Accounting for the costs of recruiting and training

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Linda Twiname,
Senior Lecturer
lindat@waikato.ac.nz

Helen Samujh and
Senior Lecturer
hsamujh@waikato.ac.nz

Steven Rae,
Student
smr39@students.waikato.ac.nz

Waikato Management School, The University of Waikato, New Zealand

ABSTRACT

We investigate the investments made by accounting firms into recruiting and training new employees into entry-level positions. This includes developing a model to capture both the direct and indirect investments/ costs associated with recruitment and training. We quantify time, effort, resources, and associated opportunity costs, on entry-level recruits. The model was converted into a quantitative questionnaire and administered to accounting firms. We administered it to twelve accounting firms. The findings from this study build upon earlier studies (Bliss, 2001; Hansen, 1997; Phillips, 1990) which estimated the cost to recruit and train new employees at approximately 150% of their annual salary. Results revealed that the true investment in recruitment and training is significantly greater for the accountants in our study. On average accountants in our study invest an additional 241% of new employees' annual salary. The findings provide insight into the true financial investments firms make during recruitment and the first year of employee training for entry-level positions.

Our model is a simple tool which managers can use to quantify their investments in new employees during their first year of employment. It has proved insightful for accounting firms and has potential for use in other industries. Further, we found that generally new employees do not reach full productivity within their first year of employment. This highlights the importance for employers to retain new employees to maximise their returns on investment.

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INTRODUCTION

We investigate the investments made by accounting firms into recruiting and training new employees into entry-level positions. Our work enables deeper understanding of the costs associated with recruiting and training new employees through the development of a model that captures relevant costs. It enables deeper insight into human resource management (HRM) issues facing the accounts.

The traditional approach to recruitment in the accounting profession follows a pattern. "Public accounting firms have focused their recruiting efforts largely on the traditional college-aged student, usually with a bachelor's degree in accounting" (Wall, 1989, p. 24). Multi-national firms implement universal procedures to enhance global harmonisation (Hooper, Davey, Liyanarachchi, & Prescott, 2008). We suggest, failure to understand the time and costs of

recruiting and training may lead to ineffective and inefficient decision making. Bliss (2001), Hansen (1997) and Phillips (1990), provide a general indication of the cost to recruit and train new employees. Phillips (1990) calculated turnover costs at "about 1.2 to 2.0 (averaging about 1.5) times the annual salary of the position in question" (p. 58). However, Aamodt (2010), suggests these studies are outdated and based on generic research in the manufacturing sector.

Across the world, there has been a general move away from manufacturing towards service industries (Aamodt, 2010; Cascio, 1991; Flamholtz, 1999); consequently, different skill sets are required. "The knowledge economy encompasses all jobs, companies, and industries in which knowledge and capabilities of people, rather than the capabilities of machines or technologies, determines competitive advantage" (Lengnick-Hall & Lengnick-Hall, 2003, p. 17). Within accounting firms, staff are important as they generate revenue through the provision of services. The knowledge, skills, abilities and competencies accountants acquire from training and experience are important to their success. It is important that firms manage their employees effectively so that they fully realise employee value and organisational investment.

Treating human capital as investments rather than expenses is becoming increasingly common in HRM literature (Cascio, 2002; Flamholtz, 1999). Cascio (2002) recognises the importance of human resources to the success of organisations. Flamholtz (1999) advocates the importance of seeing human resources as investments rather than expenses. Our research was designed to build upon HRM literature through development of a model to quantify the investment in human resources. The overall objective of our investigation was to calculate the costs of/ investments in recruitment and training of entry-level accountants in their first year of employment. In order to do so six sub-objectives were developed:

a) To identify the components and processes that employers (in the accounting profession) may engage in during the hiring process.
b) To develop a model that captures the full cost of the employment process.
c) To develop measures for each component within the employment process.
d) To prepare a questionnaire to measure the costs of the employment process.
e) To administer a quantitative questionnaire to accounting firms to test our instrument.
f) To analyse the completed questionnaires to identify the cost of the employment and training process.
g)

LITERATURE REVIEW

In order to provide a useful context for the primary research undertaken, we have organised material into four main themes. First, we investigate human resource management (HRM) and early attempts to quantify financially the value of human resources. Second, we explore different approaches to understanding costs and their measurement. Third, we discuss alternative models and their limitations. Finally, we address key costs and identify gaps within the literature.

Growth in the service sector has lead to increased demand on the HRM function within organisations (Cascio, 1991, 2002; Flamholtz, 1999; Lengnick-Hall & Lengnick-Hall, 2003). Lengnick-Hall and Lengnick-Hall (2003) recorded the evolution of the human resource function within organisations. They identified increased integration of HRM throughout organisations, which when combined with other advancements, has the potential to lower organisational costs and increase effectiveness. The human resource function is increasingly recognised for its role in organisational success and contributions to competitive advantage

(Lengnick-Hall & Lengnick-Hall, 2003). Aamodt (2010) recognises the importance of appropriate recruitment and selection processes. These processes (Noe & Wilks, 1993) are crucial as they can reduce training costs and other human resource costs.

Whilst the process of recruiting differs between industries and organisations, there are similar elements involved (Garcia & Kleiner, 2001; Lin & Kleiner, 1999). Christofferson (1977) identified twenty-six steps in the process of hiring. Garcia and Kleiner (2001) identified eight – position definition, matching positions to applicants, recruitment, application analysis, reference checking, selection processes, job testing, and applicant selection. Bliss (2001) presented six main cost areas - exiting, recruiting, training, lost productivity, new hire costs and lost sales. These steps provide a broad view of the overall HRM function.

Human resource accounting recognises employees as organisational assets which can be included in financial reporting (Cascio, 1991; Flamholtz, 1999; Wall, 1989). Flamholtz (1999) discusses developments and advances in human resource accounting. He highlights their benefits to decision-making (Flamholtz, 1999). Fully understanding and quantifying the processes that organisations go through during recruitment and training facilitates valuation of investments. Bliss (2001) recognises that there are both direct and indirect costs (for example lost productivity while training new recruits) associated with recruitment. However, “there is no generally accepted accounting procedures for employee valuation” (Cascio, 1991, p. 2).

The financial value of human capital can be difficult to quantify. Generally, HRM literature does not identify costs of recruitment (Dolfin, 2006; Garcia & Kleiner, 2001; Lin & Kleiner, 1999). The human-cost approach focuses on the costs directly related to employees including relevant training costs. This approach views human resources as expenses to be minimised or used to enhance profits (Lobel & Faught, 1996).

The asset model focuses on the costs associated with human resources within organisations. That is, direct costs associated with the recruitment and training phases of hiring. Therefore, recruiting and training expenses are generally recognised as direct costs (Cascio, 2002; Sheppeck & Cohen, 1985). Such costs are viewed as reflections of the recognised 'value' of human resources. For example, Sheppeck and Cohen (1985) have developed an asset model which measures all costs to replace employees. Tang (2005) developed a generic model based predominately around direct costs including acquisition costs, orientation costs and learning costs. Phillips (1990) and Flamholtz (1999) use similar models to calculate replacement costs.

Direct costs are relatively easy to identify and quantify, however, "visible costs are found to account for only 10-15% of total turnover costs" (Phillips, 1990, p. 58). Many organisations are unaware of the full extent of the indirect costs incurred during the recruitment and training process. Flamholtz (1999) identifies a number of indirect costs associated with hiring new employees. Sheppeck and Cohen (1985) consider the cost factors associated with human resource functions. Similarly, Bassett (1972) considers the direct and indirect costs associated with human resource accounting. They recognise costs to organisations during new employees' learning periods. However, they do not provide methods to capture the value of the indirect costs to organisations.

The replacement cost (Abowed & Kramarz, 2003; Bassett, 1972; Dolfin, 2006; Phillips, 1990; Tang, 2005) approach is a core concept of human resource accounting, which considers the full costs to organisations of replacing employees. The replacement cost approach uses models that include direct costs and indirect costs. Indirect costs are those that are not directly spent on the recruitment and training process, but are consequential costs incurred by

organisations. Phillips (1990) states that "Hidden expenses account for 80% or more of turnover costs, they are rarely measured" (p.58). Measuring and placing a value on the indirect costs (also called soft costs) is difficult. Sanford (2005) notes, "they're easy to identify but hard to quantify" (p.43). A complete study of an organisation could reveal the full extent of indirect costs, there is no simple direct measure. Sanford (2005) stated "routinely, turnover costs don't include HR paperwork and time spent processing new employees, nor do companies measure lost productivity costs resulting from the person leaving" (p. 43). Tang (2005) provides a measurement for lost productivity. However, Tang (2005) states, "it is difficult to put a value on loss of efficiency" (p. 16). Overall, Sanford (2005) and Tang (2005) acknowledge difficulties in capturing and measuring indirect costs.

In many cases, new employees are not able to achieve maximum efficiency in their first year (Bliss, 2001). Taylor (1993) found that new employees take 12.5 months, while Phillips (1990) notes that it takes on average 13.5 months for employees to reach maximum efficiency. There is a significant cost to organisations over this period. Sanford (2005) offers a model through which indirect costs might be calculated. However, Sanford does not provide specific directions to calculate soft costs nor lost productivity. Cascio (1991) presents a generic model, which includes some indirect costs (Cascio, 1991, p. 4). Phillips (1990) measures inefficiencies of all staff involved in recruitment and training processes. Flamholtz (1999) provides a theoretical framework for the construction of a model, but does not provide specific measures to capture associated costs.

The cost of employee turnover can be calculated based on the annual salary (Garcia & Kleiner, 2001; Hansen, 1997; Lobel & Faught, 1996; Phillips, 1990; Taylor, 1993). Such calculations provide indications of turnover costs that hold over time as they are based on a

percentage of annual salary. Phillips (1990) considers both direct costs, that can be easily measured, and the indirect costs, that result from inefficiencies. Through capturing indirect costs, Phillips (1990) enables us to begin to calculate organisational effects on performance and the true cost of employee turnover. “Turnover costs were calculated to be equivalent to about 1.2 to 2.0 (averaging about 1.5) times the annual salary of the position in question” (Phillips, 1990, p. 58). Phillips (1990) results are consistent with studies by Hansen (1997) who identified the cost of replacing an employee was 150% of the departing employee’s wages. Hansen does not specifically identify how figures are calculated and uses the departing employees wage rather than the new employees. Similarly, Bliss (2001) found that the cost of employee turnover will exceed 150% and possibly reaches 200 to 250%. Bliss does not use empirical research or any form of actual calculation to justify these suggestions. Whilst these figures are comparable to other studies (Hansen, 1997; Phillips, 1990) no calculations are provided in support. Through our review of the literature it became increasingly apparent that we needed to develop an instrument that could accommodate a variety of data within each classification.

Carnevale and Schulz (1990a) note that models, “highlight the investment in human resources, but ignore human resource effectiveness” (p. 57). Bliss also identifies that there are costs associated with a new hire that cannot be easily measured (2001). Overall we note that different approaches and models capture costs in different ways; and it is difficult to capture full costs and all approaches have limitations.

METHOD

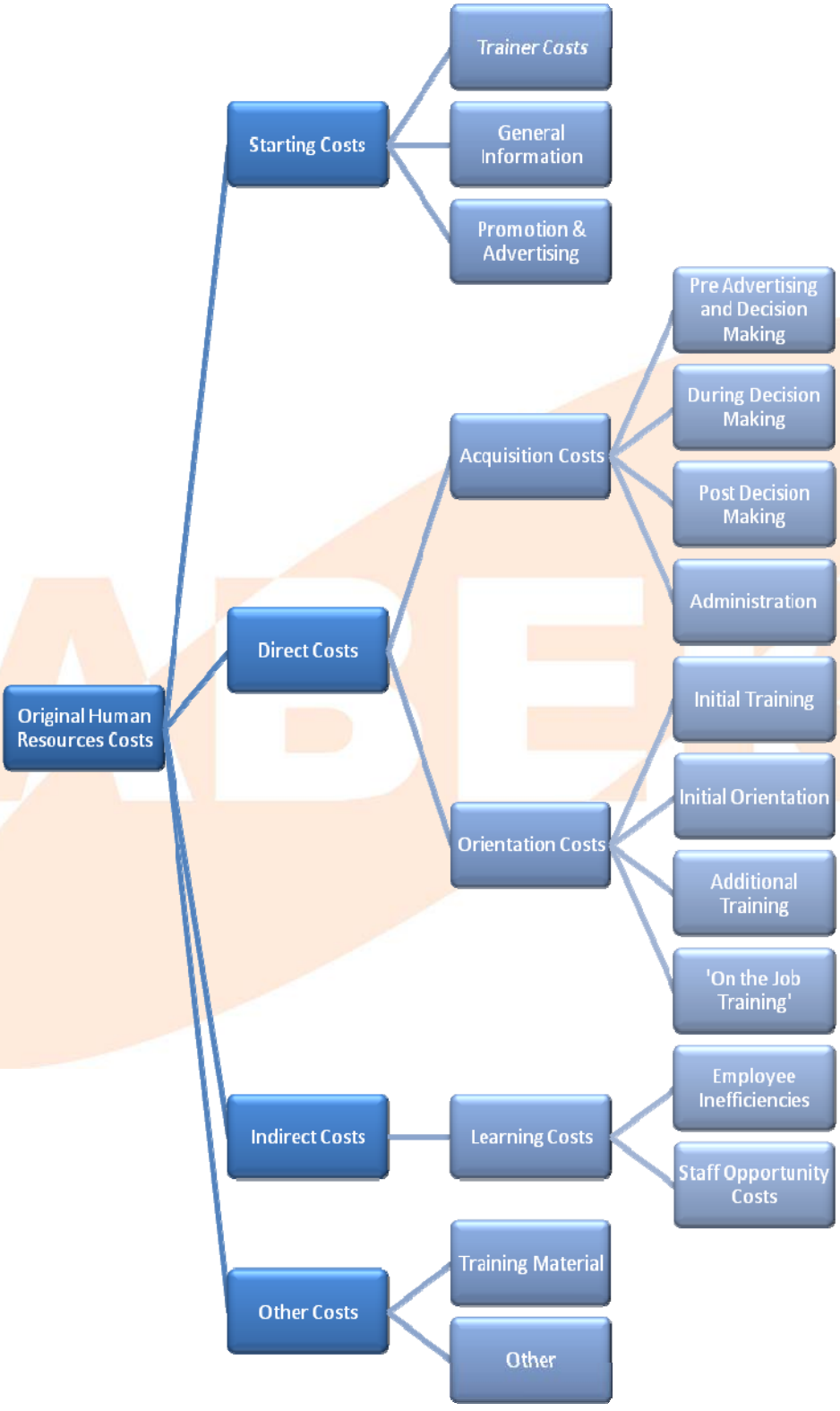
The literature review identified a number of costs to include in an instrument designed to capture the costs of recruiting and training new employees. We developed a flexible model

that extends the work of Flamholtz (1999 p. 36) and Phillips (1990). Flamholtz model provides an approach to identify cost areas, it does not offer calculations. Our model was developed and refined to capture recruitment and training costs for new employees in entry-level positions; and to allow for on job training that is directly chargeable to clients. We developed our model into a survey instrument (Appendix A) and administered it in December 2010 and January/ February 2011.

A survey enabled data collection from a wide number of sources in a relatively short period of time (Creswell, 2009). It provided consistency and was easy to administer, thus we anticipate it enabled thoughtful and accurate responses (Creswell, 2009; Sekaran, 2003) and lower costs. Initial contact was by telephone. We believe the research method that we used was objective, reliable and valid. The instrument that we designed can be replicated for future research in other business sectors.

Our questionnaire comprised of three components designed to measure costs related to filling new positions (in an accounting firm). Firstly, the employment process steps were identified through a review of relevant literature and practical experience. Secondly, a financial measure was established for each core step to capture related cost. Thirdly, we developed a model to measure costs of hiring new staff. Once developed, the model was transferred into a questionnaire to be tested on accounting businesses. To ensure high quality data, we asked managers of each organisation to complete our survey. Figure 1 captures the costs of recruitment and training new employees for entry-level positions.

Figure I.



(Flamholtz, 1999 p. 36)

Costs within the model are based on the processes identified from the literature review. The model begins with starting costs, which organisations incur prior to the hiring process. The model then separates direct and indirect costs. The direct costs represent initial organisational costs. These costs appear in the order they would occur in practice. Following the direct costs, indirect costs are associated with new employees commencing work. These costs are labelled learning costs and have been further separated into 'employee inefficiencies' and 'staff opportunity costs'. Also included in the model are 'other costs' to cover materials and any additional costs specific to organisations that the questionnaire does not otherwise capture.

Specific measures were developed for each element within the instrument. The separate sections of the questionnaire, and the rationale for each, are discussed next:

Opening questions: Captured one-off costs and information relating to the organisation. We included questions to measure the cost of trainers, the number of trainers, the amount of time-spent training and trainer's annual salary. These costs are often fixed costs to firms.

Acquisition costs: Were separate these questions into three main areas: 1) pre-advertising and decision making, 2) during decision-making, and 3) post decision-making. For each questions the number and type of staff and the amount of time spent in each process are measured along with any relevant administration time.

Orientation and training costs: Questions capture direct one-off payments to new employees or additional costs of hiring new employees. Next we measure orientation and training costs for new employees during their first year of employment. Orientation and training can occur in a number of different forms. For each we provide a number of different formats for the participant to provide appropriate costs. The final questionnaire was updated following a pilot

study. An additional question was added to ascertain the portion of on-the-job training that is chargeable to clients, thus offsetting organisational costs and providing practical on job training.

Learning costs: These questions are designed to measure new employee inefficiencies during their first year of employment and any inefficiency created through interaction with other staff members. The first measure focuses upon the new employee productivity during their first year of employment. Our instrument was adopted from Phillips (1990), which measures the productivity level in four 25% incremental stages. Employers are asked to give the number of months each employee spent at each productivity level. The second measure explores inefficiencies resulting from new employees taking other employees away from productive and income generating work. It measures the average number of hours per month new employees spends working under the supervision of other employees and their respective charge-out rates. This data provides a measure of lost income opportunity forgone while supporting new employees.

Other costs: These questions capture any additional recruitment related costs.

The research provides insights into a service sectors' recruitment costs. Data was collected from a number of organisations at one point in time (Creswell, 2009). A cluster sample approach was used to sample accounting firms that employed five or more staff. Further, generalisations can be made regarding the accounting sector in New Zealand, due to the homogeneity of practices and the existence of one professional body, NZICA. Therefore, we propose our findings are indicative of practices within New Zealand.

A complete cluster sample of accounting firms, in our region, was created from the population of New Zealand accounting firms with five or more staff. Lists of firms were compiled from online sources including the Yellow Pages (www.yellow.co.nz) and Finda (www.finda.co.nz) online websites. Company websites were used to identify contact personal and organisational size. We identified 40 potential organisations that met our requirements. Initial contact was made by phone, followed by a meeting to explain our research intensions and to answer questions. We also offered to provide a summary of each firm's data and a summary of the overall research findings. Questionnaires were completed by 12 firms, giving us a 60% response rate. The overall participation rate from the initial 40 firms was 30%.

Our findings reflect the cost to recruit, induct and train new recruits in their first year of employment, as a percentage of that employee's annual salary. We do not imply that our findings will hold over time as salaries increase, since this project does not show a causal or direct relationship with training costs. Therefore we recommend ongoing administration of our survey instrument. The comparison of training costs as a percentage of an annual salary enabled consistency of comparison. We discovered that accounting staff are required to record their work for each day, which can be used to determine each employee's productivity level (personal communication). This provided sufficient information to gauge productivity and to measure inefficiencies.

FINDINGS

We present data here from twelve accounting firms. The questionnaires were completed by directors, partners, and a HR Manager. Their data contains high levels of detail. They provide us with insights into their salary ranges, charge out rates, hours they spend on recruiting and training entry level staff.

Some firms claim they provide high levels of training and supervision. For example, two report that senior staff spend 20 hours a week with their new recruits in their first six months of employment, and 10 per week in their second six months. One employs staff that require minimal training and expects them to be "productive from day one, they learn on-the-job". Consequently our findings show a significant variation in costs and charge-out rates across the organisations. The average cost is reflective of a majority of the organisations, there are a few outliers. For example, there is significant variation in the level of direct and indirect costs between the organisations.

Respondents did not answer questions they did not wish to answer, or for which they did not have data. If a section was deemed to have insufficient data, we excluded it from the overall calculations. Table 1 provides a summation of the 'full cost to recruit and train an entry level accountant in their first year of employment'. We include both direct and indirect costs.

Indirect costs (learning costs) account for 62.1% of overall costs. Learning costs include lost productivity and opportunity costs during training in the first year of employment. Orientation costs account for 30% of overall costs and acquisition costs account for 7.9% of overall cost. These findings are discussed further in the next section.

The results reflect the considerable time spent in screening and selecting new employees (acquisition costs). The screening process represents the time spent reading curriculum vitae's and deciding which candidates will be interviewed. Following the screening, the selection process involves less staff and less total staff hours, but higher costs. Excluding the possible

outlier in firm three, the organisations spend 15 staff hours for each recruitment process, with a cost of just below $2,500 to each organisation.

The average productivity for new employees is 51.6% across their first year of employment. However, this is not linear as productivity increases across the year. Losses in productivity can be calculated at $18,500 on average. We found significant variation across the firms, ranging from $4,688 to $30,938.

The organisations approach training and orientation differently. Firms on average will spend $6,000 up front on formal training or orientation and an additional $1,100 on training during the first year. However, there is a significant variation across the firms, with firm 10 only spending $2,000 on training, where firm 1 spends $11,750. One organisation contracted out part of the training, using seminars for additional training at a cost of $500 per new recruit. These costs do not include on-the-job training.

On-the-job training costs can be recovered through charging clients a portion of work conducted with trainees. There is significant variation between the firms. Firm 8 does not charge clients for on-the-job training and firm 6 charges 5%, and in contrast firm 12 charging 75% of on-the-job training to the client. The average portion of on-the-job training recoverable from the client is 36%. This resulted in a decrease in average on-the-job training cost to the organisation to $7,700, an average $4,800 dollar reduction of the full on-the-job training cost.

Firms 5, 6 and 8 have the lowest training cost as a percentage of annual salary. Firm 11 has the lowest overall training cost but did not provide an annual salary for starting employees.

Respondents in this subgroup provided insufficient detail for us to calculate their opportunity costs. As an explanation for one firm's lower training costs they added the following: "We typically employ students who work with us during the holidays and term time. So when they graduate they do not require so much intensive training (as this is when they want to get paid the big bucks also). So they can invariably add to our bottom line from the get go, though we have incurred all the training cost by spread it over a longer period".

On average, across all 12 organisations, the total cost to each organisation in the first year of employment, over and above annual salary, is $87,508. The average salary is $36,318, which is 241% times greater than the average annual salary. Average salary, plus full organisational costs during the first year of employment is $123,826.

Total costs vary between organisations, ranging from $33,945 to $215,337. The full cost as a percentage of starting salary range between 89% and 538%. Two organisations training costs are over 500% of their annual salary (Firms 2 and 4). In both cases, the companies have relatively high opportunity costs ($140,400 and $141,600 respectively) and subsequently higher learning costs, as noted in the introduction to this section.

By working with the data that we received we were able to ascertain that on the average the nine firms supplying full data were able to recoup 36% of their investment into new recruits in their first year of employment (Table 2).

On-the-job training costs (Table 3) that were chargeable to clients, thus reducing overall costs of graduate training in their first year of employment. The net cost to employers for the nine firms now ranges between 89% to 513% and an average of 228%.

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Table 1

Full cost to recruit and train an entry level accountant in their first year of employment													
Firms	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Average**
Acquisition Costs	5000	1800	23910	9070	9000	178	2001	695	1923	4305	5950	2875	
% of Total Cost	5.4%	1.0%	17.7%	4.2%	21.9%	0.3%	4.0%	2.0%	3.2%	6.2%	25.5%	3.5%	7. 9%
Orientation Costs	46625	15200	23500	43000	27500	37000	12510	9500	1000	13560	10180	20620	
% of Total Cost	50.1%	8.5%	17.4%	20.0%	66.8%	54.3%	25.0%	28.0%	1.7%	19.6%	43.6%	24.9%	30.0%
Learning Costs	41366	161546	87960	163267	4688	30938	35508	23750	56394	51420	7200	59160	
% of Total Cost	44.5%	90.5%	65.0%	75.8%	11.4%	45.4%	71.0%	70.0%	95.1%	74.2%	30.9%	71.6%	62.1%
TOTAL COST	**92991**	**178546**	**135370**	**215337**	**41188**	**68116**	**50019**	**33945**	**59317**	**69285**	**23330**	**82655**	**87508**
Annual Salary	38000	35000	40000	40000	37500	45000	30000	38000	28000	32000		36000	36318
Cost as % of Annual Salary	**245%**	**510%**	**338%**	**538%**	**110%**	**151%**	**167%**	**89%**	**212%**	**217%**		**230%**	**241%**

Table 2 Deduct the chargeable component of training

Firms	1	2	3	4	5	6	7	8	9	10	11	12	Average
TOTAL COST	**92991**	**178546**	**135370**	**215337**	**41188**	**68116**	**50019**	**33945**	**59317**	**69285**	**23330**	**82655**	**87508**
Less chargeable	16875	1500	1000	10000	-	1000	-	0	-	0	5328	7500	4799
Net Cost to employer	76116	177046	134370	205337	41188	67116	50019	33945	59317	69285	18002	75155	82709
Annual Salary	38000	35000	40000	40000	37500	45000	30000	38000	28000	32000	-	36000	36318
Net Cost as % of Annual Salary	**200%**	**506%**	**336%**	**513%**	**110%**	**149%**	**167%**	**89%**	**212%**	**217%**		**209%**	**228%**

Table 3

On-the-job Training Costs													
Firms	1	2	3	4	5	6	7	8	9	10	11	12	Average
On-the-job Training	33750	5000	10000	20000	-	20000	-	5000	-	1000	7600	10000	12,483
Percentage of 'On-the-job Training' directly chargeable to clients	50%	30%	10%	50%	-	5%	-	0%	-	0%	70%	75%	36%
On-the-job Training' cost born by the organisation	16875	3500	9000	10000	-	19000		5000	-	1000	2280	2500	7,684
Chargeable to clients	16875	1500	1000	10000	-	1000		0	-	0	5328	7500	4,799

DISCUSSION

Our model and questionnaire were designed to capture direct and indirect costs in detail, through a concise instrument, which was directed at the cost of recruiting and training entry level accountants, in their first year of employment. A number of interesting findings emerged. The cost to recruit and train new employees is significantly greater than previous studies indicated. A significant proportion of indirect costs related to recruitment and training of new employees. The use and cost of trainers and on-the-job training varied greatly between firms. The nature of entry level accounting work, and support provided, varies significantly. The nature of industries, and organisation of work, appears to impact upon costs in the first year of employment – which, no doubt, will be recouped over time. However, these are indicative findings and further study is recommended.

Previous research (Garcia & Kleiner, 2001; Hansen, 1997; Lobel & Faught, 1996; Phillips, 1990; Taylor, 1993) canvassed a wider audience and used broader, more generic questioning. Previous research seem to provide general indications of the costs to recruit and train new employees, we worked to capture detail. Our success is partly a reflection of the high level of trust that our respondents afforded us by disclosing sensitive financial data that would not otherwise be available.

The accounting profession within New Zealand is complex, service-based, and highly regulated. Naturally accountants must work to high standards. The quality of their output and recommendations must be high. Therefore, significantly more training is required by highly skilled, highly paid people, resulting in higher overall costs/ investments in new recruits. These factors could explain the differences between our findings and previous studies.

On average two staff spend a combined 22 hours in defining new positions prior to advertising. These costs reflect the processes organisations go through prior to advertising positions. These hours would most likely be used for job (re)analysis and confirmation that the positions are required (Aamodt, 2010).

Indirect costs (learning costs) account for 62.1% of overall costs. This figure is surprisingly low as Phillips (1990) found it is usually 80% and Sanford (2005) notes it is rarely measured as it is difficult to quantify. Acquisition costs accounted for 8% of the overall cost. Aamodt (2010) recognises the importance of the acquisition and selection process. Performance benefits can be gained through appropriate recruitment and selection processes (Aamodt, 2010).

On-the-job training appears to be a significant training cost for accounting firms, due to work variety and individual client needs. Whilst a lot of training can occur in class-room settings, application of knowledge, skills and abilities take place in the workplace. In house processes and procedures must be learnt on-the-job. On-the-job training costs averaged at $12,500. There was significant variation across the organisations. When on-job-training is provided by permanent staff that hold a range of skills, they could be redeployed between training and service provision according to demand. Thus reducing the impact of ‘down time’ and optimising training potential.

Overall training and recruitment costs ranged from 89% to 538% of new recruit annual salary, with an average of 241%. At 4.5 times annual salary, our range was significantly greater than previous studies which found turnover costs were 150% of annual salary (Bliss,

2001; Hansen, 1997; Phillips, 1990). Phillips' findings ranged from 120% to 200% of annual salary, giving an overall range of 0.8 of annual salary (Phillips, 1990).

Two firms reported that senior staff spend 20 hours a week with their new recruits in their first six months of employment, and 10 per week in their second six months. Time spent training employees creates opportunity costs (learning costs). It seems highly unlikely that they would spend this much time directly supervising other staff members each week – without being able to charge the majority of time to clients. Such opportunity costs could be reduced if all parties performed chargeable tasks whilst undertaking training – thus recouping (some) training costs. Naturally some developmental work is not chargeable, such as, preparation of a client brochure or an article for a community newspaper, investigation of the firm's systems, updating the firm's databases. Such work will provide return on investment over time.

The average cost to recruit and train new employees also varied significantly across the firms. One potential explanation for such difference is varying productivity levels between new employees. Our average productivity level for new recruits in their first year is 51.6%. This suggests that it takes new recruits a significant period of time to achieve maximum efficiency. Firm five indicated that new employees reach their highest level of output and productivity from the outset. Whereas firms one, two, six, eight, nine, ten and twelve did not expect their new employees to reach full capacity during their first year of employment. Our results are consistent with those of Taylor (1993) and Phillips (1990) who identified that new employees take on average 12.5 months and 13.5 months respectively, to achieve maximum efficiency. These costs present opportunity costs to organisations, as time spent with new recruits is time taken away from chargeable work.

Our research was designed to quantify organisational investments into new recruits, in dollar terms. After investing in new recruits, organisations are in danger of their trainees being lured away to other employers (head hunted), thus bringing about lost investment. Our research identifies the significant costs/ investments that organisations bear when hiring and training new employees for entry-level positions; and thus inducting them into organisational/ professional practice. These investments highlight the importance of retaining employees for a number of years in order to recover costs.

These findings make a significant contribution to the literature identifying the full of recruitment and training is greater than earlier estimates. Previous studies have shown the cost to replace staff is 1.5 times their annual salary (Hansen, 1997; Phillips, 1990). This study shows that the cost to recruit and train new employees can be 2.4 times their annual salary. These findings show the investment that organisations makes into recruitment. Our findings have implications for human resource management and decision-making in practice through enhanced understanding of the true cost of/ investment in recruitment and training.

CONCLUSION

The purpose of this report was to develop a model that captured the cost to recruit and train an employee for entry-level positions. The literature revealed a changing business environment and increased service sector that have increased importance on human resources and their management. A number of different approaches have been attempted to capture recruitment and training costs (Bliss, 2001; Hansen, 1997; Phillips, 1990). However, these studies used generic instruments across different industries and professions, and do not

include indirect costs. Previous studies have attempted to account for indirect costs in a general indicative fashion, but and not in a specific industry or profession.

This study suggests that for specialised positions in the service sector the cost to train and recruit new employees is higher than originally estimated, largely due to high on job (indirect) training and learning costs. Further new employees do not reach full productivity within their first year of employment. This highlights the importance of retaining new employees to ensure maximum return on investment.

Limitations

The amounts calculated were based on a model that does not provide perfect accuracy. The model was designed to quickly capture indicative costs. This study was limited in part due to incomplete information provided by some participants. To reduce this impact the research could be conducted with a larger participant base.

This study focuses specifically on the cost to recruit and train entry level accounts. The findings may be extendable to accounting practices within New Zealand due to the homogenous nature of the industry. The model could be adapted for other business sectors.

REFERENCES

Aamodt, M. G. (2010). *Industrial/Organizational Psychology: An Applied Approach* (6th ed.). Belmont, CA: Wadsworth Cengage Learning.

Abowed, J. M., & Kramarz, F. (2003). The cost of hiring and seperations. *Labour Economics, 10*, 499-530.

Bassett, G. A. (1972). Employee Turnover Measurement and Human Resources Accounting. *Human Resource Management (pre-1986), 11*(3), 21-30.

Bliss, W. G. (2001). Cost of employee turnover can be staggering. *Fairfield County Business Journal, 40*(19), 20-21.

Brummet, L. R., Flamholtz, E. G., & Pyle, W. C. (1969). Human Resource Accounting: A Tool to Increase Managerial Effectiveness. *Management Accounting (pre-1986), 51*(2), 12-15.

Carnevale, A. P., & Schulz, E. R. (1990a). Economic accountability for training: Demands and pesponses. *Training and Development Journal, 44*(7), S2-S5.

Carnevale, A. P., & Schulz, E. R. (1990b). Return on investment: Accounting for training. *Training and Development Journal, 44*(7), 41-72.

Cascio, W. F. (1991). *Costing Human Resources: The Financial Impact of Behavior in Organizations* (3rd ed.). Boston, Massachusetts: PWS-KENT Publishing Company.

Cascio, W. F. (2002). *Responsible Restructuring: Creative and Profitable Alternatives to Layoffs*. San Francisco, CA: Berrett-Koehler.

Christofferson, R. (1977). The high cost of hiring. *Library Journal, 102*(6), 677-681.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.). Thousand Oaks: California: Sage.

Dolfin, S. (2006). An examination of firms' employment costs. *Applied Economics, 38*(8), 861-878.

Flamholtz, E. G. (1999). *Human Resource Accounting: Advances in Concepts, Methods, and Applications* (3rd ed.). Norwell. Massachusetts: Kluwer Academic Publishers.

Garcia, B. L., & Kleiner, B. H. (2001). How to hire employees effectively. *Management Research News, 24*(6/7), 35-42.

Hansen, F. (1997). What is the cost of employee turnover? *Compensation and Benefits Review, 29*(5), 17-18.

Hooper, K., Davey, H., Liyanarachchi, G., & Prescott, S. M. (2008). *Conceptual Issues in Accounting: A New Zealand Perspective*. South Melbourne, Victoria: Cengage Learning.

Lengnick-Hall, M. L., & Lengnick-Hall, C. A. (2003). *Human Resource Management in the Knowledge Economy*. San Francisco, CA: Berrett-Koehler.

Lin, Y.-F., & Kleiner, B. H. (1999). How to hire employees effectively. *Management Research News, 22*(9), 18-25.

Lobel, S. A., & Faught, L. (1996). Four methods for proving the value of work/life interventions. *Compensation and Benefits Review, 28*(6), 50-57.

Lombardo, C. A. (1989). Do the benefits of training justify the costs? *Training and Development Journal, 43*(12), 60-64.

Murray, L. W., & Efendioglu, A. M. (2007). Valuing the investment in organizational training. *Industrial and Commercial Training, 39*(7), 372-379.

Noe, R. A., & Wilk, S. L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology, 78*(2), 12.

Noe, R. A., & Winkler, C. (2009). *Employee Training and Development for Aust/NZ.* Nth Ryde, NSW: McGraw-Hill.

Phillips, J. D. (1990). The price tag on turnover. *Personnel Journal, 69*(12), 58-61.

Rynes, S. L., Orlitzky, M. O., & Bretz, R. D., Jr. (1997). Experienced hiring versus college recruiting: Practices and emerging trends. *Personnel Psychology, 50*(2), 309-339.

Sanford, J. (2005). Making cents out of the hiring process. *Strategic Finance, 87*(6), 41-45.

Sekaran, U. (2003). *Research Methods for Business: A Skill-building Approach* (4th ed.). New York: John Wiley & Sons.

Sheppeck, M. A., & Cohen, S. L. (1985). Put a dollar value on your training programs. *Training and Development Journal, 39*(11), 59-62.

Tang, T. (2005). Human resource replacement cost: Measures and usefulness. *Cost Engineering, 47*(4), 14-21.

Taylor, T. (1993). The true cost of turnover and how to prevent it. *Journal of Property Management, 58*(6), 20-22.

Wall, J. H. (1989). Human resources in an accounting firm: Recruiting is only the beginning - Part II. *Massachusetts CPA Review, 63*(2), 24-26.

APPENDIX A

Copy of the questionnaire administered to each accounting firm.

Dear Sir/Madam

We ask that one senior representative of each firm complete the following documents on behalf of their organization. This material contains a request for ethical approval and some pages titled "Accounting for the HRM function". Please complete this material on behalf of the organization that you work for. (We would also like you to complete "The Accounting HRM Nexus" questionnaire as an employee of your organization).

There are two possible methods for processing these documents. *Either* download this adobe file and completing the survey filling in the space on your computer and saving the file. When the survey is completed please email it to Linda Twiname at lindat@waikato.ac.nz. *Alternatively*, these pages can be printed off and completed in paper version and posted to Linda Twiname at the address given above.

Once you have completed and returned the surveys, we will assume that you have given your consent to take part in this research and the data generated using your responses will be incorporated in the overall results. Individual responses are confidential and will remain confidential. Only the three researchers (named below) will have access to the questionnaire responses. Further, no individual participants will be identified or identifiable.

We expect the findings of this research to be presented at conferences, used to enhance our teaching and discussed in journal articles. Overall the findings will inform accounting firms and the accounting profession of your views and will assist government in making policy on employment strategies. If you would like to receive a summary of our results please email Linda Twiname at lindat@waikato.ac.nz, this can be emailed to you once the results are available.

The research is being conducted by two senior lecturers from the Waikato Management School and supported by a research assistant. Our contact details are listed below:

Dr Linda Twiname, Department of Strategy and HRM	lindat@waikato.ac.nz
Dr Helen Samujh, Department of Accounting	hsamujh@waikato.ac.nz
Mr Steven Rae	smr39@waikato.ac.nz

If you have any questions about the research, or the questionnaire, please contact Linda Twiname (Phone: 07 838 4694)

Thank you for your participation,

Linda, Helen and Steven.

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The Accounting HRM Nexus Survey Questionnaire

'Accounting for the HRM function'

We would like one senior representative of your organisation who is responsible for the HRM function to complete this section on behalf of your organisation. We will not identify your organisation in our published work without first gaining your written consent. If any information requested in this questionnaire is sensitive and you do not wish to disclose it, please leave your response blank.

Please state the name of your organisation:_____
How many employees are there at your organisation?_____
How many new recruits or university graduates do you employ each year?_____
What is your average salary for trainers? $_____
How many trainers do you employ?_____
What percentage of their time do they spend training?_____
What is your annual graduate promotion budget? $_____
How much is directly spend on advertising graduate positions? $_____
What is the approximate salary of administration staff? $_____

Acquisition Costs

Please provide details regarding your annual recruitment of accounting graduates for junior accounting positions. Please complete the section below. However, if you do not have all information either fill in the table or disclose a total (or estimate) cost for that activity. *Please indicate as appropriate*.

Acquisition Costs	Staff Classification			
	Chartered Acct	Senior Acct/ Manager	Partner	Other:
Pre advertising and decision making				
Which staff and how many are involved in creating and defining junior accountant positions?				
How much time is spent, in hours per person, on the pre-recruitment decision making process? (i.e. decisions regarding the number of positions to advertise, job descriptions, position requirements etc)				
Grand Total if known $_____				
During decision making				
Which staff and how many are involved in narrowing down the pool of applicants?				
How much time is spent, in hours per person, narrowing down the pool of applicants?				
Which staff and how many are involved in the applicant screening process?				
How much time is spent, in hours per person, in the applicant screening process?				
How much administration time is spent during the recruitment process?				
Grand Total if known $_____				
Post decision making				
Which staff and how many are involved after the selection process through the orientation process?				
How much time is spent, in hours per person, after the selection process through the orientation process? (including contract preparation, informing unsuccessful applicants)				

How much administration time is spent after the recruitment process through the orientation process?				
Grand Total if know n $_____				

If 'Other' column is used, please state the position and charge out rate:_____

Orientation Costs

Please specify any payments that are made to new employees:

Dress $_____

Scholarships $_____

Computer $_____

Other: $_____ *Please Specify:* _____

Please indicate the approximate first year costs per new graduate employee

	Not provided	Local Office	Offices within a Geographic Area	All offices in single central location	Other: *please specify:* _____
Initial orientation		$	$	$	$
Initial training		$	$	$	$
Additional training		$	$	$	$
On-the- job training		$	$	$	$

Please indicate the percentage of the on-the-job training which is directly chargeable to clients _____%

If there additional new graduate orientation costs please specify the nature and amount:
(e.g. training and travel)

_____ $_____

_____ $_____

Learning Costs

Training Costs at local office

- What is the average annual salary for a first year accounting graduate employee? $___
- Please complete the fields in the table below with the approximate time in months that 'average' new graduates spend at each efficiency/productivity level in their first year of employment.

Productivity of New Employee During the First Year of Employment	
Efficiency/Productivity Level	Months operating at given level
0-25%	
25-50%	
50-75%	
75-100%	

(Phillips, 1999, p.59)

Inefficiencies and Opportunity Costs

- Please complete the fields in the table below:

Position Level	**Charge out rate to clients**	Hours spent with **each** first year employee on **average per week** (If the time varies significantly between the first and second half of the year please separate, alternatively use the total column)		
		First six months	Second six months	Total
Junior Accountant(s)	$			
Accountant(s)	$			
Senior Accountant(s) /Manager(s)	$			
Partner(s)	$			

Other training costs

What is the approximate value of additional costs incurred during the training process for manuals and print outs or similar? $_____

Any other costs not specified above? *Please identify the nature and amount:*

_____ $_____
_____ $_____
_____ $_____

General

Please tell us a little about yourself by indicating as appropriate in the following: *please select one*

Junior Acct. Chartered Acct. Senior Acct. Manager Partner Other: please specify _____

Do you have any further information/ detail/ explanations that you would like to add?

_____

_____

Thank you for completing this survey. Your support is acknowledged with gratitude.

We would also appreciate it if you would take responsibility to encourage staff at your organisation to complete the online survey 'The Accounting HRM Nexus'.

If you would like to receive a summary of our results please email Linda at lindat@waikato.ac.nz, this can be emailed to you once the results are available.