93) (given in bold font indicating it must be applied) "Because each method of presentation has merit for different types of entities, this standard requires management to select the most relevant and reliable presentation. However, because information on the nature of expense is useful in predicting future cash flows, additional disclosure is required when the function of expense classification is used. In paragraph 93, "employee benefits" has the same meaning as in AASB 119 employee benefits" (paragraph 94)

noticeable change, as previously mentioned, is the disclosure requirement in AASB 101 of expenses by nature, including total depreciation/amortization and total employee benefits, as notes information when expenses by function are presented on the face of the income statement. AASB 101 further clarifies that "employee benefits" in paragraph 93 has the same meaning as given in AASB 119 Employee Benefits.

Although AASB 101 provides illustrative examples of the nature of expense format and the function of expense format, these illustrations are not a standard income statement format that must be adopted by all companies (Alfredson *et al.*, 2007). Consequently, a diversity of disclosure practices across Australian firms with respect to the labour cost information and its formatting is allowed in the post-IFRSs period. In practice, firms can comply with AIFRSs by providing a one-line disclosure of total labour costs, or they can choose to provide multiple lines to disaggregate part or all of total labour cost (e.g. wages and salaries, payroll tax, contributions to defined benefits plans or termination payments).

4. Method

To investigate the changes in disclosure practices regarding labour cost, the research team collected a seven years series of annual reports for each sampled firm. Sampled firms were chosen from Osiris Database based on following selection criteria:

- ASX-listed Australian firms with reporting year ending in June during 2002/2003-2008/2009 (total of seven years).
- Exclusion of two sectors (10-Energy, 40-Finance) and two industry groups (151040 metals and minings, 302020 food products) according to global industry classification standard (GICS)® code[2].
- Exclusion of firms that have experienced "capital impairments" or shown negative earnings for three or more years; these firms are assumed to not have operated under ordinary business activities during the sampling periods.

These selection criteria generated a total sample of 160 firms. Regarding these 160 firms, each annual report was obtained from Connect 4 (annual reports collection) and Datanalysis databases. Labour cost information was extracted from each annual report's financial statements (face and notes) in a hand-collection manner. Some specific data had to be excluded from one or more firm years because it was prior to an initial public offering date or in a year that reported negative earnings.

In relation to determining how to categorize the extracted data, a pragmatic approach was taken because of changes in disclosure practices over the sampled years. First, there is a batch of firms that disclosed total labour cost information before and after IFRSs. Thus, regardless of IFRSs adoption, these firms have continuously provided firm-wide labour cost information. That is, if a firm had classified its expense structure by nature over the years before IFRSs adoption, then the amount of labour cost would appear either in the income statement or financial notes. These firms are categorised as a "continuously disclosing firm".

Second, with the enforcement of IFRSs, a substantial number of firms not giving labour cost information in the AGAAPs years began to do so in the AIFRSs years. Typically, these firms present "by function" expenses on the face of their income statement, and additional "by nature" expense on labour costs in the notes, to be compliant with paragraph 93 of AASB 101. These firms are classified as "newly disclosing firms".

Third, even if there is total labour cost disclosure, some cases are incomplete or ambiguous on whether or not this number does encompass the overall labour-related cost. Cases are found of companies in manufacturing industry, for example, where it is not clear whether part of the number given for "labour cost" is allocated to either cost of sales or general administration expense. If a missing element of total labour cost is suspected, then the extracted amount of total labour cost is compared with peers in the same industry. The sub-industry code of GICS® is used to identify peer companies. To compare the amount of labour cost with peers, this study introduces the concept of "labour intensity", calculated as the reported total labour costs divided by total operating cost. This labour intensity ratio represents how much a firm would rely on its labour force to conduct operating business activities. Basically, this concept assumes that peer companies in the same industry would show a similar labour intensity level. If the amount of labour cost is still unclear or too deviant compared with peers, then this case is classified in the "ambiguous" group.

Finally, there are still firms not disclosing total labour costs, even after IFRSs adoption. Firms belonging to this non-disclosure group may provide a certain elements of labour cost information such as the expense of company contributions to a defined benefits plan. These firms are acting against the intention of paragraphs 93 and 94 of AASB 101, which expects minimal disclosures under the nature of expense classification. Thus, in this research, "non-disclosure" actually means no information about the total labour cost. Even though AASB 101 allows various types of presentation as long as such information is relevant, both "ambiguous" and "non-disclosure" groups do not comply with the intention of IFRSs. In the end, a total 160 firms and 1,031 observations are identified and categorised.

5. Results

5.1 Description of pre- and post-IFRSs disclosure practices regarding labour cost

Table II depicts the extent of change in total labour cost disclosure. Owing to the different sample years (three versus four years for each period), the percentage changes shown for the pre- and post-IFRSs periods, respectively, is more comparable than the differences in number of observations.

As revealed in Table II, the continuously disclosing and ambiguous disclosure groups do not show any distinct differences in percentage change between pre- and post-IFRSs periods. After IFRSs adoption, however, 26 per cent of sample firms have begun disclosing total labour cost information (newly disclosing group), while the non-disclosure group (i.e. non-complying in the post-IFRSs period) declined from 37 to 11 per cent.

Before further analysis, it is noted that the voluntary disclosure rate of Australian firms in the pre-IFRSs period (58 per cent) is found in this study to be much higher than

Table II.
Pre- and post-IFRS disclosure practices for labour cost

		Pre-IFRS (2002/2003-2004/2005)	Post-IFRS (2005/2006-2008/2009)
Continuously disclosing	*n* (%)	255 (58)	335 (57)
Newly disclosing	*n* (%)	–	153 (26)
Ambiguous disclosure	*n* (%)	23 (5)	36 (6)
Non-disclosure	*n* (%)	165 (37)	64 (11)
Total	*n* (%)	443 (100)	588 (100)

that of US studies where voluntary disclosure of total labour costs has been reported at <10 per cent (Riahi-Belkaoui, 1999). This large difference in the extent of voluntary disclosure of total labour costs between the two countries may be attributed to several factors. First, most US studies rely on the Compustat database, thus the availability of labour cost information is likely to be restricted by the data collection approach of this database (Ballester *et al.*, 2002; Lajili and Zéghal, 2005)[3]. By comparison, this Australian study exhaustively traces labour cost in each annual report manually. Second, even before IFRSs, a high proportion of Australian firms chose to classify their expense "by nature" (panel A of Table III). Nearly, 50 per cent of Australian firms adopted the nature of expense method in the pre-IFRSs period, thereby automatically disclosing total labour costs under the AGAAPs regime. Third, before IFRSs adoption, AGAAPs relating to aspects of employee benefits or entitlements were issued on accounting for labour cost items such as "long service leave" and "annual leave" that were different from many other countries (Deegan, 2003, 2007). Although these specific labour entitlement items did not explicitly require disclosure, the standards implied that Australian accounting practices gave more weight to disclosing material labour cost items than other countries. Such practice appears to have encouraged Australian firms to voluntarily disclose total labour costs before IFRSs adoption. Finally, unlike US studies, this research excludes some industries according to selection criteria explained in the methods section.

5.2 Cross-tabulation between expense classification forms and company disclosing types

Table III arranges each sub-group according to its form of expense classification. Neither AASB 1018 during the pre-IFRSs period, nor AASB 101 during the post-IFRSs period, prescribed a standardized or specifically detailed financial statement format that firms had to adopt. As a result, variations in expense classifications can be found across Australian firms. There has been some element of judgement used in this study to categorise each income statement into either a nature or function of expense. For example, the expense by function approach is sometimes referred to as the "cost of sales" method, making the existence of "cost of sale" in the income statement indicative of this "by function" classification form. However, there are some firms, which present both characteristics of the nature of expense (e.g. labour cost and/or depreciation) and the function of expense (e.g. cost of sale and/or distribution expense) at the same time. These firms are categorised as "both" format group, and most of these firms belong to distributor, retailer or service providers. Thus, the "cost of sale" in the income statements of these firms mainly comes from purchasing cost, not production cost.

When the expense classification format chosen by a firm is cross-tabulated with its pattern of disclosure of total labour costs in the pre- and post-IFRSs periods, the association is found to be highly significant. All six cross-tabulation panels in Table III show a highly significant association between disclosing types and expense classifications as revealed by the χ^2 probability test of $p < 0.000$ at the foot of each panel.

As shown in panel A of Table III, it is noticeable that even before IFRSs, a majority of Australian firms presented their expense structure using a nature approach. Excluding the ambiguous group, 48 per cent of the total sample ($n = 214$) adopted the nature of expense format, thereby enabling a higher (voluntary) disclosure rate of total labour costs. The 37 per cent ($n = 165$) of "non-disclosure" firms in the pre-IFRSs reflects their "by function" expense classification choice.

Table III.
Cross-tabulation analysis between disclosing types and expense classifications

	Pre-IFRS (2002/2003-2004/2005)				Post-IFRS (2005/2006-2008/2009)			
	Nature	Function	Both[b]	Total	Nature	Function	Both[b]	Total
Panel A: all sample								
Continuously disclosing	214 (48%)	8 (2%)	33 (7%)	255 (58%)	271 (46%)	17 (3%)	47 (8%)	335 (57%)
Newly disclosing	–	–	–	–	11 (2%)	134 (23%)	8 (1%)	153 (26%)
Ambiguous disclosure	12 (3%)	11 (2%)	–	23 (5%)	20 (3%)	16 (3%)	–	36 (6%)
Non-disclosure	–	165 (37%)	–	165 (37%)	–	64 (11%)	–	64 (11%)
Total	226 (51%)	184 (42%)	33 (7%)	443 (100%)	302 (51%)	231 (39%)	55 (9%)	588 (100%)
	Pearson χ^2: 389.160 (p-value < 0.000)				Pearson χ^2: 418.920 (p-value < 0.000)			
Panel B: manufacturer[a]								
Continuously disclosing	53 (45%)	–	–	53 (45%)	59 (38%)	8 (5%)	–	67 (43%)
Newly disclosing	–	–	–	–	6 (4%)	61 (39%)	–	67 (43%)
Ambiguous disclosure	3 (3%)	5 (4%)	–	8 (7%)	4 (3%)	4 (3%)	–	8 (5%)
Non-disclosure	–	56 (48%)	–	56 (48%)	–	13 (8%)	–	13 (8%)
Total	56 (48%)	61 (52%)	–	117 (100%)	69 (45%)	86 (55%)	–	155 (100%)
	Pearson χ^2: 109.486 (p-value < 0.000)				Pearson χ^2: 96.264 (p-value < 0.000)			
Panel C: service[a]								
Continuously disclosing	161 (50%)	8 (3%)	33 (10%)	202 (63%)	212 (50%)	9 (2%)	47 (11%)	268 (63%)
Newly disclosing	–	–	–	–	5 (1%)	67 (16%)	8 (2%)	80 (19%)
Ambiguous disclosure	9 (3%)	6 (2%)	–	15 (5%)	16 (4%)	12 (3%)	–	28 (7%)
Non-disclosure	–	103 (32%)	–	103 (32%)	–	50 (12%)	–	50 (12%)
Total	170 (53%)	117 (37%)	33 (10%)	320 (100%)	233 (55%)	138 (32%)	55 (13%)	426 (100%)
	Pearson χ^2: 273.129 (p-value < 0.000)				Pearson χ^2: 312.313 (p-value < 0.000)			

Notes: [a]Two sub-industries are excluded ($n = 13$) from all samples because they are unclear on whether they belong to manufacturer or service sector; GICS code 20105010 (industry conglomerates) and 20201060 (office services and supplies); [b]firms that classify their expense both by nature and by function

After IFRSs adoption, 26 per cent of the total sample starts to provide total labour cost information for the first time (i.e. "newly disclosing" group in panel A). Further, the extent of the "non-disclosure" group declines from 37 ($n = 165$) to 11 per cent ($n = 64$) due to the adoption of IFRSs. Interestingly, amongst the newly disclosing group, the "by function" approach is 134 (88 per cent = 134/153). This means that most of newly disclosing firms classify their expense by function on the face of income statement, and simultaneously provide additional labour cost information in the financial notes, which is fully compliant with paragraph 93 of new AASB 101. Meanwhile, there is no conspicuous change in composition ratio within continuously disclosing and ambiguous disclosure groups due to IFRSs adoption.

Panels B and C of Table III present a split of data according to two broad industry types: manufacturing and service. While IFRSs does not mention the association between expense classification format and industry type, the former AASB 1018 says "an entity engaged in providing services is more likely to classify its expense by nature than by function" (paragraph 5.2.4). Of course, the opposite inference is reasonable: manufacturers would be more likely to find the function of expense a natural choice. To categorise firms into two different industry types, the GICS® code and McLachlan *et al.* (2002) are used. The GICS® code provides text descriptions in sub-industry levels, and McLachlan *et al.* (2002) also suggest a guideline regarding industry classification in Australia. Some support for this inference is seen in panel B of Table III. Australian manufacturers slightly prefer the function of expense approach (52 per cent in the pre-IFRSs period and 55 per cent in the post-IFRSs period). More importantly, the disclosure of total labour costs by manufacturers increased greatly due to IFRSs. Before IFRSs, 45 per cent of manufacturers disclosed labour-related cost, but after IFRSs this rose to 86 per cent due to the strong take up by newly disclosing manufacturing firms. Again, most of the newly disclosing manufacturers present their expense by function and use notes to accounts to provide the nature of expense including total labour cost (61 out of 67 firms).

In terms of firms in service industries, panel C reveals they have preferred the nature of expense approach during both the pre- and post-IFRSs periods (53 and 55 per cent). The newly disclosing service industry firms, however, have mostly chosen the function of expense approach (67 out of 80 firms). Service industry firms make up most of the group that discloses "both" formats of expense classifications. Hence, when counting the group that provides "both" formats, the proportion of firms disclosing total labour costs was higher for service industry firms than for manufacturing industry firms in pre-IFRSs (63 versus 45 per cent). However, this comparison becomes slightly reversed in the post-IFRSs period, where the total labour costs disclosure rate for manufacturers is 86 per cent and for service industries is 82 per cent. This industry trend change is the result of a greater movement from non-disclosure to newly disclosing firms in manufacturing than in service industries.

In summary, in the pre-IFRSs period, the disclosing rate of labour costs was higher in service industries mainly because "by nature" and "both" formats were dominant during that period. The rate of disclosure of total labour costs becomes similar in both manufacturing and service industries in the post-IFRSs period when most newly disclosing manufacturing firms responded to the new requirements of AASB 101 by providing supplementary nature of expense information.

5.3 Firms' financial characteristics compared between different disclosure groups

To provide further insights into the characteristics of firms that have chosen to disclose total labour costs compared to those that have not, Table IV presents a comparison of means of total assets, sales and ROE between the disclosing and non-disclosure groups of firms. Following the propositions by Ballester *et al.* (2002), this study posits that both the size (proxied by assets and sales) and the profitability (proxied by ROE) of a firm are main factors that motivate the disclosure of labour cost.

The results in Table IV reveal no significant differences between the two groups in terms of firm size, sales and ROE in the pre-IFRSs period. This finding differs from Ballester *et al.* (2002), who report that firms with larger assets and higher ROE are more likely to voluntarily offer labour cost information. Given that Australian firms of all sizes were subjected to a more specific accounting standard on components of labour costs (AASB 1028 Employee Benefits, albeit without mandated disclosure on total labour costs) than other countries before IFRSs, no significant difference between the two groups is understandable.

In the post-IFRSs period, no significant difference is found between disclosing and non-disclosing firms on the basis of their total assets or ROE levels. However, Table IV indicates that non-disclosure firms have a significantly lower mean of sales than disclosing firms (t-test p-value < 0.000). The inference is that firms reporting a relatively low operating revenue (sales) level are more reluctant to reveal labour cost information because it may reflect poorly on the firm's labour productivity.

Turning to comparisons of financial characteristics of continuously disclosing firms versus newly disclosing firms during the post-IFRSs period, Table V reveals some significant results. In Table V, firms are compared by level of labour cost and intensity, as well as their total assets, sales and ROE. The result is there are no significant differences between the total assets, sales or labour costs of firms that continuously disclosed total labour costs before and after IFRSs and those that newly disclosed it after IFRSs. However, significant differences are found in relation to ROE and labour intensity. Newly disclosing firms have a significantly higher ROE but a significantly

	Pre-IFRS (2002/2003-2004/2005)				Post-IFRS (2005/2006-2008/2009)			
	n	Mean	t-test p-value	Wilcoxon p-value	n	Mean	t-test p-value	Wilcoxon p-value
Total asset								
Disclosing	255	1,014,195	0.547	0.204	488	1,417,991	0.836	0.866
Non-disclosure	165	1,235,678			64	1,302,759		
SALE[a]								
Disclosing	255	835,642	0.203	0.154	488	1,473,721	0.000**	0.016*
Non-disclosure	164	1,304,448			62	465,025		
ROE[b]								
Disclosing	252	0.211	0.724	0.906	481	0.210	0.176	0.134
Non-disclosure	162	0.205			61	0.238		

Table IV.
Firms' financial characteristics compared for disclosing versus non-disclosure firms

Notes: Significance at: *5 and **1 per cent levels; [a]No sales are reported in one observation during pre-IFRS and two observations during post-IFRS periods; [b]ROE = net income for year (t) divided by book value of common equity at the end of year ($t - 1$); the cases where ROE > 1 are excluded from sample as outliers

	n	Mean	*t*-test *p*-value	Wilcoxon *p*-value
Total asset				
Continuously disclosing	335	1,387,504	0.819	0.892
Newly disclosing	153	1,484,744		
SALE				
Continuously disclosing	335	1,181,578	0.129	0.354
Newly disclosing	153	2,113,383		
ROE[a]				
Continuously disclosing	329	0.193	0.001**	0.001**
Newly disclosing	152	0.244		
Labour cost				
Continuously disclosing	335	315,227	0.975	0.942
Newly disclosing	153	312,844		
Labour intensity				
Continuously disclosing	335	37.8%	0.000**	0.000**
Newly disclosing	153	27.1%		

Notes: Significance at: *5 and **1 per cent levels; [a]the cases where ROE > 1 are excluded from sample as outliers

Table V.
Firm's financial characteristics compared for continuously versus newly disclosing firms after IFRS

lower labour intensity. This suggests that more profitable firms having lower labour costs as a ratio of total operating expenses would be in a favourable financial position to comply with new AASB 101 and reveal total labour costs for the first time. In these financial circumstances, disclosure of total labour costs is less likely to expose poor performance. That is, profitability to shareholders (ROE) is higher and labour costs as a proportion of operating costs (labour intensity) is lower, so management will be less defensive about disclosing the total labour costs incurred.

5.4 Aggregated versus disaggregated disclosing firms

As a proxy for the quality of disclosure about labour costs, firms are divided into sub-groups according to lines included in their financial statements related to accounting items on labour costs. Three sub-groups are identified: "aggregated disclosing" (firms that provide total labour costs alone), "disaggregated disclosing" (firms that provide total labour costs and other items such as wages and salaries, contributions to employees' defined benefits plans and share-based compensation) and "aggregated to disaggregated disclosing" (firms that provided total labour costs alone in the pre-IFRSs period then changed to add disaggregated information in the post-IFRSs period). Table VI reclassifies the disclosing groups of Table II by the number of lines of labour costs-related accounting items, excluding non-disclosure and ambiguous groups.

The highlight of Table VI in the pre-IFRSs period is that most firms did not provide a breakdown structure of labour costs (aggregated disclosing firms are 94 per cent and disaggregated are 6 per cent). With the adoption of IFRSs, however, two major changes happened. First, as revealed in the post-IFRSs column of Table VI, around 24 per cent ($n = 81$) of continuously disclosing firms changed their disclosure practices from "aggregated" to "disaggregated" disclosure (average lines was 1.0 before IFRSs, but became 5.2 after IFRSs). Although these firms continuously (and voluntarily) provided labour cost information regardless of IFRSs adoption, this change in disclosure practices is conspicuous. Thus, these firms are separately categorised as an

		Pre-IFRS (2002/2003-2004/2005)	Post-IFRS (2005/2006-2008/2009)
Continuously disclosing			
Aggregated	*n*	239 (94%)[b]	233 (70%)
	Lines[a]	1.0	1.2
Aggregated to disaggregated[c]	*n*	–	81 (24%)
	Lines	–	5.2
Disaggregated	*n*	16 (6%)	21 (6%)
	Lines	3.7	4.1
Sub-total	*n*	255 (100%)	335 (100%)
Newly disclosing			
Aggregated	*n*	–	43 (28%)
	Lines	–	1.0
Disaggregated	*n*	–	110 (72%)
	Lines	–	5.6
Sub-total	*n*	–	153 (100%)

Table VI.
Aggregated versus disaggregated disclosing firms pre- and post-IFRS periods

Notes: [a]The average number of lines that are allocated to explain labour cost in financial statements; [b]ratio within each periods and disclosing type; [c]aggregated disclosing before IFRS, but change to disaggregated disclosing after IFRS

"aggregated to disaggregated disclosing" group. Second, as mentioned above, almost 26 per cent of total sampled firms start to provide labour cost information, but the majority of these firms (i.e. 72 per cent) allocate three or more lines to specific labour cost items. Interestingly, the adoption of IFRSs brought about a high proportion of disaggregated labour cost disclosure amongst newly disclosing firms, but not continuously disclosing firms.

To seek a further understanding of differences in characteristics between firms in the pre-IFRSs period that provide disaggregated ($n = 16$) versus aggregated ($n = 239$) disclosure, a comparison of means becomes problematic because of the large difference in the size of the two groups. Therefore, a within industries matching approach was undertaken for the pre-IFRSs period. Firms were selected from the large aggregated disclosure group as an industry match, as far as possible, to the 16 firms from the disaggregated disclosure group. When the financial characteristics of these two groups are compared, the results are that the disaggregated disclosure group, on average, has higher total assets, higher sales, higher ROE, higher labour costs and higher labour intensity ratio. These results are somewhat consistent with findings in Ballester *et al.* (2002). Ballester *et al.* (2002) explain that big firms are more likely to voluntarily disclose more about labour costs because they may experience economies of scale in terms of preparation costs and they also may want to alleviate higher political costs. In the Australian context, big firms would have similar incentives to provide greater details of their labour costs structure.

After IFRSs adoption, the two disclosure groups begin to provide more detailed information regarding labour cost. Apart from original disaggregated sub-group, 24 per cent of continuously disclosing firms switched from the aggregated to the disaggregated sub-group after IFRSs, and 72 per cent of newly disclosing firms provided disaggregated information with adoption of IFRSs, as previously noted from Table VI. These two disaggregated sub-groups are especially noteworthy because they have sent more information to the market from the start of IFRSs adoption. Table VII compares these

	Within continuously disclosing				Within newly disclosing			
			t-test	Wilcoxon			*t*-test	Wilcoxon
	n	Mean	*p*-value	*p*-value	*n*	Mean	*p*-value	*p*-value
Total asset								
Aggregated	233	1,123,930	0.001**	0.147	43	3,078,096	0.006**	0.005**
Disaggregated[a]	81	412,576			110	861,888		
SALE								
Aggregated	233	1,046,235	0.008**	0.021*	43	5,274,142	0.030*	0.012*
Disaggregated[a]	81	496,321			110	877,813		
ROE[b]								
Aggregated	228	0.198	0.216	0.166	43	0.248	0.877	0.786
Disaggregated[a]	81	0.176			109	0.243		
Labour cost								
Aggregated	233	310,458	0.028*	0.015*	43	695,366	0.025*	0.007**
Disaggregated[a]	81	170,775			110	163,312		
Labour intensity								
Aggregated	233	38.8%	0.799	0.996	43	26.3%	0.642	0.884
Disaggregated[a]	81	38.1%			110	27.5%		

Notes: Significance at: *5 and **1 per cent levels; [a]within the continuously disclosing group, "disaggregated" means "aggregated (before IFRS) to disaggregated (after IFRS)"; [b]the cases where ROE > 1 are excluded from sample as outliers

Table VII.
Aggregated versus disaggregated disclosing after IFRS

sub-groups against their aggregated sub-groups after the IFRSs period. The financial characteristics of these disclosing groups are presented in Table VII. This table shows that for both groups, disaggregated disclosing firms have smaller total assets, revenues (sales) and labour costs compared to aggregated disclosing firms. These differences are all significant except for one case, whereas there are no differences in ROE and labour intensity.

The question raised by the findings in Table VII is why do smaller firms (in terms of total assets, sales and total labour costs) tend to voluntarily disclose more details about labour costs, especially within the newly disclosing group? This result is intuitively unexpected. First, the expectation is that larger firms would provide more-detailed disclosure, based on arguments of their greater economies of scale or higher political costs. Second, smaller firms are more likely to be concerned about protecting the competitive advantage of their labour force against larger competitors. This would encourage smaller firms to provide less-detailed labour cost disclosures because of the perceived proprietary costs involved (Samudhram *et al.*, 2010). What, therefore, is a plausible explanation for the finding that smaller firms disclose more labour cost details than larger firms? It is contended that the macro-economic situation in the Australian labour market during the post-IFRSs period (after 2005) may be the contributing factor. As Hansson (2004, p. 353) mentioned, "labour markets are primarily local markets and there are even reasons to believe that labour markets are segmented within each local market". After the first adoption year, the unemployment rates of Australia were steadily diminishing from 5.0 per cent in 2005 to 4.2 per cent in 2008 (OECD, 2010c). Even with the impact of global financial crisis (GFC), the Australian job market is still strong. According to the OECD (2010a), as of 2009, Australia has escaped the influence of the GFC and its economy is expected be stronger in 2010 and 2011[4]. Although the unemployment rate in 2009 rose to 5.5 per cent due to GFC, unemployment is projected

to fall again to 5.2 per cent in 2010, the lowest level amongst OECD member countries. Specifically, the OECD explains the decrease of worked hour in Australia during 2008-2009 was attributed to declining working hour rather than reduction of employment (OECD, 2010b, p. 2). It adds that the main reason is because "wide spread skills shortages in the years prior to 2007 have encouraged firms to retain their staff in the expectation of a short-lived downturn and high costs of recruitment during the ensuring recovery"[5]. In this regard, it seems plausible that there has been a consistent demand for skilled workers even during the GFC. Since larger firms tend to pay higher wage, designated the "big-firm premium" (Gibson and Stillman, 2009), then a smaller firm may be in a relatively unfavourable position compared to its larger competitors to secure an adequate labour force. As a result, smaller firms in Australia are more likely to suffer from skilled labour shortages. Given that the disaggregated items of labour cost are mainly related to various remuneration benefits to the labour force, the tendency for smaller firms to provide disaggregated disclosure appears to be a signalling strategy to current and prospective employees about the firm's competitiveness in the labour market. Equally, it may be a strategy to ease shareholders' concerns about the firm's ability to retain and attract a skilled work force.

6. Conclusions

This study investigates the effects of the adoption of IFRSs in Australia on disclosure practices concerning company-wide labour cost information. Identifying the incidence and pattern of changes in labour cost disclosure practices by companies is a significant concern to corporate analysts and accounting researchers. Recently, analysts and researchers have faced a barrier in measuring companies' intellectual capital and productivity due to the poor availability of company-wide labour cost data. IFRSs adoption offered the prospect of bringing about changes in company disclosure practices that might break down this barrier in data availability. The new drivers of labour cost disclosures were AASB 119 Employee Benefits and AASB 101 Presentation of Financial Statements, introduced in Australia at the time of IFRSs adoption in 2005. Most importantly, AASB 101 mandated the nature of expense classification (entailing disclosure of at least the single item "total labour costs" somewhere in the financial statements).

In this study, a total of 160 Australian firms are analysed during seven years from 2002/2003 to 2008/2009. The first three years are the pre-IFRSs period and the last four years are the post-IFRSs period. Results show that in the pre-IFRSs period, approximately 60 per cent of Australian firms voluntarily disclosed total labour costs (continuously disclosing firms) mostly because they chose to present their expense structure on a "by nature" basis. After the adoption of IFRSs, a further 26 per cent of sampled firms begin to disclose total labour costs (newly disclosing firms). Interestingly, most of these newly disclosing firms stick to the "by function" form of classification in their income statement, and additionally provide a note on expenses classified "by nature" including total labour costs. These newly disclosing firms were found to have a significantly higher ROE but a significantly lower labour intensity than continuously disclosing firms. In these financial circumstances, disclosure of total labour costs by newly disclosing firms would have been less likely to expose those firms to poor labour performance.

In relation to the extent to which disclosed information about labour costs is disaggregated, it is found that very few companies (6 per cent) voluntarily provided

disaggregated labour cost information in the pre-IFRSs period. After IFRSs adoption, 24 per cent of continuously disclosing firms that provided aggregated labour costs in the pre-IFRSs period switched to disaggregated disclosure (aggregated to disaggregated sub-group within continuously disclosing group). By comparison, 72 per cent of newly disclosing firms after adoption of IFRSs provided disaggregated labour cost information (disaggregated sub-group within newly disclosing group). These two sub-groups are characterised by their changes in labour cost disclosure in terms of disclosing lines at the time of adoption of IFRSs. Interestingly, these firms are found to be smaller (in total assets, sales and labour costs), suggesting that different economic motives have driven their choice of providing disaggregated information about labour costs. It is argued that a tight market for skilled labour during the post-IFRSs period in Australia has encouraged management of smaller firms to signal more details about labour costs (benefits) as a strategy to retain their labour force and ease shareholders' concerns about prospective labour shortage.

Although there have been substantial advances in voluntary corporate disclosures about human resources, particularly of a narrative nature, the lack of corporate labour cost information has been one of the biggest barriers for empirical research on corporate intellectual capital and productivity. The adoption of IFRSs in Australia has resulted in a substantial increase in the availability of aggregated and disaggregated labour cost information in listed companies' financial statements. This disclosure is far from complete or consistent amongst listed companies. Given the number of countries adopting IFRSs around the world, the increase in labour cost information in financial statements is likely to have occurred well beyond Australia. This study points to the prospect that evidence from other adopting countries can be gathered and compared in the future. Such evidence of current disclosure practices concerning labour costs can facilitate the collection of a comprehensive database on corporate labour cost-related data. This can invigorate or re-invigorate emerging research in the fields of human resource accounting and costing, the measurement of corporate intellectual capital and the computation of value-added and productivity performance measures. This study has demonstrated an important practical benefit for human resource researchers and analysts that can be attributed to the adoption of IFRSs in different countries.

Notes

1. All the AASB standards can be obtained from following AASB web sites. Pre-2005 AASB standards are available at: www.aasb.com.au/Archive/pre-2005-AASB-standards.aspx (accessed 9 October 2010). AASB 1028 Employee Benefits released in June 2001 was effective on or after 1 July 2002. And AASB 1018 Statement of Financial Performance released in June 2002 applied to annual reporting periods ending on or after 30 June 2002. Accounting Standards after IFRS are available at: www.aasb.com.au/Pronouncements/Browse-for-pronouncements.aspx (accessed 9 October 2010). AASB 119 Employee Benefits released in July 2004 to replace former AASB 1028 and apply on or after 1 January 2005. Also, AASB 101 Presentation of Financial Statements was July 2004 version, and effective on or after 1 January 2005.
2. GICS® code is a form of industry classification code comprise of eight-digit code with text descriptions, and developed by Standard & Poors and MSCI, Barra in 1999. The disaggregated explanations are available at: www.standardandpoors.com/indices/gics/en/us (accessed 23 September 2010).
3. Ballester *et al.* (2002, p. 353) indicate that they use data line number 42 (labour and related expense) on the Compustat annual industrial and research files. They add this number

includes wages and salaries, incentive compensation, pension costs and other benefit plans, payroll taxes and profit sharing.

4. Gross domestic product (GDP) growth rates of Australia were 5.0 per cent (2007), 2.1 per cent (2008), and dropped to 1.2 per cent (2009). However, it is projected to bounce back to 3.3 per cent in 2010 and 3.6 per cent in 2011, respectively. In response to GDP trends, the unemployment level were 4.4 per cent (2007), 4.2 per cent (2008), but rose up to 5.6 per cent in 2009. But, it is also expected to fall again 5.2 per cent in 2010 and 4.9 per cent in 2011 (OECD, 2010a).
5. OECD (2010b, p. 2) comments:

   [. . .] the latest OECD Employment Outlook shows that more than 90 per cent of the reduction in total hour worked in Australia in the two years to the end of 2009 was due to declining working hours rather than reduction in employment, compared with just over half on average in previous downturns.

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