

The effects of accounting regime change on labour cost disclosures by Australian companies

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Abstract

Purpose – This study investigates changes in corporate disclosures of labour-related costs in financial statements arising from a change in the accounting regime from GAAPs to IFRSs in Australia.

Design/methodology/approach – An archival empirical approach is taken. Data is sampled for 160 listed companies in Australia over seven years covering AGAAP (2003-05) and AIFRS (2006-09) periods. To measure disclosures, a classification and count is made of line items for labour-related costs found in the face and notes of 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% to 85%, and the discretionary disaggregation of ‘total labour costs’ became more prevalent. Companies providing disaggregated information in the post-IFRS period are characterized by lower total assets, lower sales and lower labour costs. But their ROE and labour intensity are not differentiating characteristics. Reasons for these phenomena are addressed.

Originality/value – Previous studies have not analysed the effect of IFRS adoption on disclosures of labour-related information. This study gives new evidence about types of firms who 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, 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 (e.g., Abeysekera and Guthrie, 2004; April et al., 2003; Bozzolan et al., 2003; Brennan, 2001; Firer and Williams, 2005; Goh and Lim, 2004; and 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. (e.g. Lev 2001; Ballester et al., 2002; Lajili and Zéghal 2005; Lajili and Zéghal 2006; and Wyatt, 2008)

Some European countries consistently require mandatory disclosure of total labour cost (e.g. UK and France). But, prior to the adoption of international financial reporting standards (IFRSs), disclosure of company-wide labour-cost data in financial statements was largely optional to management in developed countries of North America, Asia, and Oceania. For example, in the US, where IFRSs have not yet 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 is dependent on voluntarily disclosed information in financial statements, and is restricted by limited and inconsistent corporate labour-related data in the US. In Australia, during the pre-IFRS period, labour related accounting standards and their disclosure requirements were centred in *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. But there was an alternative 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. But, 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. And 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-IFRS 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 IFRS adoption in 2005, several changes to labour-related cost disclosures were introduced. First the new *AASB 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 allows two different formats regarding expense classification. However, this time it 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-IFRS 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 IFRS 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 IFRS. Very few studies have provided evidence on the nature and extent of disclosure of firm-wide labour cost information in financial statements. In US setting, many studies have extracted some firm-wide labour cost information from limited samples of voluntary disclosures in financial statements. (e.g. Ballester et al., 2002; Lajili 2004; Lajili and Zéghal 2005; Lajili and Zéghal 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* (paragraph 86-95). Despite this expectation, there is no evidence of widespread reporting of labour expenditures under GAAP”. Thus, this study will be the first to explore the effects of IFRS adoption on labour cost disclosure.

Differences in the extent to which corporate management would change labour cost disclosure practices due to IFRS adoption are likely to be related to the firm’s prevailing profile of size of tangible assets, rate of return on equity, 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 value or effectiveness of human capital (e.g. Hansson, 2004). Management would 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-IFRS 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.

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-IFRS 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 GAAPs (AGAAPs) and Australian IFRSs (AIFRSs) would be indicative of other IFRS-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, 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 given 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 (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 (Edivissson 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 the investment in human resources. Darby et al. (1999) determine that a firm's value will increase by 7.3%, if it has one article 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% 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 (e.g. 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 among three different countries.

However, 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 US. Ballester et al. (2002, p.353) explain that US SEC'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 not enough to assess labour cost due to the wide variation of compensation and training schemes for employees. As a result, less than 10% 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 the voluntarily disclosing firms. These findings are unlikely to be representative of entire industries (or types of no disclosure firms). In this regards, 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 IFRS adoption. For example, Chalmers and Godfrey (2006), Chalmers et al. (2008), and Cheung et al. (2008) study the changes in intangible assets driven by IFRS adoption. More specifically, Carlin and Finch (2008) investigate the disclosure practices of goodwill impairment tests in Australia after IFRS. 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 IFRS. 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 IFRS 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-IFRS regimes is given in Table 1. [1]

Table 1 Comparison of Australian Accounting Standards related to Labour Cost Disclosure

Pre-IFRS	Post-IFRS
<p>Labour cost disclosures under AASB 1028 <i>Employee Benefits</i></p> <p>Classification of employee benefits (par. 4.2-4.12):</p> <ul style="list-style-type: none"> - Wages and Salaries - Compensated Absence - Profit sharing and Bonus Plan - Termination Benefits - Post-Employment Benefits 	<p>Labour cost disclosures under AASB 119 <i>Employee Benefits</i> equivalent to IAS 19.</p> <p>Short-term employee benefits (including wages and salaries)</p> <ul style="list-style-type: none"> - Other accounting standards such as AASB 124 or AASB 101 may require disclosure of short-term employee benefits. (par.23) <p>Post-employment benefits</p> <ul style="list-style-type: none"> - Defined Contribution Plans: disclosure of the amount recognized as an expense. And additional disclosure for key management personnel according to AASB 124. (par. 46-47) - Defined Benefits Plans: comprehensive disclosure requirements including total expense in Income statement (par. 120-125)

<p>Disclosure requirements are separately stipulated from par. 6.1. - 6.10:</p> <ul style="list-style-type: none"> - Comprehensive disclosure requirements for equity-based employee compensation and defined benefits superannuation plans (par. 6.1 and 6.3-6.10) - Disclosure requirement for the aggregate liabilities and assets arising from employee benefit (par. 6.2) 	<p>Other Long-term Employee benefits: Other accounting standards such as AASB 124 or AASB 101 may require disclosure (par. 131)</p> <p>Termination benefits and following disclosure requirements:</p> <ul style="list-style-type: none"> - Contingent Liability according to AASB 137 - If material, additional disclosure according to AASB 101 - Key personnel information by AASB 124 (par. 141-143)
<p>Expense Classification under AASB 1018 <i>Statement of Financial Performance</i></p> <p>All expenses from ordinary activities must be classified either:</p> <p>(a) all according to their nature; or (b) all according to their function (par. 5.2)</p> <p>“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” (par. 5.2.2.)</p>	<p>Expense Classification under AASB 101 <i>Presentation of Financial Statement equivalent to IAS 1.</i></p> <p>“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.” (par.88)</p> <p>“Entities classifying expense by function shall disclose additional information on the nature of expense, including depreciation and amortisation expense and employee benefits expense.” (par. 93) (given in bold font indicating it must be applied).</p> <p>“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 <i>Employee Benefits</i>.” (par.94)</p>

As highlighted in Table 1, before the adoption of AIFRS, two accounting standards 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 AASB1028’s disclosure requirements, AASB1018 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-IFRS 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-IFRS period, column 2 of Table 1 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 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-IFRS 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, this study collects a 7-year series of annual reports for each sampled firm. Sampled firms are chosen from Osiris Database based on following selection criteria:

- ASX-listed Australian firms with reporting year ending in June during 2002/03~2008/09 (total of 7 years);
- Exclusion of two sectors (10-Energy, 40-Finance) and two industry groups (151040 Metals & Minings, 302020 Food Products) according to GICS (Global Industry Classification Standard)® 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* database.

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 IPO 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 IFRS 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 IFRS adoption, then the amount of labour cost would appear either in the income statement or financial notes. These firms are categorised as 'continuously disclosing firm'.

Second, with the enforcement of IFRS, a substantial number of firms not giving labour cost information in the AGAAP years began to do so in the AIFRS 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 just 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 the 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 IFRS 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 that 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 IFRS. In the end, a total 160 firms and 1,031 observations are identified and categorised.

5. Results

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

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

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

		Pre-IFRS (’02/’03-’04/’05)	Post-IFRS (’05/’06-’08/’09)
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%)

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-IFRS periods. After IFRS adoption, however, 26% 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-IFRS period) declined from 37% to 11%.

Before further analysis, it is noted that the voluntary disclosure rate of Australian firms in the pre-IFRS period (58%) is found in this study to be much higher than that of US studies where voluntary disclosure of total labour costs has been reported at less than 10% (e.g. Riahi-Belkaoui, 1999). This large difference in extent of voluntary disclosure of total labour costs between the two countries may be attributed to several factors. First, most US studies rely on *Compustat* database, thus the availability of labour cost information is likely to be restricted by the data collection approach of this database (e.g. Ballester et al., 2002; Lajili and Zéghal, 2005) [3]. By comparison, this current Australian study exhaustively traces labour cost in each annual report directly by hand. Second,

even before IFRSs, a high proportion of Australian firms chose to classify their expense ‘by nature’ (see panel A of Table III). Nearly 50% of Australian firms adopted the nature of expense method in the pre-IFRS period, thereby automatically disclosing total labour costs under the AGAAP regime. Third, before IFRS 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; Deegan 2007). Although these specific labour entitlement items did not explicitly require disclosure, those 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 voluntary disclosure total labour costs before IFRS 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 AASB1018 during the pre-IFRS period, nor AASB101 during the post-IFRS 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-IFRS 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 Chi-squared probability test of $p < 0.000$ at the foot of each panel.

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

Panel A- All sample

	Pre-IFRS ('02/'03-'04/'05)	Post-IFRS ('05/'06-'08/'09)
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	Nature	Function	Both ²	Total	Nature	Function	Both ²	Total
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- Manufacturer¹

	Pre-IFRS ('02/'03-'04/'05)				Post-IFRS ('05/'06-'08/'09)			
	Nature	Function	Both ²	Total	Nature	Function	Both ²	Total
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- Service¹

	Pre-IFRS ('02/'03-'04/'05)				Post-IFRS ('05/'06-'08/'09)			
	Nature	Function	Both ²	Total	Nature	Function	Both ²	Total
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)				

1. 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).
2. Firms that classify their expense both by nature and by function.

As shown in panel A of Table III, it is noticeable that even before IFRSs, a majority of Australian firms presented their expense structure by nature approach. Excluding the ambiguous group, 48% 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% (n=165) of ‘non-disclosure’ firms in the pre-IFRS reflects their ‘by function’ expense classification choice.

After IFRS adoption, 26% 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% (n=64) due to adoption of IFRSs. Interestingly, amongst the newly disclosing group, the ‘by function’ approach is 134 (88% = 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 IFRS adoption.

Panels B and C of Table III present a split of data according to two broad industry types: manufacturing and service. While IFRS 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% in the pre-IFRS period and 55% in the post-IFRS period). More importantly, the disclosure of total labour costs by manufacturers increased greatly due to IFRSs. Before IFRSs, 45% of manufacturers disclosed labour related cost, but after IFRS this rose to 86% 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 pre- and post-IFRS periods (53% and 55%). 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% vs. 45%). However, this comparison becomes slightly reversed in the post-IFRS period, where the total labour costs disclosure rate for manufacturers is 86% and for service industries is 82%. 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-IFRS period, the disclosing rate of labour costs was higher in service industries mainly because ‘by nature’ and ‘both’ formats were dominant during that period. But the rate of disclosure of total labour costs became similar in both manufacturing and service industries in the post-IFRS period when most newly disclosing manufacturing firms responded to the new requirements of AASB101 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 comparisons of means of total assets, sales and return on equity (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-IFRS period. This finding is different from Ballester et al. (2002) who report that firms with larger assets and higher ROE are more likely to voluntarily offer labour cost information. But given that Australian firms of all sizes were subjected to a more specific accounting standard on components of labour costs (AASB1028 Employee Benefits, albeit without mandated disclosure on total labour costs) than other countries before IFRSs, no significant difference between the two groups is understandable.

Table IV Firms’ financial characteristics compared for disclosing vs. non-disclosure firms

		Pre-IFRS ('02/'03-'04/'05)				Post-IFRS ('05/'06-'08/'09)			
		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 ²	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 ³	Disclosing	252	0.211	0.724	0.906	481	0.210	0.176	0.134
	Non-disclosure	162	0.205			61	0.238		

1. * significant at 5%, ** significant at 1% level.

2. No sales are reported in one observation during pre-IFRS and two observations during post-IFRS periods.

3. ROE = Net income for year (t) divided by book value of common equity at the end of year (t-1). The cases where ROE is greater than 1 (ROE > 1) are excluded from sample as outliers.

In the post-IFRS period, no significant difference is found between disclosing and non-disclosure 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-IFRS period, Table V reveals some significant results. In Table V, firms are compared by level of labour cost and labour 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 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 AASB101 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.

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

		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 ²	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%		

1. * significant at 5%, ** significant at 1% level.

2. The cases where ROE is greater than 1 (ROE > 1) are excluded from sample as outliers.

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 given 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-IFRS period then changed to add disaggregated information in the post-IFRS 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-IFRS period is that most firms did not provide a break down structure of labour costs (aggregated disclosing firms are 94% and disaggregated are 6%). With the adoption of IFRS, however, two major changes happened. First, as revealed in the post-IFRS column of Table VI, around 24% (n=81) of continuously disclosing firms changed their disclosure practices from ‘aggregated’ to ‘disaggregated’ disclosure (average lines was 1.0 before IFRS, but became 5.2 after IFRS). Although these firms continuously (and voluntarily) provided labour cost information regardless of IFRS adoption, this change in disclosure practices is conspicuous. Thus, these firms are separately categorised as ‘aggregated to disaggregated disclosing’ group. Second, as mentioned above, almost 26% of total sampled firms start to provide labour cost information, but the majority of these firms (i.e., 72%) 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.

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

			Pre-IFRS (‘02/’03-‘04/’05)	Post-IFRS (‘05/’06-‘08/’09)
Continuously Disclosing	Aggregated	N	239 (94%) ²	233 (70%)
		Lines ¹	1.0	1.2
	Aggregated	N	-	81 (24%)

	to Disaggregated ³	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%)

1. The average number of lines that are allocated to explain labour cost in financial statements.
2. Ratio within each periods and disclosing type;
3. Aggregated disclosing before IFRS, but change to Disaggregated disclosing after IFRS.

To seek a further understanding of differences in characteristics between firms in the pre-IFRS period that give 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-IFRS 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 IFRS adoption, the two disclosure groups begin to provide more detailed information regarding labour cost. Apart from original disaggregated sub-group, 24% of continuously disclosing firms switched from aggregated to disaggregated sub-group after IFRSs, and 72% 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 IFRS adoption. Table VII compares these sub-groups against their aggregated sub-groups after the IFRS 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.

Table VII Aggregated versus disaggregated disclosing after IFRS

		Within Continuously disclosing				Within Newly Disclosing			
		N	Mean	t-test p-value	Wilcoxon p-value	N	Mean	t-test p-value	Wilcoxon p-value
Total Asset	Aggregated	233	1,123,930	0.001**	0.147	43	3,078,096	0.006**	0.005**
	Disaggregated ²	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 ²	81	496,321			110	877,813		
ROE	Aggregated	228	0.198	0.216	0.166	43	0.248	0.877	0.786
	Disaggregated ²	81	0.176			109	0.243		
Labour Cost	Aggregated	233	310,458	0.028*	0.015*	43	695,366	0.025*	0.007**
	Disaggregated ²	81	170,775			110	163,312		
Labour Intensity	Aggregated	233	38.8%	0.799	0.996	43	26.3%	0.642	0.884
	Disaggregated ²	81	38.1%			110	27.5%		

1. * significant at 5%, ** significant at 1% level.

2. Within the continuously disclosing group, ‘disaggregated’ means ‘aggregated (before IFRS) to disaggregated (after IFRS)’

3. The cases where ROE is greater than 1 (ROE > 1) are excluded from sample as outliers.

The question raised by these 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 give 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-IFRS 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% in 2005 to 4.2% in 2008 (OECD, 2010a). Even with the impact of GFC, the Australian job market is still strong. According to the OECD

(2010b), as of 2009, Australia has escaped from the influence of the global financial crisis (GFC), and its economy is expected be stronger in 2010 and 2011[4]. Although the unemployment rate in 2009 rose to 5.5% due to GFC, unemployment is projected to fall again to 5.2% in 2010, the lowest level among OECD member countries. Specifically, the OECD (2010c, p2) explains the decrease of worked hour in Australia during 2008-2009 was attributed to declining working hour rather than reduction of employment. 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, known as the ‘big-firm premium’ (e.g. 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 shortage. Given that the disaggregated items of labour cost are mainly related to various remuneration benefits to the labour force, the tendency of smaller firms to give 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.

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. To date, 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. IFRS adoption offered the prospective 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 IFRS 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 2002/03 to 2008/09. The first three years are the pre-IFRS period and the last four years are the post-IFRS period. Results show that in the pre-IFRS period, approximately 60% 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% of sampled firms start 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%) voluntarily provided disaggregated labour cost information in the pre-IFRS period. After IFRS adoption, 24% of continuously disclosing firms that provided aggregated labour costs in the pre-IFRS period, switched to disaggregated disclosure (aggregated to disaggregated sub-group within continuously disclosing group). By comparison, 72% 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-IFRS 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. But 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 websites. Pre-2005 AASB standards are available at: <http://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.

And Accounting Standards after IFRS are available at: <http://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 kind of industry classification code comprise of 8-digit code with text descriptions, and developed by Standard & Poors and MSCI/Barra in 1999. The disaggregated explanations are available at: <http://www.standardandpoors.com/indices/gics/en/us> (accessed 23 September 2010).

3. For example, Ballester et al. (2002, p.353) say that they use data line number 42 (Labour and related expense) on the Compustat Annual Industrial and Research Files. And they add this number includes wages and salaries, incentive compensation, pension costs and other benefit plans, payroll taxes, and profit sharing.

4. OECD (2010b), “Australia - Economic Outlook 88 Country summary”, available at: http://www.oecd.org/document/15/0,3343,en_2649_34573_45268687_1_1_1_1,00.html (accessed 12 February 2011). GDP growth rates of Australia were 5.0% ('07), 2.1% ('08), and dropped to 1.2% ('09). However, it is projected to bounce back to 3.3% in 2010 and 3.6% in 2011 respectively. In response to GDP trends, the unemployment level were 4.4% ('07), 4.2% ('08), but rose up to 5.6% in 2009. But, it is also expected to fall again 5.2% in 2010 and 4.9% in 2011

5. OECD (2010c), “Country notes/what’s new in your country this year-Australia: Employment Outlook 2010-How does AUSTRALIA compare?”, available at: http://www.oecd.org/document/46/0,3343,en_2649_34747_40401454_1_1_1_1,00.html, (accessed 12 February 2011). It says, “The latest OECD Employment Outlook shows that more than 90% 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” (p.2).

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