

# Bricklaying Contractors Stepping Up

Training  
bricklaying  
apprentices  
on-the-job has  
its challenges



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# Executive Summary

This report presents the results of surveys conducted with bricklaying contractors across Australia that were intended to uncover in greater detail the challenges faced by employers of bricklaying apprentices. The purpose of this approach was to clarify how the ABBTF can best support employers to improve apprenticeship take-up, completion rates and enhance on-the-job training outcomes.

Two surveys were conducted by phone and e-mail. The primary and more substantive survey targeted contractors with apprentice experience and included 453 responses across 32 questions. The second survey targeted employers who choose not to employ apprentices and presented 17 questions (101 responses).

The results of this survey present a detailed description of employers of bricklaying apprentices across Australia and the challenges they face in hiring and training on-the-job. The influence of subsidies is explored as well the contentious issue of whether all employers of apprentices are well suited to the role.

The extensive survey also provided the ability to develop a prediction model to identify those contractors with higher completion rates and who employ more apprentices than the average contractor. And finally, this report describes various different types of contractors through the use of market segmentation. These two approaches provide the ABBTF to more specifically target their service and message to contractors.

**Contractors** Employers tend to go through a phase of increased usage of apprentices soon after their first apprentice. On average, their employment of apprentices gradually decreases over time after their first apprentice. However, this does not imply that it is only the younger contractors who take on more apprentices. Surprisingly, 34% of bricklaying employers had 17 years or more experience before taking on their first apprentice. Even this group of experienced bricklayers took on more apprentices soon after their first apprentice.

Of those contractors who have hired a 1<sup>st</sup> year apprentice before, 47% have also taken on a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice at some point in their career. This occurs, on average, four years after taking on their 1<sup>st</sup> year apprentice. Those who take on 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices tend to have larger gangs (i.e. 4.7 vs 3.4 people) and hire more apprentices over their career (i.e. 7.4 vs. 3.8 apprentices) on average.

When asked about the single most important reason contractors hire an apprentice, over half said it was 'to train them my way ... no bad habits'. One in five suggested they hired apprentices to grow their business. Less than 10% identified commitment, cost savings or financial incentives as the most important reason.

The timing of hiring an apprentice is most often triggered if a good kid comes along or there is lots of work. In comparison, they are much less likely to hire when new grants or subsidies are on offer or to replace an apprentice.

**Challenges** 77% of contractors experience difficulty in finding a person they are willing to sign up as an apprentice. The single most important hiring concern for contractors is having enough work over the next few years when making a hiring decision (40%). Contractors in this camp tend to wait longer before taking on their first apprentices and hire fewer apprentices over their career.

The next two most important hiring concerns expressed by contractors are whether someone is good enough to be a bricklayer (24%) and whether they will stay with the job (16%). Notably, this last group that worries about whether they will stay have lower completion rates and are more likely to have had a poor experience with their first apprentice. Those contractors that are most concerned with their apprentice leaving may suggest poorly suited employers or a poor selection process.

Once hired, the challenges become much more operational. Three major challenges in the first few weeks on-the-job appear to dominate contractors. They include the challenge to 'keep them moving', 'keep them keen' and, 'having patience to explain things'. Contractors showed other differences depending upon the challenges they found most challenging.

Those contractors who rated 'keep them moving' as more challenging hired when a good kid was available and hired more apprentices but had a lower completion rate. Those most challenged with 'keeping them keen' also were opportunistic hirers, but usually had a poor experience with their first apprentice. Those contractors who found 'having patience' more challenging tended to have smaller gangs and had a lower average number of apprentices over time.

The concerns are very different when taking on a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice. Most contractors are concerned about the quality of their work (59%) with many also concerned with getting them 'trained in our method' (41%). There appears to be a common theme throughout the report that alludes to the variety of ways in which contractors set out a job and how they utilise the apprentice's role on the jobsite. The lowest rated concern dealt with how many bricks they could lay (24%). Other major concerns contractors have in hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice is their attitude (45%) and 'why did they leave their last employer' (32%). These substantial concerns may suggest a lack of vetting the applicant (e.g. interviewing, reference calls).

**Subsidies** The influence of subsidies on contractors hiring activities was disappointingly low.

Few employers suggested they hired apprentices due to the subsidies (4%). While 36% of contractors suggest that a new subsidy may make them more likely to hire at the time, this was much lower than other triggers such as when a 'good kid comes along' (77%) or there is 'lots of work' on offer (77%).

Contractors feel that subsidies help pay for time at trade school, general costs and productivity loss. However, less than a third felt it helped them get over the line to hire an apprentice.

***Should all employers train apprentices?*** 78% of contractors who

have employed apprentices believe there are employers of apprentices who should not be training apprentices. Whilst the majority of contractors believe something should be done about this, many acknowledge this issue is a difficult one to control. Suggestions from survey respondents included:

regulation, screening or banning employers, on-site inspections, trade school intervention, and employer training.

Relatedly, there are bricklaying contractors who choose not to employ apprentices. When asked to select the various reasons for not hiring apprentices, the two most common reasons were due to their concern with having reliable work and the long term commitment to the apprentice. Other reasons suggested a poor fit with training. 80% of contractors who choose not to employ apprentices identify with at least one of the following reasons:

- Doesn't fit in with my goals or directions
- I wouldn't encourage anyone into bricklaying
- Can't see myself training someone

**Profiling** The varying views, attitudes and behaviours of employers provided enough evidence to make a profile of contractors with higher completion rates and those who hire apprentices more than the average contractor. The following descriptions include those questions which were significant predictors.

**Picking contractors with higher completion rates** - On average, contractors with higher than average completion rates, tend to have more experience as bricklayers and have had more time under their belt since their very first apprentice. However, it does not necessarily mean they have had more apprentices during that time. In fact, employers with higher completion rate tend to hire apprentices less often when compared to contractors with low completion rates.

Although there are no hiring reasons or hiring triggers that indicate higher completion rates, there are concerns and challenges that are associated with lower completion rates. Contractors with lower than average completion rates are most concerned with whether their apprentice will stay and whether they should keep them or not within the first few weeks. Relatedly, these bricklayers have found it hard to 'find the right people' when they first started out as contractors. Contractors with lower than average completion rates also find it very challenging to keep the apprentice moving within the first few weeks.

However, contractors who believe they make more money with an apprentice are much more likely to experience higher completion rates.

**Who hires more apprentices?** - On average, contractors who hire more apprentices tend to have larger gangs. They also have less experience as a bricklayer and have fewer years since their first apprentice when compared to contractors with a lower average.

Contractors who hire more apprentices per year are much more likely to hire when an apprentice needs to be replaced and tend to interview more people, in general. At the time of hiring, they are more concerned with the impact of training on their time, but are less concerned with the paperwork when compared to those contractors with a lower average.

**Those most likely to have an apprentice now** - On average, contractors with a current apprentice are more likely to have a larger gang, have hired more apprentices over their career and have seen more apprentices successfully complete their apprenticeship. These contractors are more likely to



have hired because a good kid comes along, or to replace an apprentice. They generally believe that the pressure on rates does not impact their hiring decision. More importantly, they feel they are more profitable with an apprentice.

Contractors with a current apprentice are less concerned about an apprentice slowing them down or taking up the contractor's time in training. In fact, these contractors believe that it is the employer's role to spell things out in detail. They also tend to more strongly believe that a contractor should enjoy teaching an apprentice. Notably, they are more likely to worry about whether to keep an apprentice during the first few weeks on the job.

**Market segmentation** Marketing segmentation suggests that rather than treating all contractors in the same manner, there may be meaningful subsets that differ in some way. This may lead to tailoring services to different subsets, and, or marketing the message of the ABBTF in a more targeted manner.

There is no single way to segment a market. It is an exploratory process and has more to do with its usefulness to an organisation. To that end, there are two different market segmentations presented in this report. The first segments contractors based upon their approach to hiring. The second segmentation is more closely aligned to completion rates. The value of segmentation is in providing a better understanding of different groups of contractors that tend to hold similar values or behaviours.

**Key messages** The following presents the key points for the ABBTF.

- First and foremost, it is evident that the majority of contractors find it challenging in sourcing an appropriate apprentice whether the apprentice is new to the trade or part way through their apprenticeship.
- Many contractors hire when 'a good kid comes along' (77% are more likely to hire)
- It appears that many employers give up looking for apprentices over time. They interview fewer individuals and hire fewer apprentices over time. Comments suggest they become frustrated with the selection process and instead prefer to wait for someone to approach them.
- Sourcing appropriate apprentices would appear to be an important and valued service for contractors.
- While contractors are more likely to hire an apprentice when they have lots of work, many hold off because they are unsure whether they will have enough work over the three years apprenticeship.
- Providing a service that helps to move an apprentice to another employer would be a welcome support and may moderate the concern on having enough work over the next three years.
- Contractors have different concerns when hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. The issues are more trade specific and include concerns about their quality of work and how quickly they will pick up 'our method'. This suggests that sourcing 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices for



contractors will require a better understanding of the apprentice's on-the-job skillset and the contractor's requirements.

- Contractors who employ apprentices appear to differ in a number of ways.
  - ✓ There is evidence that different employers manage jobs differently. Most contractors hire 1<sup>st</sup> year apprentices so they can 'train them my way' and are most concerned about the quality of workmanship over quantity, when hiring 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices.
  - ✓ Varying hiring concerns also appear to explain differing approaches to training, or at the very least, management styles.
  - ✓ The majority believe there are employers of apprentices that should not be training apprentices. The prevailing view of contractors is that some form of prevention or intervention should be in place but emphasise that this should be done by those who knows the trade.
- Selecting and, or better matching of contractors with apprentices appears viable. This study points to key predictors which indicate which contractors hire more and have higher completion rates. This approach to profiling was able to predict to a reasonable level (72% to 79%)<sup>1</sup>.
- The subsidy does not appear to have a major or direct effect on apprenticeship hiring.
- Segmenting the market of employers of apprentices could provide a more targeted delivery of supporting services and potentially a more efficient use of funds.

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<sup>1</sup> Profiling was not the main focus of this survey. Results suggest that further research in this area could improve accuracy.



# 1. Introduction

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The brick and block manufacturing industry has a proud history of supporting contractors who use their product. The manufacturing industry jointly contributes with builders to support the bricklaying and blocklaying workforce. Much of this support is conducted by the Australian Brick and Blocklaying Training Foundation (ABBTF) in its work to promote, attract and support the employment of bricklaying apprentices. With an aging workforce and less than half of the workforce qualified in the trade, this support remains an important initiative to improve the standing of bricklayers and blocklayers within the industry.

Bricklaying contractors decide who and when they will hire as an apprentice and how they will manage on-the-job training. Although there has been a great deal of attention on attracting individuals into the trade, and how best to incentivise employers, there has been very little research on the specific challenges faced by contractors in their role as employers and trainers of apprentices.

## ***Purpose***

The intent of this project is to develop a better understanding of the current hiring practices of contractors and the training challenges faced by bricklaying contractors who take on apprentices. The purpose of this approach is to clarify how the ABBTF can best support employers to improve apprenticeship take-up, completion rates and enhance on-the-job training outcomes.

Key lines of questioning in this research include:

- What reasons do contractors hire apprentices and what triggers the timing?
- What are the biggest concerns when making that decision
- What are the greatest challenges for the employer in the first few weeks of having an apprentice?
- Can we predict which employers hire more apprentices or have higher completion rates
- Are there different segments of employers that require different supports from the ABBTF

## ***Survey***

The information presented in this report was sourced through two surveys conducted with bricklaying contractors across Australia. Since the primary focus was to explore the needs of contractors who employ apprentices, the main survey was directed at contractors who have had at least one apprentice during their career. This survey collected 453 valid responses. A second survey that was more limited in scope collected 101 responses from bricklaying contractors who choose not to hire apprentices.

The main survey utilised the ABBTF contact list as the sampling frame. This provided the most inclusive contact list for this industry since the ABBTF provides a subsidy to 75% of all contractors with apprentices<sup>2</sup>. Additionally, the survey design went to great length to ensure the results are representative for all Australian bricklaying contractors. This important distinction allows for results that represent all contractors and not just those included in the survey.

The selection of contacted contractors utilised random sampling. This was accomplished by putting all contacts in randomised order and then selecting contractors from each State or Territory in proportion to the number of apprentices in that State or Territory. This results in every contractor having an equal chance of being in the survey regardless of which State or Territory they reside in.

The survey design appears to have been largely successful in achieving a representative sample since the Australian Bureau of Statistics showed a very similar average age (mean=39.4, SD= 13.8, N=24,872) for bricklayers to the survey (mean 39.5, SD=10.5, N=449). Additionally, the split between domestic and commercial sectors matches closely with the historical 80/20 split.<sup>3</sup>

The survey questions were informed through three focus groups and eleven in-depth interviews. The resulting survey had 32 questions with 64 variables used in the analysis (See Appendix 1 for survey). The main survey was trialled with 26 Victorian contractors which provided valuable feedback and slight changes to question phrasing and answer sets.

The main survey was conducted by phone and e-mail. The phone surveys collected 215 completed surveys with an overall response rate of 60%, while the e-mail surveys collected 238 with a 22% response rate.

The second survey targeting contractors who do not intend to hire apprentices. Contacts were sourced from the Yellow pages by State. These surveys were conducted solely by phone and collected 101 completed surveys (421 calls were made with a response rate of 24%). This survey had 17 questions (See Appendix 2 for survey).

## ***Analysis and accuracy***

A number of statistical approaches were used within this study. While not wanting to bog the report down with statistical results, a few comments are in order for those interested in the level of accuracy and approach of analysis. In general, differing statistical approaches were used to

- present survey results,
- compare group difference,
- make predictions and,
- segment contractors into differing market groups.

**Survey results** - The descriptive results from individual questions are accurate within +/- 4.6% for the main survey with 453 responses. For instance, if the survey reflects that 77% of all contractors experience difficulty in finding an apprentice, this point estimate may actually lie somewhere

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<sup>2</sup> ABBTF data, 2012

<sup>3</sup> IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 6.

between 72.4% and 81.6%. This sampling error can be reduced by increasing the number surveyed, but does have decreasing returns as the number of surveys increases.

**Comparing group difference** - Other analyses were more specific in nature. There are a number of reported results which compare measures between different groups. Any reported measures that are stated to differ between groups are statistically significant within an analysis of variance approach (ANOVA,  $\alpha=.05$ ), and meet the assumptions required for such an analysis.

**Predictions** - Another statistical approach was used to predict which questions can accurately profile contractors into certain groups. For instance, can we accurately predict which contractors hire more apprentices than others? Binary logistic regression analysis was conducted to predict group membership from a set of questions. With the right questions, this approach can then quantify the success rate of accurately placing each contractor in the correct group.

**Segmenting market groups** – Since the ABBTF is in essence a service supplier, it may be useful to consider segmenting contractors into different groups with similar attributes – a common marketing practice for product and service organisations. Cluster analysis was conducted for this purpose.

Having described the survey design and analytical approach, we now move into the results section of the report. The next chapter describes bricklaying contractors and their engagement with apprentices. In this chapter we explore when contractors typically take on apprentices and the reasons they usually consider taking on an apprentice.

Chapter 3 reviews the challenges faced by bricklaying contractors in hiring an apprentice. How difficult it is to find an apprentice is presented, along with the hiring decisions and challenges faced by contractors in the first few weeks with an apprentice on the job site. The impact of subsidies and grants are also presented, as perceived by contractors.

Not all contractors take on apprentices, nor are all contractors well suited to training. In chapter 4, the views of contractors are presented on this topic along with their views on what should be done about contractors who are not well suited to train apprentices.

Chapter 5 and 6 take a more analytical approach to the information provided by the surveys. The information presented in these chapters attempt to predict which employers hire more apprentices, and which have higher completion rates. We refer to this as profiling. The final chapter attempts to shed further light on bricklaying contractors by classifying them into different subgroups. This is commonly referred to as market segmentation. The purpose for this is to better target the ABBTF message and possibly services to specific groups.

## 2. Contractors

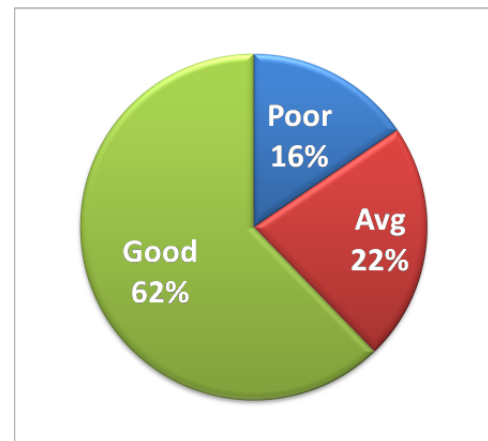
Bricklaying contractors who have taken on an apprentice at some point during their career vary in their timing and reasons for engaging in training bricklayers. This section describes some of the attributes of contractors who engage with apprentices, before we turn our attention to some of the challenges described in the next chapter.

Here, we describe when contractors tend to take on apprentices, and whether they consider hiring apprentices who are midway through their training. As well, we reflect some of the reasons and hiring triggers that contractors consider important in the hiring process.

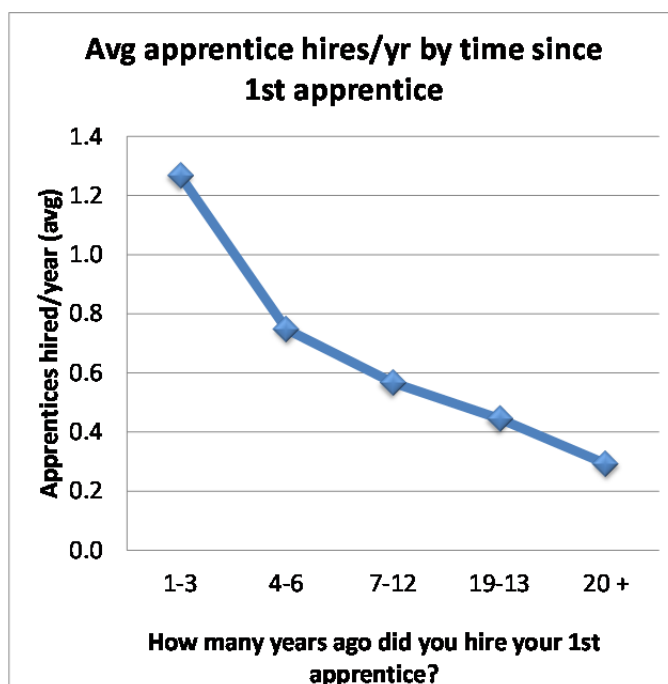
### *My very first apprentice*

The majority of employers describe a good experience with their first apprentice. In fact, only 16% of contractors describe their first experience as 'poor'.

On average, contractors tend to take on fewer apprentices the more experienced (i.e. older) they become. The survey reveals that the average number of apprentices for employers is, on average, highest during the earlier part of their career and steadily declines over time in the trade.



Also significant and more importantly, bricklaying contractors tend to take on more apprentices soon after their very first apprentice. The average number of apprentices hired declines over time



after their first apprentice. The increased likelihood of hiring more apprentices soon after their first apprentice appears to be more important than simply the number of years as a bricklayer. There is no significant difference in average number of apprentices hired per year for employers who take on their first apprentice sooner in their career versus later in their career. That is to say, that employers who hire their first apprentice later in life, also tend to hire more apprentices soon after their first apprentice.

These results suggest that, on average, contractors tend to go through a phase of

increased usage of apprentices soon after their first apprentice. This rate appears to decline for most employers over time. In this feature, there was no difference detected between States.

## ***Experience in the trade***

Not all bricklayers bring the same amount of experience to the table when taking on their first apprentice. Contractors were asked what year they started in the trade as a first year apprentice (or new bricklayer if they did not do an apprenticeship). 11% of employers take on their first apprentice within 5 years of starting in the trade. This indicates that one in ten employers have only one or two years experience as a qualified bricklayer before taking on their first apprentice.

The majority of contractors have more experience. 84% of employers had 7 or more years experience in the trade before taking on their first apprentice. Surprisingly, 34% of bricklaying employers had 17 years or more experience before taking on their first apprentice.

*“If you want the trade to go on and go on strong, you need to train the guys [on the job] properly ... and that doesn’t seem to be happening.”*

**Contractor**

Comments from bricklaying contractors in forums and interviews suggest that many bricklayers take on their first apprentice too early in their career. However, experience alone does not tell the whole story. The number of years experience a bricklayer had before their first apprentice did not explain significant differences in:

- the average number of apprentices hired per year
- the completion rate, or
- whether an employer currently had an apprentice

## ***Hiring a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice***

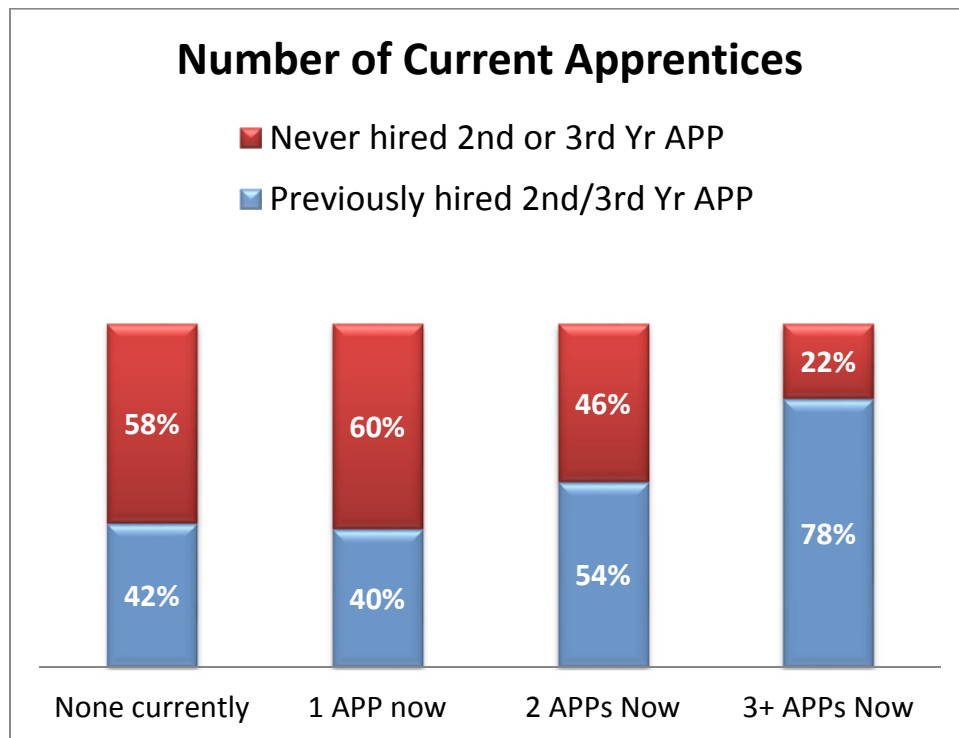
Of those contractors who have hired a 1<sup>st</sup> year apprentice before, 47% have also taken on a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice at some point in their career.

When compared to contractors who have only hired first year apprentices, those who hired a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice had larger gangs, on average, (i.e. 4.7 vs. 3.4 people) and hire more apprentices per year, on average (.78 vs. .57).

Although there is very little difference in experience as a bricklayer for those who have taken on a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice (i.e. our proxy measure for age), they have, on average, taken on their first apprentice four years earlier than contractors who have not hired a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. This would suggest that, on average, contractors tend to hire 1<sup>st</sup> year apprentices initially and then progress on to taking a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice.



In general, these contractors have hired more apprentices over their career (i.e. 7.4 vs. 3.8 apprentices). Despite this statistic, they are no more likely to have an apprentice currently when compared to contractors who have never hired a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. However, if we look more closely at those who currently employ an apprentice, the contractors who have hired 2<sup>nd</sup>/3<sup>rd</sup> year apprentices before are much more likely to have multiple apprentices currently.



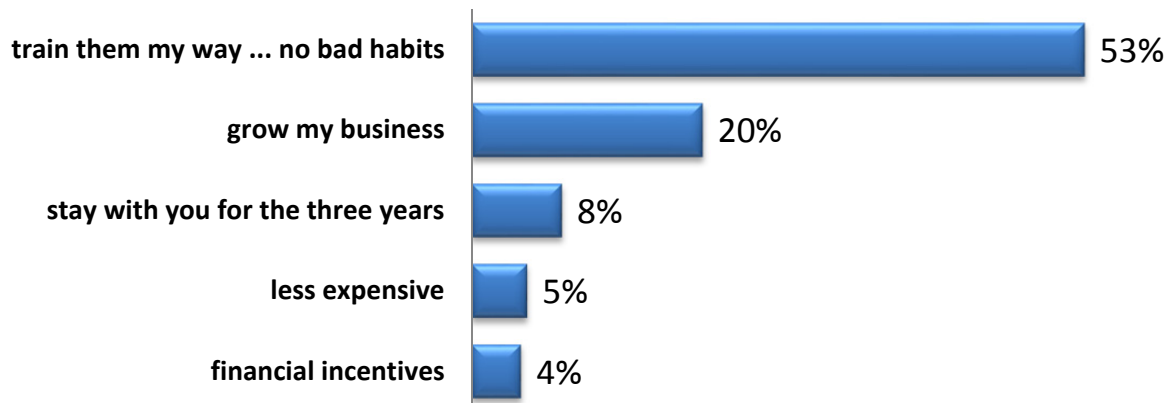
## Why hire an apprentice

Interviews and forum discussions identified a number of reasons why contractors hire an apprentice. Although many commented on the abuse of apprentices as labourers and the practice of hiring them for cheap labour, the survey results did not bear this out. Only 5% of contractors stated they hired apprentices primarily because they were 'less expensive'.

*"For me, I'd rather teach someone how I do things ... or at least what I think is right anyways."*

**Contractor**

## The Single Most Important Reason You Hire

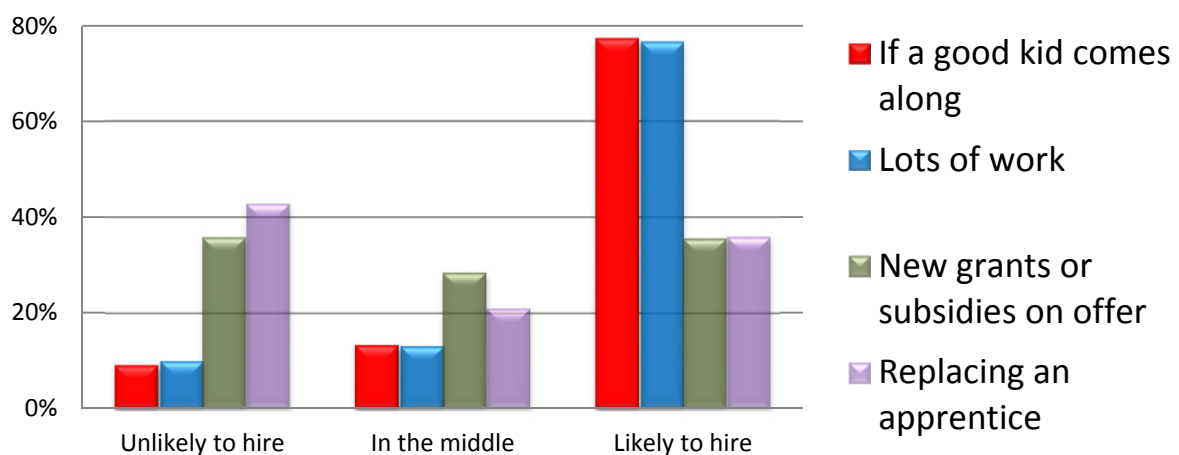


When asked to select the single most important reason why they hire an apprentice, just over half of all contractors said it was to 'train them in their way so they do not develop bad habits'. One in five, suggest they hire in order to grow their business. Less than 10% of contractors hire due to loyalty, cheaper labour costs or financial incentives.

It is noteworthy that employers do not always have an apprentice within their gang. One third of contractors hire less than one apprentice every three years. Anecdotally, we are well aware of periods of time where contractors may have multiple apprentices, followed by periods without any apprentices. This appears to be closer to the norm than a consistent factory like progression of apprentices who are replaced when qualified.

Even though the reasons for hiring an apprentice persist, the timing of these hires is influenced by other factors. Focus groups suggested four main themes of triggers for hiring an apprentice. Employers were asked to rate each of these triggers as to whether they were more or less likely to hire then.

## Triggers on the Timing of Hiring an Apprentice



Coincidentally, 77% of employers were more likely to hire 'if a good kid comes along' and if they had 'lots of work' on the go. Only 36% were more likely to hire when 'new grants or subsidies on offer' or 'replacing an apprentice'.

### **Issues for ABBTF**

These results suggest that the best window of opportunity to increase the total number of apprentices is to focus on those contractors who have recently taken on their first apprentice. These individuals are much more likely to take on a higher number of apprentices, no matter how old they are or how long they have been in the industry. In tandem with this however, is the need to better understand the reasons behind the falloff in hiring numbers. Are there ways that the ABBTF can support employers to extend this period of increased hiring?

Another significant market to target for the ABBTF is employers who are ready to take on a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. This target market hires more apprentices over their career, on average. It appears that targeting contractors four or five years after their first apprentice, or perhaps after their first completion would be appropriate. It seems to follow logically, that once an employer has experience with managing their first apprentice(s) through the 2<sup>nd</sup> and 3<sup>rd</sup> year of the apprenticeship, it becomes much easier or palatable to take on a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice.

Since many contractors hire when 'a good kid comes along', it would appear that contractors would be well served by some form of sourcing of appropriate candidates.

Over half of all contractors hire to 'train them in their way so they do not develop bad habits'. This result suggests that contractors' expectations and methods of running a job may vary somewhat. Comments about apprentices being used as cheap labour may well occur within the industry. However, some of these views may simply reflect different methods of laying out a job, roles performed by apprentices, and different on-the-job training approaches.

Finally, emphasising how apprentices can help to grow a contractor's business would appear to present a strong marketing position, especially where contractors are experiencing an increase in work.

Having described some of the defining attributes of contractors who have taken on apprentices, we turn our attention in the next chapter to the challenges faced by contractors in the hiring process.

### 3. Challenges faced by contractors hiring apprentices

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Running a contracting business is challenging on many fronts. Without the administrative support of larger organisations, a contractor takes on many responsibilities and functions which are a challenging feature of any small business owner.

Our focus in this section is to explore the various concerns and challenges faced by contractors who employ a bricklaying apprentice. Of particular interest are the concerns of contractors when deciding to hire an apprentice as well as the challenges during the crucial first few weeks on the job. Additionally, contractors reflect on the specific challenges in hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice which are separate from those of a 1<sup>st</sup> year apprentice.

#### ***Finding an Apprentice***

The vast majority of contractors experience some difficulty in finding a person they are willing to sign up as an apprentice – 77% find it ‘difficult’ or ‘very difficult’. Whilst some employers suggest it is difficult to simply find someone interested to respond to an advertisement, more employers comment that the real challenge is finding an appropriate candidate who is well suited and willing to ‘stick it out’ through the first few months.

On the surface, one might be forgiven for thinking that employers who interview (or review) more individuals would have better results. Although, contractors who interview more have hired a larger number of apprentices over their career, their completion rate is no better. There appears to be two potential explanations for this. Since many employers only look for an apprentice once every few years, interviewing may not be a skill that is widely used or honed. Secondly, comments suggest that many employers become discouraged with hiring process. Contractors interview less and less as they gain experience in the trade. Notably, 22% of all employers interview only one person when looking for an apprentice. Granted, some explanations reflect hiring a family member, most comments reveal opportunistic hiring when someone good comes along.

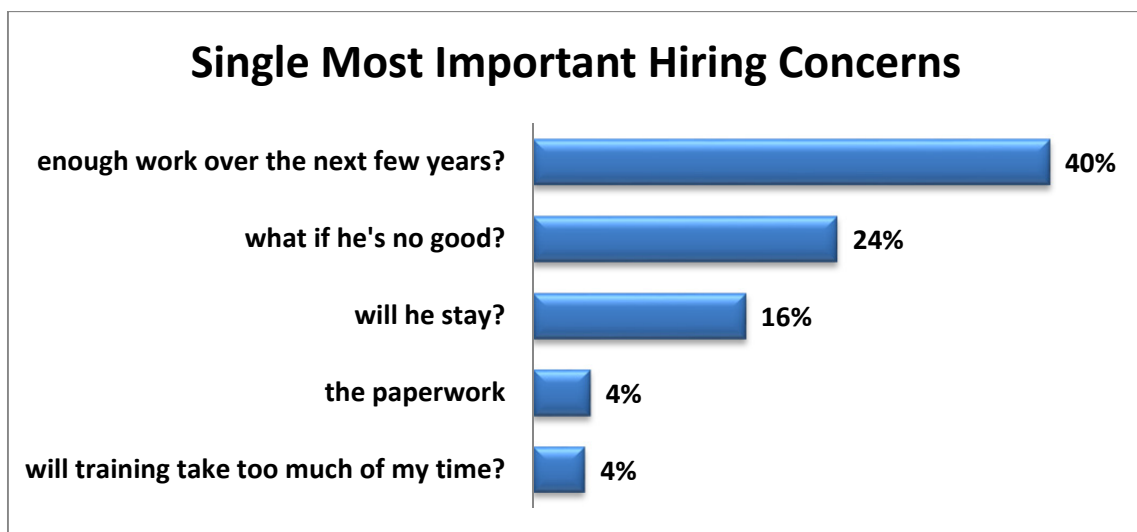
*“I [can’t] keep trialling 5 kids a week ... and keep going through a big portfolio. But if I could get 2 to 3 kids that were keen ... I’d be keen.”*

*“... it can wear you down. At the end of the day, many people just give up.”*

#### ***Concerns when Deciding to Hire***

There are a number of concerns that contractors consider in making the final hiring decision. Focus groups and interviews identified five major themes, which were tested within this survey.

When asked to identify the single most important hiring concern when deciding whether to hire an apprentice, 40% of contractors worry whether they will have 'enough work over the next few years' to keep the apprentice. This was followed by the concern on whether the apprentice is 'no good' (24%) and 'will he stay' (16%). Few employers were concerned with the training time they would have to personally commit to their apprentice while on-site. This commitment appears to be either taken for granted as part of the deal or even an aspect that some employers enjoy. 75% of employers of apprentices agree with the statement that 'You need to enjoy teaching if you take on an apprentice'.



However, hiring concerns are not independent of each other. Naturally, there are a number of concerns which impact the hiring of an apprentice. On one hand, we can confidently say that the most important hiring concerns are ranked as presented above. On the other, we would be interested to know if those who ranked 'will he stay' as the most important concern, still had concerns with having enough work? Or were they more concerned than others about the 'paperwork'? In the end, we are trying to decipher whether there are differences between contractors with differing answers on the most important hiring concern.

The survey design explored this possibility. After selecting the single most important concern, as presented above, respondents were then asked to rate the other concerns in relation to their biggest concern – on a scale of 1 to 10.

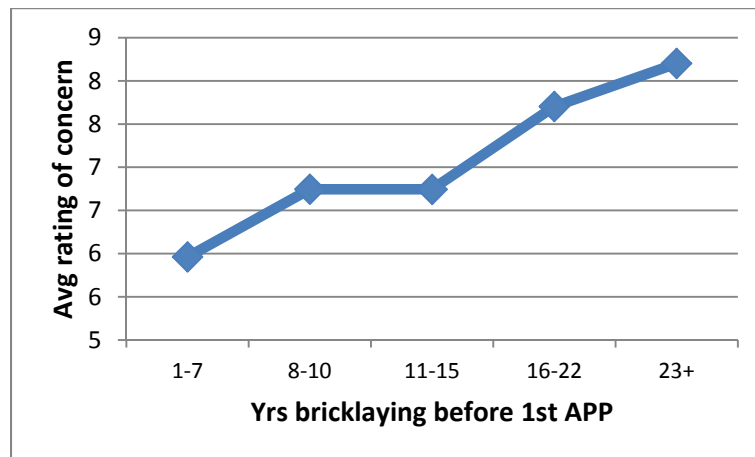
**Enough work over the next few years** - For those contractors who rated 'enough work' as their most important hiring concern, there was little change from the average ratings for the other concerns. However, contractors who expressed their biggest concern to be 'what if he's no good' and 'will he stay' were somewhat less concerned with having 'enough work'. This may suggest that some contractors tend to focus more on sourcing the better candidates as opposed to having enough

work. This sheds further light on the top two triggers for hiring an apprentice; hiring when ‘a good kid comes along’ may be quite separate as a hiring trigger from ‘lots of work’ for some contractors.

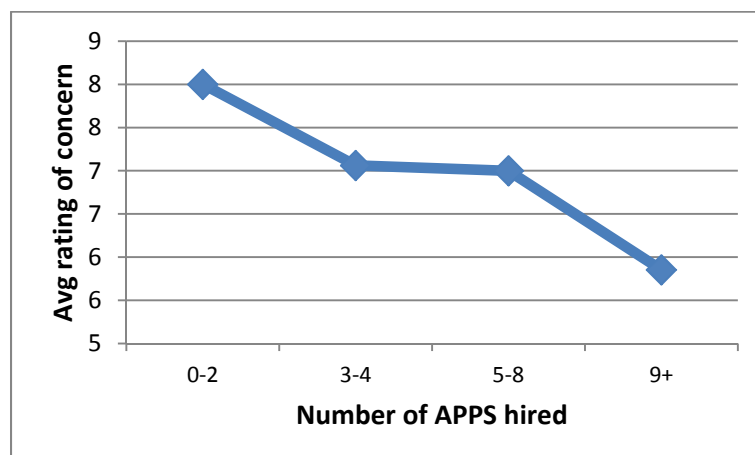
This variation in the rating of ‘enough work’ also revealed relationships with other attributes. Contractors who worry more about ‘enough work’ wait longer before taking on their first apprentices, on average (See figure below). Additionally, a heightened concern on ‘enough work’ is related to the total number of apprentices a contractor hires over their career. Contractors who worry more about ‘enough work’ hire fewer apprentices over their career, on average.

Contractors who are more concerned with ‘enough work’ also are more likely to question the profitability of an apprentice.

### Hiring concern of ‘enough work’ vs. Experience before 1<sup>st</sup> apprentice



### Hiring concern of ‘enough work’ vs. Number of apprentices hired

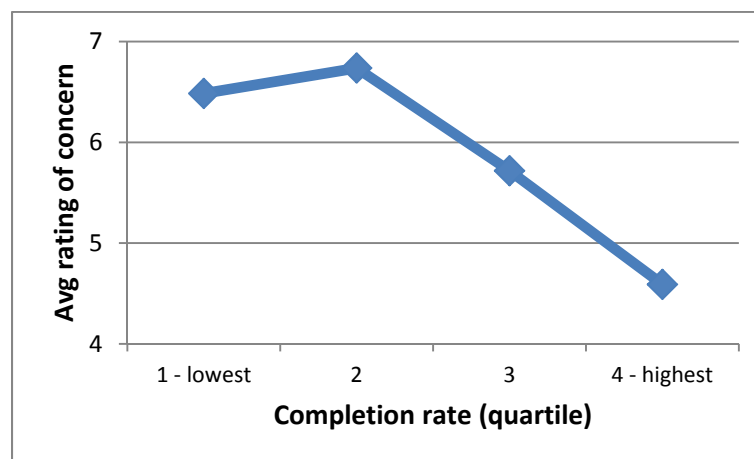


**What if he's no good** - While those most concerned with 'what if he's no good' did not reveal many distinguishing features, they do tend to question whether 'having an apprentice cost them more than it is worth' more than others not concerned with this factor.

**Will he stay** - For contractors who were most concerned with 'will he stay', they were on average,

- more likely to have had a poor experience with their 1<sup>st</sup> apprentice
- more likely to hire them 'to train them my way', and
- had a lower completion rate.

## Hiring concern of 'will he stay' vs. Completion rate



In summation, it appears that there are two separate themes on hiring concerns. On one hand there are those who are most concerned about having enough work, as compared to contractors who focus more on the candidate. The concern with having enough work is more prevalent for older bricklayers and results in fewer apprentices being hired, in general.

Those contractors who focus more on the candidate are most concerned with their performance (i.e. what if he's no good) or their commitment (i.e. will he stay?) Contractors are least successful in retaining an apprentice when they are most concerned with whether the apprentice will stay. Those contractors that are most concerned with their apprentice leaving may suggest poorly suited employers or a poor selection process. These contractors have experienced a higher than average attrition rate – a result that usually began with their first apprentice.

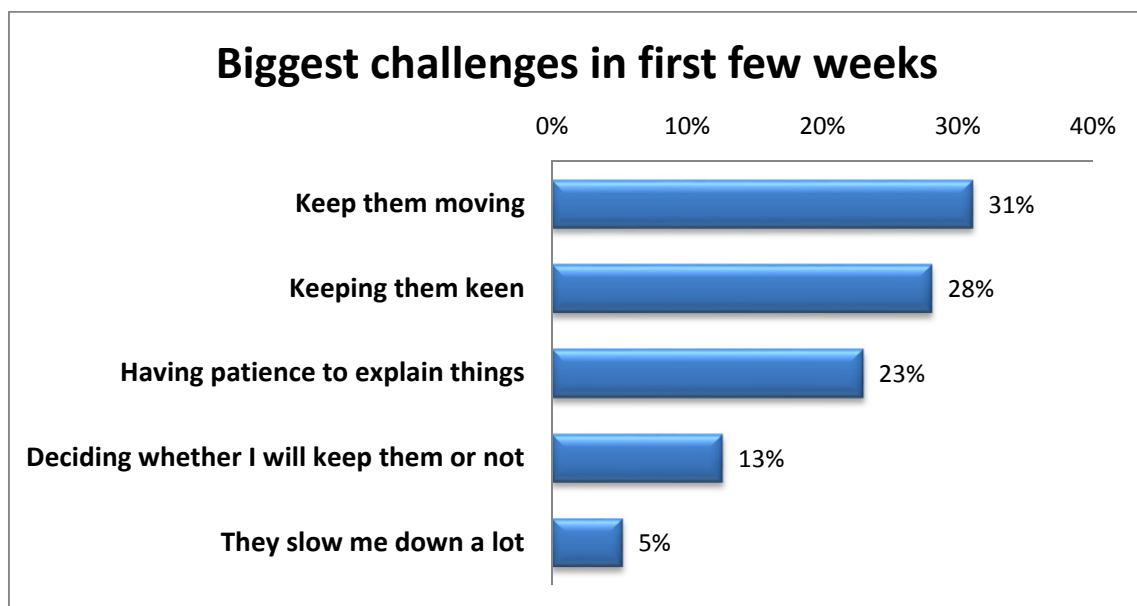
*"You'll always make an allowance ...if you see a guy and think, he's a gun, he's a thinker, he's got drive ... I'll spend \$300 if he's going to make me \$800"*



## ***Biggest challenges in the first few weeks***

While the previous topic reviewed the concerns of contractors when deciding whether to hire a particular candidate, this discussion reviews those challenges specific to the initial training period. It is a well-recognised fact that the highest attrition rate is experienced within the first few months of an apprenticeship. This is not only a poor outcome for the apprentice, but also represents lost time and disappointment for the employer.

Focus groups and interviews highlighted five major themes of challenges experienced by the contractor during the first few weeks. It is important to note that the focus here is on the contractors' challenges and not on the apprentices' suitability or failings. The chart below represents the single most challenging factors from contractors who have had experience with bricklaying apprentices.



Three major challenges in the first few weeks on-the-job appear to dominate contractors. They include the challenge to 'keep them moving', 'keep them keen' and, 'having patience to explain things'.

These challenges were rated by all respondents on a 10-point scale to explore relative differences and associations with other attributes. Notably, there was little relative difference in the ratings of challenges across the range of challenges. That is to say, that no matter which factor a contractor chose as the most challenging factor, the other factors were consistently stable and similar to other contractors. However, there were other relationships associated with the challenges within the first few weeks.

**Keep them moving** – Those contractors who rated ‘keep them moving’ as more challenging tended to have a higher average number of apprentices, and were more likely to hire an apprentice if ‘a good kid comes along’. Unfortunately, these contractors also experienced a lower completion rate.

**Keeping them keen** – Contractors who were more challenged with ‘keeping them keen’ were also more likely to hire if ‘a good kid comes along’, but were more likely to have had a poor first experience with their first apprentice.

**Having patience** – Those contractors who found ‘having patience’ more challenging tended to have smaller gangs and had a lower average number of apprentices over time.

While different contractor bring different personalities and skillsets to the role of training an apprentice, these various concerns may well explain the differing training styles or management styles amongst contractors. It is not too far a stretch to consider a contractor who focuses on keeping their apprentice moving to be more directive than a contractor who is more focused on keeping them keen. Unsurprisingly for today’s youth, a directive approach may explain the lower completion rate within this group.

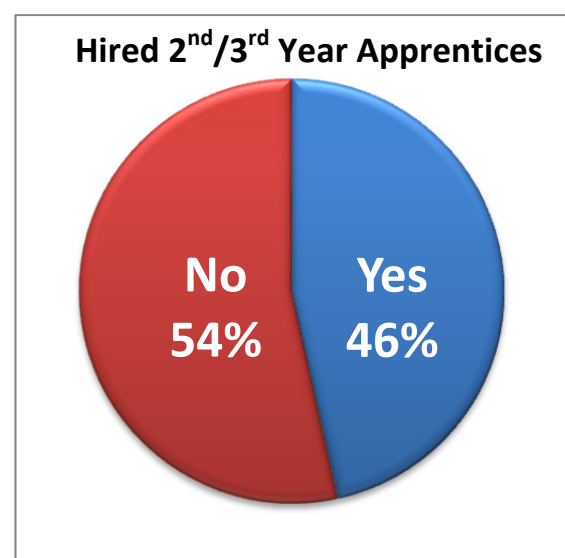
Those most concerned with having the patience in the first few weeks may well indicate a more personal coaching or mentoring role. This would seem more likely and perhaps appropriate for this group of contractors since they feature smaller gangs and hire fewer apprentices over time.

## ***Concerns with taking on a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice***

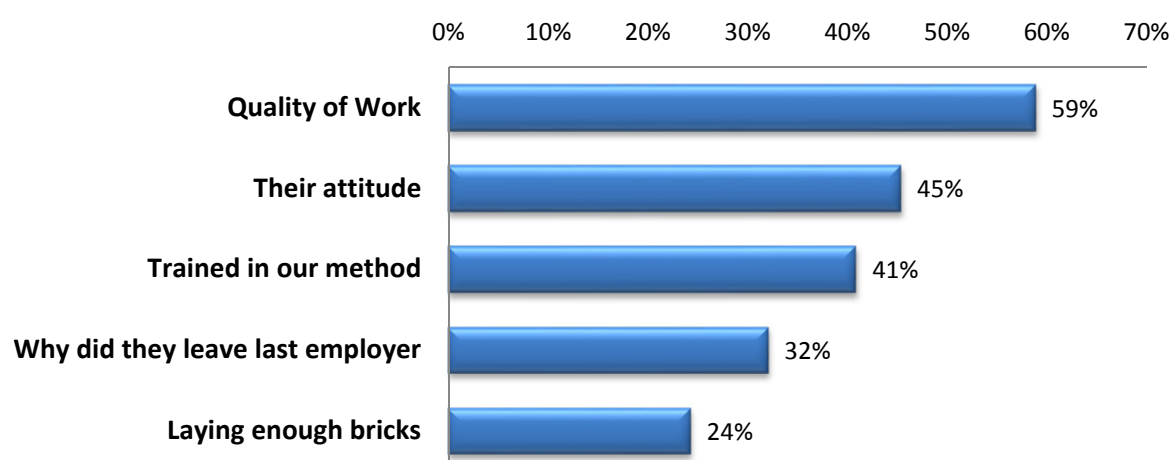
Roughly half of all employers of apprentices have taken on a 2<sup>nd</sup> or 3<sup>rd</sup> year apprentice. Despite the work-ready skills, 69% of all contractors who have hired a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice experience difficulty in finding someone they are willing to sign on.

Focus groups and interviews noted five overall themes when describing employer concerns when hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. These concerns are substantially different from hiring a 1<sup>st</sup> year apprentice.

The results are presented in the figure below. Note that survey respondents were able to select multiple items.



## Concerns when starting a 2nd/3rd year apprentice



The dominating concern for contractors is the quality of the apprentice's work. Most comments from respondents reflect poor training in their previous job as the cause of this concern.

Relatedly, 41% of employers are also concerned with getting a new 2<sup>nd</sup>/3<sup>rd</sup> year apprentice 'trained in our method of organising a job'. This alludes to the variety of ways in which contractors set out a job and how they utilise the apprentice's role on the jobsite. While many contractors complain about apprentices being used as 'cheap labour', there also appears to be a degree of variety in on-the-job training. Focus groups highlighted the various opinions of contractors as to the timing and level of responsibility given to an apprentice.

*"When you get guys from other people ... it's more that they have bad habits."*

*"Many apprentices don't learn the difficult things."*

*"I teach my apprentice how to run a business."*

Other major concerns contractors have in hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice is their attitude and 'why did they leave their last employer'. These substantial concerns may suggest a lack of vetting the applicant (e.g. interviewing, reference calls).

Surprisingly, only one in four contractors were concerned with whether they could 'lay enough bricks'. The quality of their work was much more important to contractors who are very protective of their reputation with builders.

## ***Measuring the impact of subsidies***

Exploring contractors' views on subsidies can be a tricky enquiry. By itself, there would be near unanimous support from contractors receiving financial support. However, the importance of subsidies is best tested when comparing their value in comparison to other factors. 'Do subsidies help?' is a very different question than 'Do subsidies help more than a, b or c?'

It should be noted that throughout the focus groups and comments from the survey, subsidies and grants were interchangeable terms in the contractors' mind. Who actually paid these cash inducements was not usually well understood and most often viewed as 'coming from the government'.

There were four areas within the survey that explored the influence of subsidies and grants in relation to other factors. They included a measure of subsidies as:

- a reason for hiring
- a trigger for timing of a hire
- whether a contractor believes they hire more apprentices due to subsidies
- whether contractors feel the subsidy helps them 'get over the line to hire an apprentice'

**Reasons for hiring** – Contractors were presented with five reasons for hiring an apprentice, and asked to choose the single most important reason. Only 4% of contractors identify financial incentives as the most important reason they hire an apprentice. Instead, they are more likely to hire an apprentice because they have no bad habits, or alternatively, to grow their business.

*“Just pays for the time they are away at trade school”*

**Trigger for hiring** – Respondents were asked to rate four common triggers that impact the timing of their decision to hire an apprentice. Each of these triggers was rated on a 5-point scale from 1-unlikely to 5-likely to hire then. 36% of all contractors believe that they are more likely to hire due to new subsidies on offer. However, contractors are much more likely to hire when a 'good kid comes along' (77%) or there is 'lots of work' on offer (77%).

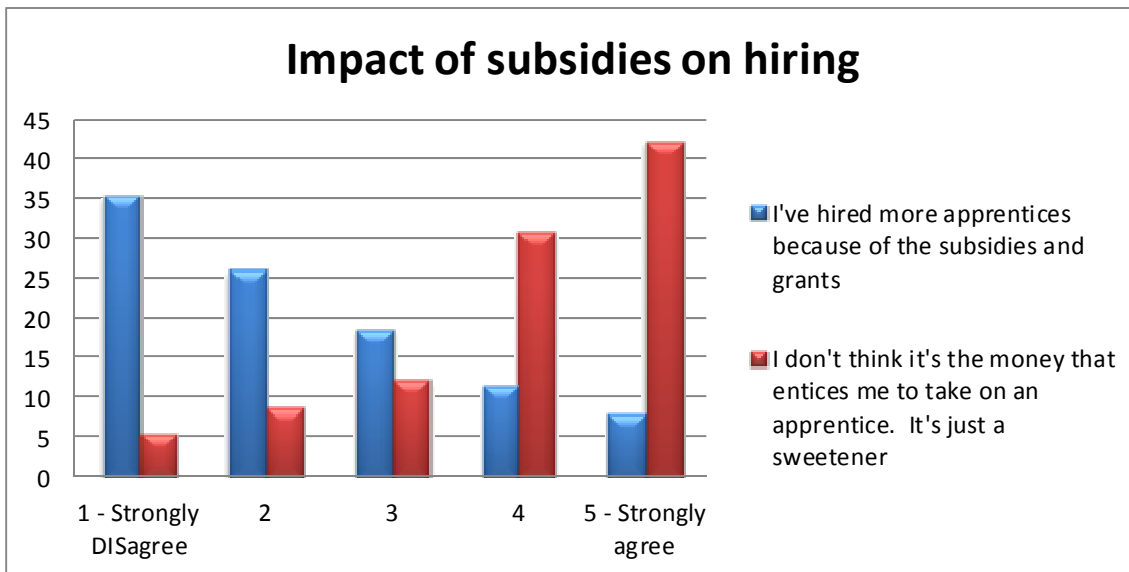
*“It would have to be a lot of money to make up for what your outlay is”*

*“Just giving employers more money is pointless if they're not going to train their apprentices”*

**Believe they hire more due to subsidy** - Further exploration of contractors' attitude on subsidies and grants were conducted by presenting two opposing statements and asking the contractor to rate their agreement or disagreement for each. The two statements were:

- “I've hired more apprentices because of the subsidies and grants”
- “I don't think it's the money that entices me to take on an apprentice. It's just a sweetener”

The results clearly indicate that contractors who have experience with the apprenticeship system, on average, do not believe they hire more apprentices due to the subsidy.

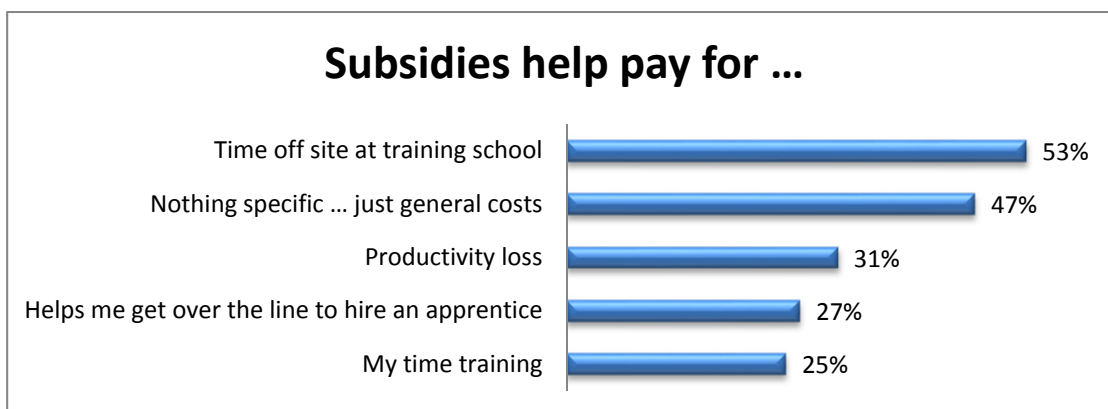


**What do subsidies represent to contractors?** – Even if subsidies are not the main reason for hiring an apprentice, we acknowledge that many comment that it is helpful and may, at times, be the matter that helps them ‘get over the line to hire an apprentice’.

In looking at this issue separately from a ‘hiring trigger’, we were interested in how contractors view subsidies and grants. Focus groups and interviews highlighted that some contractors associate subsidies and grants as helping with specific expenses or issues in relation to training an apprentice. To that end, respondents were asked to choose what they felt subsidies helped pay for. Five items were presented and respondents could choose more than one selection.

Just over half of all contractors associate subsidies with helping to pay for the apprentice’s time off site for trade school training. Roughly one-third of all contractors associate subsidies with helping to pay for the loss in productivity, while one-quarter feel it recompenses the employer for their time spent training. However, almost half feel that the subsidy helps pay for ‘... just general costs’.

Most importantly for our analysis in this section, only 27% of employers suggest that it ‘helps them get over the line to hire an apprentice’.



## ***Impact of subsidies on other factors***

Subsidies may support the industry in ways that are less obvious to contractors. For this reason, the various questions on subsidies and grants were explored for any association with completion rates, average number of apprentices hired over time, and whether a contractor currently has an apprentice.

In order to make the analysis more sensitive, the various questions on subsidies described above were combined to form a 'subsidy scale' (See Appendix 3 for details).

There was no relationship between contractors' views on subsidies and completion rates. That is to say, completion rates were no different for employers who felt subsidies encouraged them to hire apprentices or not.

Further, there was no relationship detected between views on subsidies and the average number of apprentices hired over time. The average number of apprentices hired was similar for contractors regardless of whether subsidies encouraged their hiring practices or not.

*“You help me get the right person and that will more than make up for [the subsidy]”*

However, employers were slightly more likely to have an apprentice currently if the subsidy influenced their decision to hire an apprentice. However, this influence was only slight and not very substantial.

Subsidies had very little impact with most other factors. However, there are a couple of relationships that were significant. For instance, contractors who felt they were more profitable with an apprentice, were more likely to hire due to the subsidy. Additionally, contractors are more likely to hire due to the subsidy when they associate subsidies as helping to pay for specific items (e.g. time at training school, employer's training time, or productivity loss) as compared with just general costs.

Just as notable are the factors which did not reveal any relationship with subsidies. That is to say, contractors' views on subsidies were no different for contractors with differing:

- years of experience as a bricklayer
- years bricklaying before 1st apprentice
- number of apprentices
- size of gang
- reasons for hiring
- hiring concerns
- domestic vs. commercial
- State

## Challenges when first starting out as a contractor

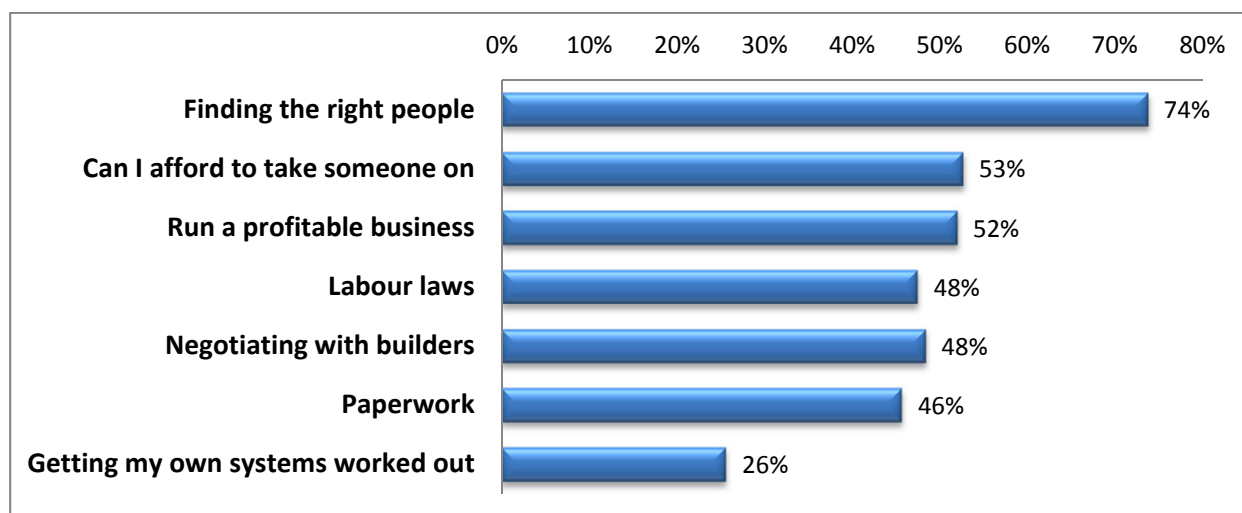
Although this topic was not an intended objective of this survey, many contractors put forward the case that supporting newly qualified bricklayers would help to ensure an ample supply of bricklayers as well as developing future employers of apprentices. Many contractors felt this support was desperately needed and was currently lacking within the industry. From the perspective of the ABBTF, this may provide an opportunity to engage and support bricklayers in a pathway(s) to successfully employ apprentices.

Contractors highlighted their concern with challenges and perceived lack of support for recently qualified bricklayers. Interviewees and focus group attendees emphasised that many are not well equipped or taught how to 'sub out' and appropriately handle their affairs as a small business. The general feeling was that it negatively impacts on the industry and many capable bricklayers are lost to other industries.

*“They don’t know how to fill out a BAS statement, invoice or even get an ABN ...”*

*“Employing others ... it’s hard at first. You don’t know how to produce a payslip.”*

To this end, discussion identified seven broad categories of challenges faced by new contractors. Contractors were able to rate each challenge from ‘not very challenging’ to ‘very challenging’ (5-point scale). The results below present the percent of responses that rated the factors as challenging or very challenging.



Getting the right gang when first starting out as a contractor is the main issue most contractors find challenging. Finding the right people and choosing the size of the gang are the two top challenges faced by the majority of new contractors.

Challenges on managing the business are varied and are experienced by roughly half of all contractors when they first started out on their own. In order of importance, these challenges are



how to 'run a profitable business', understanding the 'labour laws and requirements', 'negotiating with builders' and 'the paperwork'.

Older bricklayers comment that the labour laws and paperwork are much more onerous now than in the past. They also note that negotiating with builders is more challenging with the volume builders that are a larger part of the current market for residential bricklaying.

Notably, bricklayers who are first starting out as a contractor appear quite comfortable with how to run a job. Most often they have picked up a system from their last employer, or even consciously decided how they could do it better when they start their own gang.

Although, most of these challenges do not indicate whether an employer will take on many apprentices or experience higher or lower completions rates, there is one exception that stands out. Contractors who initially found it very challenging to 'find the right people' experience lower completion rates with their apprentices, on average. In fact, those contractors who rated 'finding the right people' as very challenging, were 90% less likely to experience better than average completion rates, when compared to those who rated this challenge as not very challenging.

**In summary, this chapter has explored a number of challenges** faced by contractors during the process of hiring an apprentice and their critical first few weeks of training.

First and foremost, it is evident that the majority of contractors find it challenging to source an appropriate apprentice whether the apprentice is new to the trade or part way through their apprenticeship.

In general, contractors appear to have two major areas of concern in the hiring process. Contractors are generally concerned about the business production and, or the candidate. Business production concerns that are important to contractors include:

- is there enough work
- how do I keep them moving
- the quality of work
- teaching them our method

The important factors that focus on the candidate include:

- what if he's no good
- will he stay?
- keeping them keen
- having patience
- their attitude
- why did they leave their last employer?

From the ABBTF's perspective, these particular challenges may suggest a variety of possible interventions for consideration:

- It appears that many employers give up looking for apprentices over time. They interview fewer individuals and hire fewer apprentices over time. Comments suggest they become frustrated with the selection process and instead prefer to wait for someone to approach them.
- **Sourcing appropriate apprentices would appear to be an important and valued service for contractors.**
- While contractors are more likely to hire an apprentice when they have lots of work, many hold off because they are unsure whether they will have enough work over the three years apprenticeship.
- **Providing a service that helps to move an apprentice to another employer would be a welcome support and may moderate the concern on having enough work over the next three years.**
- Contractors have different concerns when hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. The issues are more trade specific and include concerns about their quality of work and how quickly they will pick up 'our method'. This suggests that sourcing 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices for contractors will **require a better understanding of the apprentice's on-the-job skillset and the contractor's requirements.**
- Contractors who employ apprentices appear to differ in a number of ways.
  - There is evidence that different employers manage jobs differently. Most contractors hire 1<sup>st</sup> year apprentices so they can 'train them my way' and are most concerned about the quality of workmanship over quantity, when hiring 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices.
  - Varying hiring concerns also appear to explain differing approaches to training, or at the very least, management styles.
- It follows, that better matching of contractors with apprentices (especially 2<sup>nd</sup> and 3<sup>rd</sup> year apprentices) would have stronger outcomes on successful hiring and completion rates.

## 4. Are all employers good for apprentices?

Employers are encouraged to take on an apprentice to help increase the numbers in the trade and improve the ratio of qualified (i.e. competent) bricklayers. This chapter reviews whether contractors believe employers of apprentices are well suited to the task.

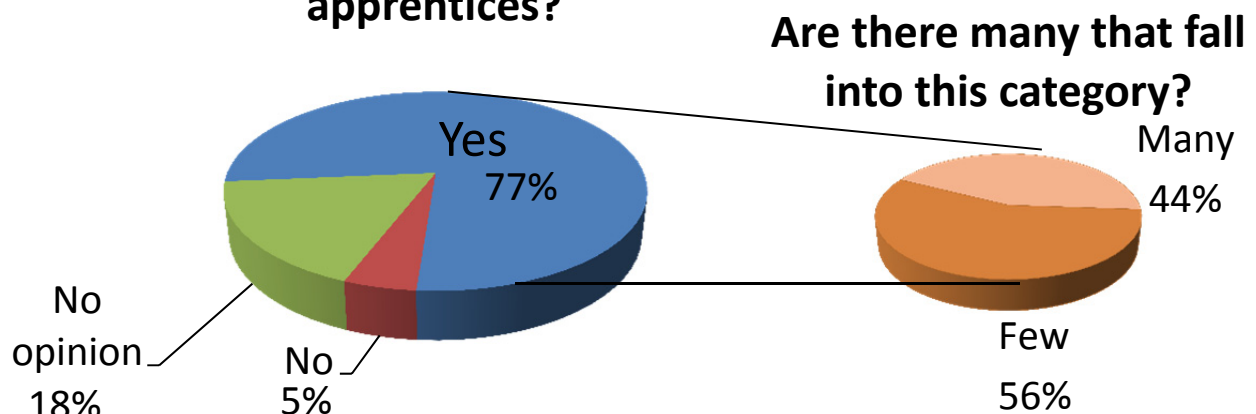
On one hand, the employer provides the workplace experience and opportunity for the apprentice to practice skills learned at trade school. However, previous research suggests that bricklaying employers believe that the majority of learning takes place on-the-job as opposed to in the RTO<sup>4</sup>. This survey suggests that on-the-job training incorporates much more than simply experience on the trowel. Over half of all contractors hire apprentices to ‘train them my way [with] no bad habits’ and strongly believe that an employer needs to spell things out in detail for the apprentice.

*“The personalities of some guys just don’t allow them to teach people ... other guys take pride in helping someone”*

However, training apprentices can be challenging for many contractors. One in five contractors highlight their biggest challenge in the first few weeks with an apprentice is having enough patience to explain things. In fact, three-quarters of contractors hold the view that ‘you need to enjoy teaching if you take on an apprentice’.

This inevitably leads to the question of whether all contractors who take on an apprentice are well suited to role. The majority of bricklaying contractors believe that there are employers of apprentices that should not be training apprentices.

### Are there employers of apprentices who should not be training apprentices?



<sup>4</sup> Barriers and Drivers for Bricklaying Apprentices (2009), p 45

Of those contractors who believe there are employers who should not be training apprentice, 56% believe that only a few fall into this category, while 44% believe that many fall into this category.

Contractors who felt there are employers of apprentices that should not be training apprentices were asked 'what should be done, if anything, to deal with this issue ... in your opinion?' This open ended question received 196 responses which could be categorised.



The majority of contractors acknowledged this issue is a difficult one to control without a simple answer. Comments from the survey and focus group suggest something should be done, but many worried as to who would manage the process. Inherent in these comments was a fear that someone 'who doesn't know the industry' might just make it worse.

*"I don't know, but if the employer can't get it right then how can the apprentice?"*

Those who suggested regulating the trade included comments on two different approaches. While one group advocated licensing of the trade as part of the solution, other suggested some form of regulation of employers as trainers.

Screening employers, banning poor employers and on-site checks often came up in conversations together, acknowledging the challenge of sifting the good from the bad. However, contractors often held the opinion that it was easy to identify a poor employer if you could see how they did things on site.

## Contractors who choose not to have an apprentice

This section reviews a smaller sample of contractors who have never had an apprentice or, if they have, choose never to have one again. The sample frame was sourced through simple random sampling of contractors listed in the yellow pages stratified by State. All surveys were conducted by phone with 101 completed surveys. Forty of the respondents had never hired an apprentice before, while sixty-one respondents had hired an apprentice in the past but will never hire one again.

In general, this group was very similar in years of experience to the larger survey, but were more likely to have a smaller gang (2.5 vs. 4.0).

The two major reasons these contractors do not hire apprentices is due to their concern with having reliable work and the long term commitment to the apprentice. While 56% feel that hiring an apprentice does not fit in with their goals, roughly half feel apprentices are too frustrating and that subbies are better value.

Notably, one in four contractors from this group are particularly negative about the bricklaying trade and, or feel they would not make a good trainer for an apprentice.

*“Never really fitted in with where I was going. Had a few kids work for me but they were not keen so I never bothered.”*



Three of the topics above point to employers who are unlikely to be swayed into taking on an apprentice. They are:

- Doesn't fit in with my goals or directions
- I wouldn't encourage anyone into bricklaying
- Can't see myself training someone

It is important to note that 80% of all respondents commented on at least one of the three items above. This would suggest that those individuals who choose not to take on an apprentice chose to do so either due to their situation or because they are ill suited to the role.

The following describes comments from two separate groups within this short survey: those contractors who have had an apprentice in the past but will never do so again, and those contractors that have never had an apprentice before.

## ***Never again!***

Sixty contractors had experience with apprentices in the past but do not intend to ever hire another apprentice in the future.

Although their completion rate was no different from contractors in the larger survey, this group had, on average, hired fewer apprentices over their career.

These contractors were asked to describe in an open question the reasons they won't take on another apprentice. Their top answers were:

1. Problems with apprentices
2. Not enough work
3. Too costly
4. Close to retirement
5. Too specialised
6. Parents interfering

In describing the reasons they will never take on another apprentice, this group showed some variation in concerns from contractors who have a more regular engagement with apprentices. Contractors who do not intend to ever hire another apprentice had a particularly poor opinion of current apprentices. In general, they felt they were poorly suited; ill prepared by the school system and had a poor attitude. Their opinions appeared firm and entrenched.

Their comments also highlighted a concern with having enough work, and the perception that apprentices were too

*“They are lazy and do not have a work ethic. We have a small crew and cannot afford app making costly mistakes. They are a hassle and take up too much time.”*

costly to make it all worthwhile.

Other comments from contractors unwilling to take on any more apprentices pointed to individuals who were either close to retirement or had become specialised in some way that they felt did not make them an appropriate host for an apprentice.

## ***Never had an apprentice***

Thirty-nine contractors from this survey had never taken on an apprentice. Of these, half had considered taking on an apprentice in the past but had decided against doing so - only five felt they were likely to hire an apprentice sometime in the future. It would appear that the majority of those surveyed represent contractors who are unlikely to engage with training apprentices.

These contractors were asked to describe in an open question the reasons they wouldn't take on an apprentice. Their top answers were:

1. Not enough work
2. Apprentices cost too much
3. My work is too specialised
4. Anticipate too many problems with apprentices
5. Prefer to train outside of the apprenticeship scheme (or utilise RPL instead of regular attendance in trade school)

There are strong similarities between those who have never had an apprentice and the previous group which have had experience with apprentices. This group is unlikely to take on an apprentice because they do not feel they have enough work, believe the apprentice is costly and, or feel their line of work is too specialised.

In summary, roughly three-quarters of all contractors who engage with apprentices believe there are employers with apprentices who should not be training apprentices. The majority hold the opinion that some form of prevention or intervention should be in place but emphasise that this should be done by those who knows the trade.

Roughly 80% of contractors who choose not to engage with apprentices do so for reasons that would be difficult to change. They have different goals or, by their own admission, are ill-suited for training an apprentice.



## 5. Profiling: Can we identify the best employers?

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So far, we have described some of the attributes of contractors who have had an apprentice and the variety of challenges they face. In this section, we attempt to take a deeper look into those factors which predict higher usage of apprentices by contractors and better completion rates.

This analysis looks at predicting three specific measures. They are:

- completion rates
- the average number of apprentices hired over time
- who has a current apprentice

Each of these important measures are split into two categories; those higher than average versus those lower than average. From there, we analyse a range of responses from contractors to deduce which responses may predict the likelihood of a contractor being higher or lower than average on these particular measure<sup>5</sup>.



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<sup>5</sup> Binary logistic regression is the statistical approach used.

## ***Picking contractors with higher completion rates***


Completion rates for bricklaying apprentices are a continuing challenge for the industry. The Australian Brick & Blocklaying Training Foundation reports completion rates of 50% for the most recently completed cohorts<sup>6</sup>.

There are many facets which impact completion rates, not the least of which are the actual attributes of the apprentice. Other obvious factors include the registered training organisations, the influence of family and friends, apprenticeship wages and a secondary education system more geared towards academic learning as opposed to applied hand skills.

However, bricklaying contractors play a pivotal role in the apprenticeship system. Contractors make the hiring decision and have the most contact with the apprentice during their training period. Where there is a failure in completion, it would be hard to ignore the role with the most control over selection and skills training.

There were ten questions within the survey which were associated with predicting completion rates. The figure below describes these factors for a person with high completion rates. However, each factor could equally be described in the opposite direction to describe a contractor with low completion rates. These questions could predict which contractors were likely to have higher completion rates than average (or less) with 79% accuracy.

### **Factors which predict contractors with high apprentice completion rates**

	<b>Simon has a high completion rate and is likely to:</b>
	Have more experience as a bricklayer
	Took on his 1 <sup>st</sup> apprentice many years ago
	Had a good experience with his 1 <sup>st</sup> apprentice
	He believes he is more profitable with an apprentice
	Takes on fewer apprentices, on average
	Interviews fewer people
	Is less concerned with his apprentice leaving
	Is less challenged to keep them moving in 1 <sup>st</sup> weeks
	Is less challenged in deciding to keep them or not in 1 <sup>st</sup> weeks
	Even as a new contractor, he was confident in finding the right people for his gang

**Overall prediction - 72%<sup>7</sup>**

<sup>6</sup> Completion rate of 50.3% for bricklaying apprentices who commenced in 2007 and 49.9% completion rate for apprentices who commenced in 2008 (Sourced from ABBTF)

<sup>7</sup> In combination, these factors correctly predict 72% of all contractors as either high or low average number of hiring

Contractors surveyed in this project had an average completion rate of 58% (N=399). It is worth noting that the analysis of completion rates excluded contractors who took on their first apprentice within the last two years, since they have not had the opportunity to complete their training yet.

At the extremes, 16% of contractors reported a completion rate of 0% while 33% reported a completion rate of 100%.

Of interest in this section are the distinguishing factors of those contractors who have better than national completion rates (i.e. above 50%). In this prediction modelling, we compared two groups; those employers with a completion rate above 50% as compared to those who experience completion rates of 50% or less. The following discussion provides further details to the predictive factors presented in the figure above.

**Experience matters** - Contractors with more bricklaying experience, in general, are more likely to have higher completion rates. On average, each year of experience increases the likelihood of having a higher completion rate by 4%.

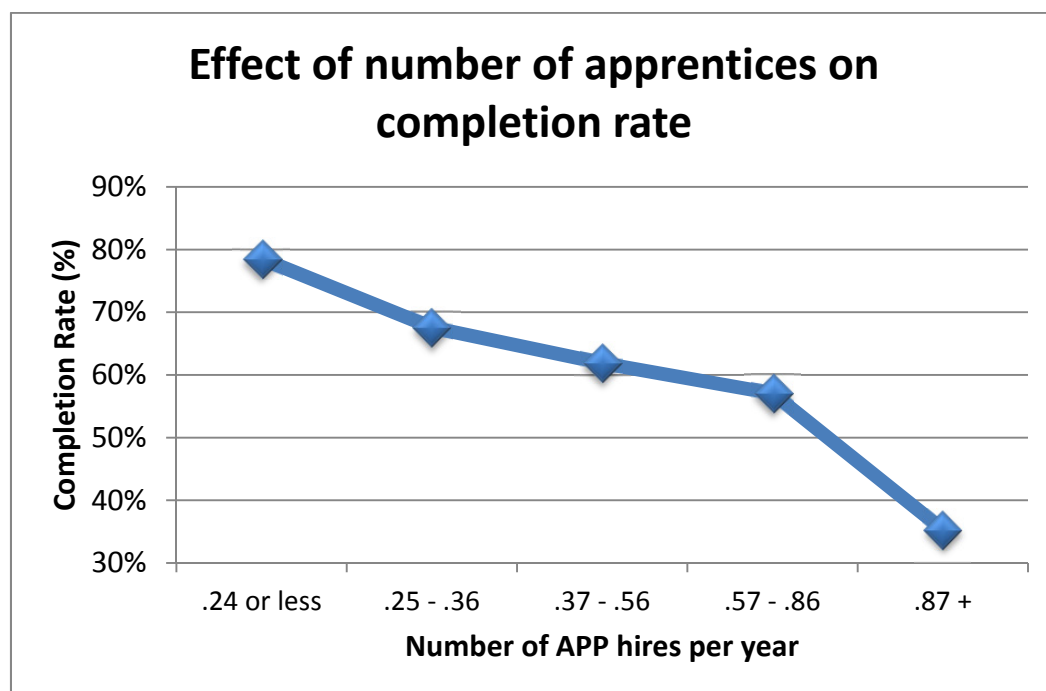


Relatedly, experience with apprentices is also associated with completion rates. Those who have taken on an apprentice earlier are more likely to have a higher completion rate. However, having experience with more apprentices does not appear to be related to completion rates.

**Your first apprentice** - The experience contractors have with their very first apprentice is related to completion rates. Those who have a good or very good experience with their first apprentice, are over 7 times more likely to have a higher than average completion rate. Whether this first experience shapes the training capabilities of a contractor or is simply an outcome of a person well suited to training, this factor is an important predictor of completion rates.

**Can you hire too many apprentices?** - Employers with fewer apprentices per year are more likely to have a higher completion rate. In fact, for every additional apprentice hiring per year on average, an employer is 68% less likely to experience high completion rates.

Some might wonder if this is related to apprentices in the commercial sector where it is more common to have more apprentices under a contractor. In fact, there was no relationship between completion rates and the average number of apprentices for the commercial sector (or even those who worked in both). This relationship was solely within the domestic sector. The figure below presents the relationship for those contractors in the domestic sector only (N=271).



**Do interviews help?** - Contrary to expectations, a higher number of interviews conducted by employers reduce the likelihood of higher completion rates. However, this relationship is borderline on statistical significance.

Qualitative comments suggest that many employers do not actively review many potential applicants, but rather wait for them to be approached by someone who is 'truly interested' or 'keen on working'. This default position may therefore reflect that 'interviewing' one person is more successful than interviewing many. However, perhaps the real issue is that many employers do not want to take the time to actively search for apprentices and are simply willing to take someone on who 'comes along'.

**Hiring concerns** – The reasons why employers hire an apprentice does not seem to be associated with higher or lower completion rates. However, employers who worry whether an apprentice will stay with them when they are hiring are much less likely to experience high completion rates. This may indicate a less than adequate candidate or an employer who is unsure of how to source a good

candidate. Similarly, during the apprentice's first few weeks on the job, employers who worry about 'keeping them moving' and whether they will 'keep them or not' are much less likely to have high completions.

**A contractor's background** - Employers were asked about issues that were challenging to them when they first started out as a contractor; this is before they took on their first apprentice. Only one aspect had any relationship with completion rates. Those contractors who found it very challenging to 'find the right people' when they first started out as a contractor, were 90% less likely to have higher than average completion rates. The importance of this skill appears consistent with the hiring concerns above.

**Opinion on profitability of apprentice** - Those employers who feel they are more profitable with an apprentice are much more likely to have a higher completion rate.

**Factors that don't matter** – It may be worthwhile noting some of the factors which were not associated with high or low completion rates within this study. They include:

- domestic vs. commercial sector contractors
- how many years a contractor was in the trade before they took on their first apprentice
- whether they have an apprentice now
- the reason they hire an apprentice
- the triggers for hiring
- how easy or difficult it is for a contractor to find an apprentice they are willing to sign on
- whether they have hired a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice on before
- their use or opinion on subsidies or grants

### Summary

On average, contractors with higher than average completion rates, tend to have more experience as bricklayers and have had more time under their belt since their very first apprentice. However, it does not necessarily mean they have had more apprentices during that time. In fact, employers with higher completion rate tend to hire apprentices less often when compared to contractors with low completion rates.

Although there are no hiring reasons or hiring triggers that indicate higher completion rates, there are concerns and challenges that are associated with lower completion rates. Contractors with lower than average completion rates are most concerned with whether their apprentice will stay and whether they should keep them or not within the first few weeks. Relatedly, these bricklayers have found it hard to 'find the right people' when they first started out as contractors. Contractors with lower than average completion rates also find it very challenging to keep the apprentice moving within the first few weeks.


However, contractors who believe they make more money with an apprentice are much more likely to experience higher completion rates.

## Who hires more apprentices?

Encouraging contractors to take on apprentices has been an important goal for the ABBTF and key feature of the subsidy program. Therefore, this section looks at the factors which predict contractors' who hire more (or less) apprentices.

There were nine questions within the survey which were associated with the number of apprentices hired by a contractor. These questions could predict which contractors were likely to hire more apprentices than average (or less) with 79% accuracy.

### Factors which predict contractors who hire more apprentices

	Craig hires more apprentice and is likely to:
	Started bricklaying more recently
	Have a larger gang
	Took on his 1 <sup>st</sup> apprentice recently
	Has a lower completion rate
	Hires when an apprentice leaves him
	Conduct more interviews when looking for an apprentice
	More concerned about the impact an apprentice will have on their time
	Less concerned about paperwork when hiring an apprentice
	Worries less about the patience required in the first few weeks

**Overall prediction - 79%<sup>8</sup>**

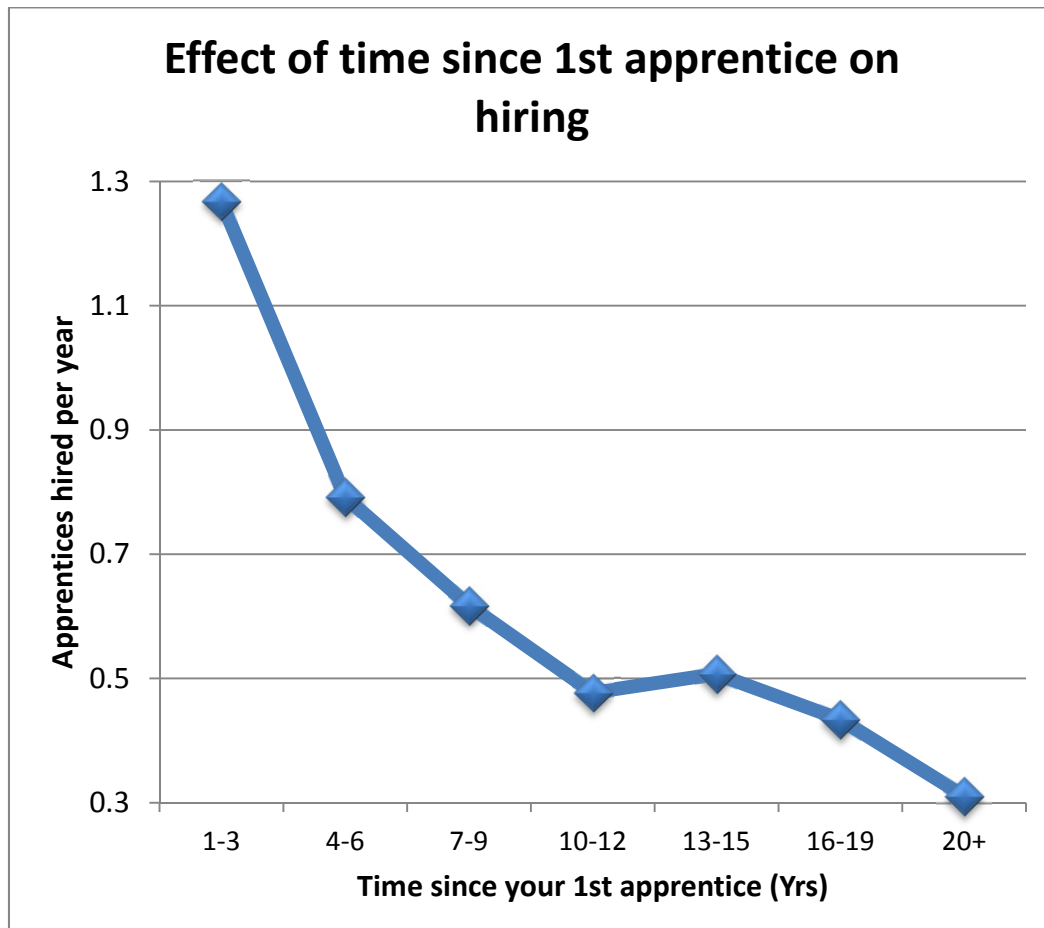
In general, there is a large range amongst contractors – .05 to 8.0 apprentices hired per year. This suggests that some contractors hire an apprentice on average once every 20 years, while others hire eight apprentices per year.

In this prediction modelling, we compared two groups; those employers who hire more apprentices than most contractors (0.48+) to those who hire less (0.47 or less). The following discussion provides further details to the predictive factors presented in the figure above.

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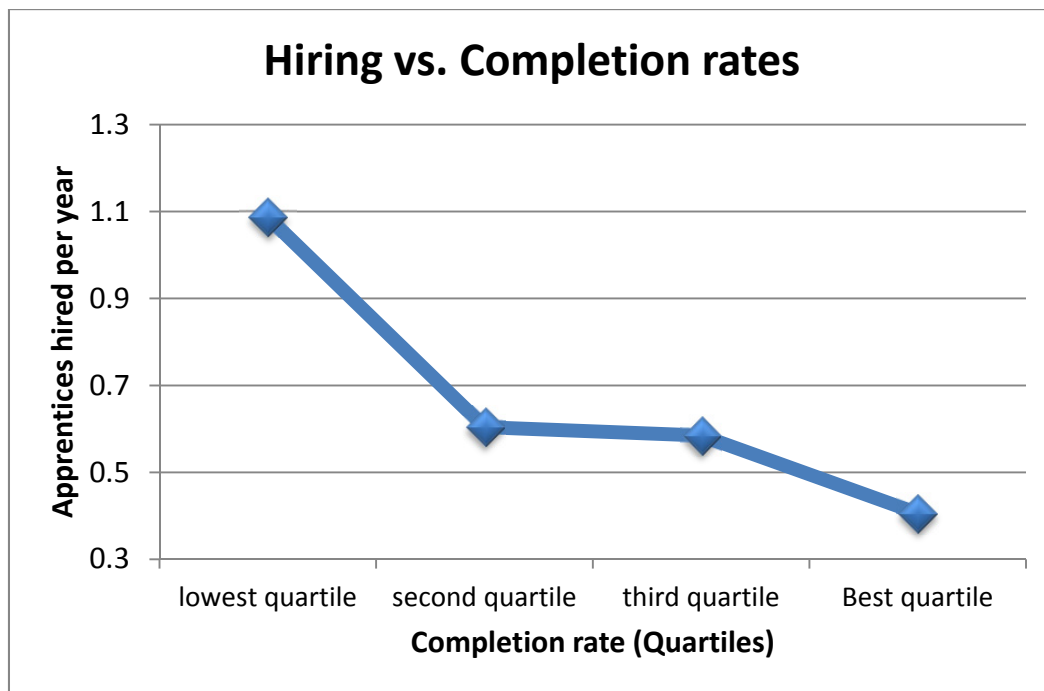
<sup>8</sup> In combination, these factors correctly predict 79% of all contractors as hiring either above or below the average.

**Time in the industry** – Contractors tend to take on more apprentices earlier in their bricklaying career. For every additional year in the bricklaying industry, contractors are 9.7% less likely to hire more than the average contractor. Similarly, contractors tend to hire more when they first start training apprentices. As time marches on, contractors' hire fewer and fewer apprentices.



**How many you employ** – Larger gangs are more likely to have a higher average of apprentices. Those who employ 3-4 in their gang (not necessarily apprentices) are 1.6 times more likely to hire more apprentices, on average, when compared to those who have smaller gangs. In fact, those who employ 5 or more in their gang are twice as likely to hire more than the average contractor.

**Completion rate** – Employers with high completion rates are much less likely to hire many apprentices. Stated another way, those contractors with a high average number of apprentices are significantly more likely to have lower completion rates.



**Hiring triggers** – Most hiring triggers do not significantly predict higher or lower apprentice hiring. However, those who hire to replace an apprentice are 3.2 times more likely to hire more than the average contractor.

**Hiring process** – Contractors who interview more candidates are more likely to hire more than average. The likelihood of a higher average increases by 10% for every extra person interviewed.

At the time of hiring, those contractors who are more worried whether the ‘training will take too much of my time’ tend to hire more apprentice per year. However, those who are more concerned about the ‘paperwork’ at the time of hiring tend to hire fewer apprentices per year.

**First week challenges** - Contractors who struggle with having enough patience to explain things in the first few weeks of the apprenticeship are less likely to hire more apprentices on average.

### Summary

On average, contractors who hire more apprentices tend to have larger gangs. They also have less experience as a bricklayer and have fewer years since their first apprentice when compared to contractors with a lower average.


Contractors who hire more apprentices per year are much more likely to hire when an apprentice needs to be replaced and tend to interview more people, in general. At the time of hiring, they are more concerned with the impact of training on their time, but are less concerned with the paperwork when compared to those contractors with a lower average.



## ***Those most likely to have an apprentices now***

In this section, we delve into those factors which predict whether a contractor currently has an apprentice at present. Although this may inform generally, the findings must be set within the context of the times. This survey was conducted during a particularly slow period of economic activity which has dramatically reduced the construction industry output and has resulted in lower rates for bricklaying. Therefore, the factors explored in this section are more accurately describing those contractors who current employ an apprentice during tough economic times.

There were fifteen questions within the survey which predicted whether a contractor was likely to have a current apprentice. These questions could predict with 74%<sup>9</sup> accuracy.

	<b>Shane has a current apprentice and is likely to:</b>
	Have a larger gang
	Taken on his 1 <sup>st</sup> apprentice recently
	Hired many apprentices over his career
	Qualified many apprentices over his career
	Hired more apprentices per year than other contractors
	Has a slightly higher completion rate
	Hires to replace apprentice
	Hires when a good kid comes along
	Less concerned about the impact an apprentice will have on their time
	Less worried about an apprentice slowing them down in the first few weeks
	More worried whether 'I should keep them' initially
	Hires without regard to the lower rates per 1000 that other contractors take into account
	Believes contractors should enjoy teaching
	Believes contractors need to spell things out in detail
	Believes he is more profitable with an apprentice

<sup>9</sup> In combination, these factors correctly predict 74% of all contractors as either having a current apprentice or not having a current apprentice

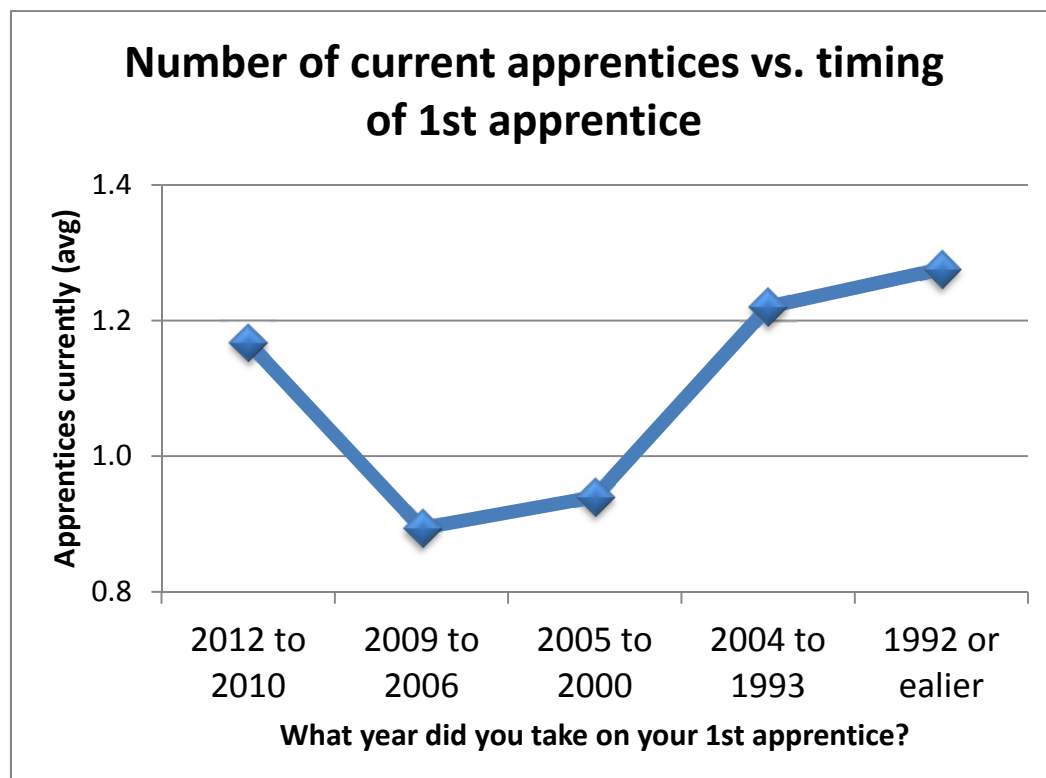
Two-thirds of all contractors who have had an apprentice at some point in their career, currently have at least one apprentice at present - 26% have two or more. The following description explores the factors which predict those with a current apprentice.

**Size of the gang** – Contractors with larger gangs are more likely to have a current apprentice. The likelihood of having an apprentice increases by 40% for each additional person employed by a contractor.

**When you took on your very first apprentice** – The number of years since their first apprentice is a significant predictor of current apprentices. However, it is not a consistent or straight line effect. Contractors who took on their first apprentice between the year 2000 and 2009 are 65% less likely to have an apprentice currently. Those who took on their first apprentice more recently, or earlier than 2000 tend to have a higher likelihood of having an apprentice currently.

This may suggest that those employers who took on their first apprentice during the 'boom years' have moved away from taking on an apprentice, and, or those in the middle age bracket are more likely to use subbies as opposed to apprentices.

It is also noteworthy that there was a particularly large cohort of bricklaying apprentices during 2010 due to the federal government economic stimulus package which directed \$14.2 billion towards the refurbishment and building of halls, libraries and classrooms in primary schools across Australia. Of interest here, is that many of these apprentices were picked up by contractors taking on their very first apprentice.

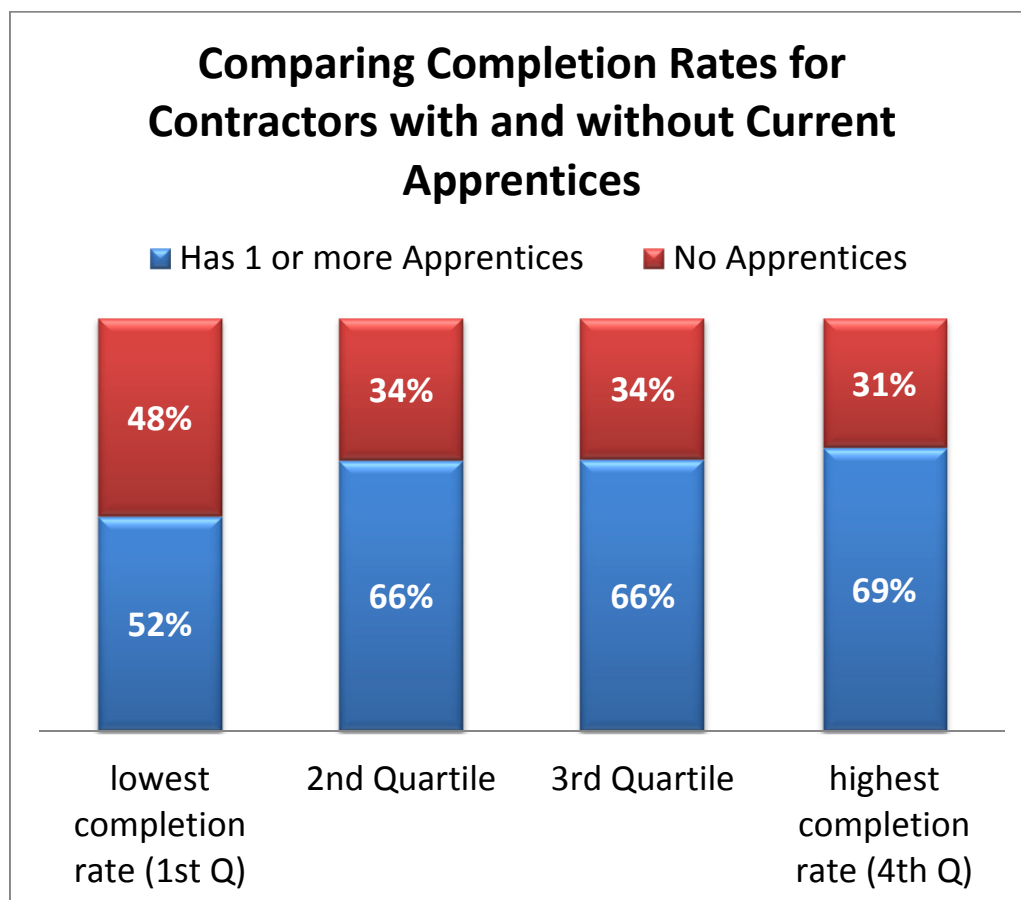


**Number of apprentices over your career** – In general, contractors who have had more experience with apprentices are more likely to have a current apprentice. There are three measures that back this up.

Those contractors which have hired more apprentices over their career, are more likely to have a current apprentice. In fact, they are 11.6% more likely to have a current apprentice for each additional apprentice they have hired over their career. Similarly, contractors who have had more apprentices finish their apprenticeship with them are more likely to have a current apprentice.

However, the number of apprentices alone is not the most significant indicator. A high average number of apprentices per year is much more important. Those contractors who hire more apprentices per year are 3.1 times more likely to have a current apprentice.

**Completion rate** - Those with a current apprentice tend to have a better track record on completion rates. Yet, there is a note of caution here. There is a great deal of variation within this predictor suggesting that completion rates vary a great deal amongst contractors who have a current apprentice. However, further analysis reveals that those with the worst completion rates are less likely to have an apprentice currently. It would appear that those with the lowest record of completion rates are currently jumping out of the apprentice game.



**Hiring process** – Contractors who hire to ‘replace an apprentice’ or because a ‘good kid comes along’ are much more likely to have a current apprentice. In fact, contractors who are most likely to hire because a ‘good kid comes along’ are 3.7 times more likely to have a current apprentice. For employers who are most likely to hire because an apprentice leaves, they are 9.7 times more likely to have an apprentice currently.

During the first few weeks on the job, contractors are less likely to have a current apprentice if they are worried about the amount of their ‘time spent training’ and whether an apprentice ‘will slow them down’ in the first few weeks. However, contractors that are more concerned with whether they will ‘keep the apprentice’ in the first few weeks are more likely to have a current apprentice.

**Impact of lower rates on hiring** - Those contractors who feel that lower rates per 1000 ‘doesn’t matter’ were 80% more likely to have a current apprentice when compared to those who answered ‘less likely’. Surprisingly, those who felt they were ‘more likely’ to hire an apprentice due to the lower rates, did not actually reveal a higher likelihood of having a current apprentice.

**Opinions on having an apprentice** – There are certain beliefs held by contractors who currently have an apprentice that distinguishes them from contractors who do not currently have an apprentice. For instance, contractors who have a current apprentice believe the following:

- they are more profitable with an apprentice
- it is the employer’s role to ‘spell things out in detail for apprentices’
- employers ‘... need to enjoy teaching if you take on an apprentice’

## Summary

On average, contractors with a current apprentice are more likely to have a larger gang, have hired more apprentices over their career and have seen more apprentices successfully complete their apprenticeship. These contractors are more likely to have hired because a good kid comes along, or to replace an apprentice. They generally believe that the pressure on rates does not impact their hiring decision. More importantly, they feel they are more profitable with an apprentice.

Contractors with a current apprentice are less concerned about an apprentice slowing them down or taking up the contractor’s time in training. In fact, these contractors believe that it is the employer’s role to spell things out in detail. They also tend to more strongly believe that a contractor should enjoy teaching an apprentice. Notably, they are more likely to worry about whether to keep an apprentice during the first few weeks on the job.

## 6. Segmenting Contractors

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Contractors who take on apprentices are not all made from the same clay. They are represented by a diverse group of individuals with differing needs, characteristics and behaviours. Understanding how contractors differ may provide some valuable guidance for the ABBTF. This section takes a look at contractors from a marketing segmentation perspective. A market segment is a subset of a market.

Marketing segmentation suggests that rather than treating all contractors in the same manner, there may be meaningful subsets that differ in some way. This may lead to tailoring services to different subsets, and, or marketing the message of the ABBTF in a more targeted manner.

There is no single way to segment a market. Many organisations may segment a market by geography, or simply demographic attributes (e.g. age, sex, and ethnicity). However, many marketing researchers believe the best place to start is to look at the behaviours and attitudes of the target market. The intent is to try different variables alone or in combination that adequately separate the target market into sizable and meaningful subsets.

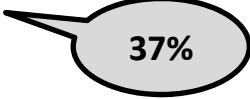


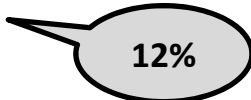
To this end, the following sections presents two different market

segmentation approaches that provided strong segmentation results with sizeable subsets. Each present four segments, but this is just coincidence as segmentation could easily result in more or fewer segments.



# Engaging with Apprentices

The first market segmentation was devised by looking at the varying hiring concerns of employers. These differing attitudes separated contractors into four subsets that held varying views and behaviours across a number of survey questions (See Appendix 4 for more information). The following table presents a description of each segment and the proportion of contractors across Australia that fall into each segment.

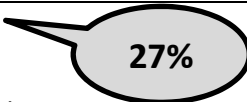
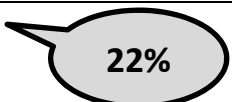
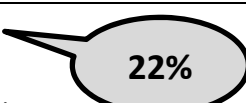
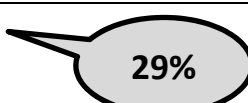
<p><b>Looking for a better way</b> </p> <p>From the very beginning, this contractor struggled with negotiating with builders and how he can run his business more profitability. Hiring an apprentice might help, because they see others contractors doing it – and the subsidy is a nice sweetener. But at the end of the day, they know they are the most productive person in the gang. If they can simply find enough work and get an apprentice who doesn't slow them down, it should work out ... shouldn't it?</p>	<p><b>Thoughtful committer</b> </p> <p>This contractor believes that in order to be fair to an apprentice, you should be confident in having enough work over the next few years. When they do take on an apprentice, they are committed to the individual from the beginning. They take a strong interest in the apprentice's life and are less worried about whether they will have to let them go in the first few weeks. They prefer 1<sup>st</sup> year apprentices that they can shape and are less likely to hire due to any subsidy or grant.</p>
<p><b>Tentative Chooser</b> </p> <p>This contractor has jumped into hiring an apprentice with the least amount of trade experience. They are an opportunistic hirer of apprentices and unsure of their choice. They will hire when a good kid comes along, but will worry about choosing the right apprentice and whether they should keep them in the first few weeks. These contractors are also more likely to hire 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices, but even with this group they have reservations about their choices. Even after hiring them, these contractors worry more than others as to why they left their last employer, whether they will pick up 'our method' and if they can lay enough bricks.</p>	<p><b>Early Jumper with Experience</b> </p> <p>This contractor got into hiring apprentices sooner than most other contractors and have more time under their belt since they took on their first apprentice. They are confident in taking on an apprentice and are up to the challenges of training an apprentice. This contractor employs larger gangs than the others and is much less concerned about having enough work or whether their apprentice is the right one. In fact he is much more likely to have had a good experience with his first apprentice, and have fewer worries about apprentices when compared to the other contractors.</p>

These segments suggest different contractors may be in need of various support and more open to particular messages. For instance, those 'Looking for a better way' appears to be a sizable segment that struggle with running a profitable business and how to manage a gang (including apprentices) for greater productivity. The 'Tentative Chooser' appears most in need of support with how to

source and hire apprentices. The ‘Thoughtful committer’ prefers first year apprentices but may be more open to hiring if there was a mechanism for handing over their apprentice to another contractor if business slows down. They just want to be fair to their apprentice, but are held back by the three year commitment. The ‘Early Jumper with Experience’ is a group to keep in regular contact with for the ABBTF since they have larger gangs and are less concerned with the hiring concerns experienced by the other segments. They are confident, and experienced.

## Influencing Completion

The second segmentation describing contractors explores the various approaches contractors take in their use of apprentices. This segmentation was devised by classifying subsets that varied on their completion rates and influence of subsidies – see Appendix 4. The table below presents the description and size of each subset for contractors across Australia.

<p><b><i>The Businessman</i></b></p>  <p>This contractor is the most likely of all to see an apprentice as a profitable proposition. Although they may not hire because of the subsidy, they are twice as likely to hire when the financial incentives come along – why wouldn’t you if it’s on offer. Although the subsidy may not make a huge difference, it does help to offset their time away at trade school. Their biggest concern is hiring the wrong kid, since they don’t want to find out they’ve wasted the last six months of their time training the wrong kid. This contractor has a high completion rate.</p>	<p><b><i>The Mercenary</i></b></p>  <p>This contractor gets paid to train a lot of apprentices, or at least that’s how they see the subsidy working. However, they question whether it is all worthwhile – most probably because of the high number of drop-outs they experience. This contractor worries about the apprentice slowing them down and whether they should keep them on or let them go.</p>
<p><b><i>The Craftsman</i></b></p>  <p>This contractor has been in the trade longer and started having apprentices earlier than most other contractors. They know their trade are proud of being a bricklayer and would be happy to show someone how good this industry is, even without the subsidy. This contractor experiences high completion rates. They find it relatively easy to find an apprentice they are willing to hire and don’t have all the worries everyone else does about taking on an apprentice.</p>	<p><b><i>The Warden</i></b></p>  <p>This contractor goes through a lot of apprentices, but experiences a high number of drop-outs. They are least concerned about finding the right kid or replacing an apprentice but are more concerned with keeping the ‘chain gang’ moving. Head down, bum up is the mantra. Subsidies do not influence their hiring decision. In fact, they are more worried about apprentices taking up too much of their time. If everyone would just do their job and show up, this contractor would be much happier.</p>

These segments suggest that higher completion rates are experienced by those contractors who see an apprentice as a profitable proposition or because they are a proud 'Craftsman' who takes great pleasure in passing on their skills. Higher completion rates are also experienced by the segments that are concerned about finding the right person, or find this search relatively easy. The 'Businessman' understands the importance of hiring the right person but would benefit from support in the hiring process.

The 'Mercenary' and the 'Warden' do not appear to place importance on hiring the appropriate apprentice and focus more on their own productivity. Notably, both experience low completion rates. The 'Mercenary' and the 'Warden' would benefit from a better understanding of how an apprentice can be utilised profitably in appropriate ways that lead to high completions. Finding out how the 'Businessman' makes it work could be useful to both of these groups. Interestingly, almost 50% of the 'Mercenary' and 'Warden' contractors show interest in hearing how other bricklayers train their apprentices.

There are two groups of contractors that are particularly appealing in this segmentation, due to their high completion rates – the 'Craftsman' and the 'Businessman'. The 'Craftsman' doesn't need subsidies thrown at them, but simply needs to be recognised for their skills and wisdom in how to manage an apprentice. They will gladly give back to the trade that has provided a satisfying career. The 'Businessman' will be attracted by new information on how to be profitable with an apprentice. The campaign of 'Makes Good Business Sense' used by the ABBTF is likely to resonate most with this group.

The campaign of 'Makes Good Business Sense' could be extended to support the 'Mercenary' and the 'Warden' – both of these segments experience poor completion rates. However, this would require a more trade specific description of the training process used on-the-job that makes an apprentice profitable. The 'Mercenary' and the 'Warden' are more focused on being productive with their own two hands and appear to struggle with managing a more productive outcome through others.

Revealing or encouraging the 'Mercenary' how to train an apprentice on-the-job profitably is particularly important. While the 'Mercenary' questions the profitability of an apprentice, they also feel they should be paid for their time training. Therefore, it is not surprising that this segment is more likely to hire due to subsidies, but notably experiences the lowest completion rate of all segments (22% completion rate). For this segment, the subsidy may encourage the 'Mercenary' to continue bad training habits with poor outcomes for everyone.



## 7. Key Findings for ABBTF

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This report represents the most thorough examination of the current hiring practices of contractors and the training challenges faced by bricklaying contractors who take on apprentices.

A better understanding of these practices and challenges provide greater clarity on the issues and services required by employers of bricklaying apprentices.

The following presents the key points for the ABBTF.

- First and foremost, it is evident that the majority of contractors find it challenging in sourcing an appropriate apprentice whether the apprentice is new to the trade or part way through their apprenticeship.
- Many contractors hire when 'a good kid comes along' (77% are more likely to hire)
- It appears that many employers give up looking for apprentices over time. They interview fewer individuals and hire fewer apprentices over time. Comments suggest they become frustrated with the selection process and instead prefer to wait for someone to approach them.
- Sourcing appropriate apprentices would appear to be an important and valued service for contractors.
- While contractors are more likely to hire an apprentice when they have lots of work, many hold off because they are unsure whether they will have enough work over the three years apprenticeship.
- Providing a service that helps to move an apprentice to another employer would be a welcome support and may moderate the concern on having enough work over the next three years.
- Contractors have different concerns when hiring a 2<sup>nd</sup>/3<sup>rd</sup> year apprentice. The issues are more trade specific and include concerns about their quality of work and how quickly they will pick up 'our method'. This suggests that sourcing 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices for contractors will require a better understanding of the apprentice's on-the-job skillset and the contractor's requirements.
- Contractors who employ apprentices appear to differ in a number of ways.
  - ✓ There is evidence that different employers manage jobs differently. Most contractors hire 1<sup>st</sup> year apprentices so they can 'train them my way' and are most concerned about the quality of workmanship over quantity, when hiring 2<sup>nd</sup> or 3<sup>rd</sup> year apprentices.
  - ✓ Varying hiring concerns also appear to explain differing approaches to training, or at the very least, management styles.
  - ✓ The majority believe there are employers of apprentices that should not be training apprentices. The prevailing view of contractors is that some form of prevention or intervention should be in place but emphasise that this should be done by those who knows the trade.

- Selecting and, or better matching of contractors with apprentices appears viable. This study points to key predictors which indicate which contractors hire more and have higher completion rates. This approach to profiling was able to predict to a reasonable level (72% to 79%)<sup>10</sup>.
- The subsidy does not appear to have a major or direct effect on apprenticeship hiring.
- Segmenting the market of employers of apprentices could provide a more targeted delivery of supporting services and potentially a more efficient use of funds.

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<sup>10</sup> Profiling was not the main focus of this survey. Results suggest that further research in this area could improve accuracy.

*Contact ABBTF for survey questionnaire*

**Appendix 1 – Survey Questionnaire used for  
contractors with experience hiring apprentices  
(453 responses)**

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*Contact ABBTF for survey questionnaire*

**Appendix 2 – Survey Questionnaire used for  
contractors who choose not to hire apprentices  
(101 responses)**



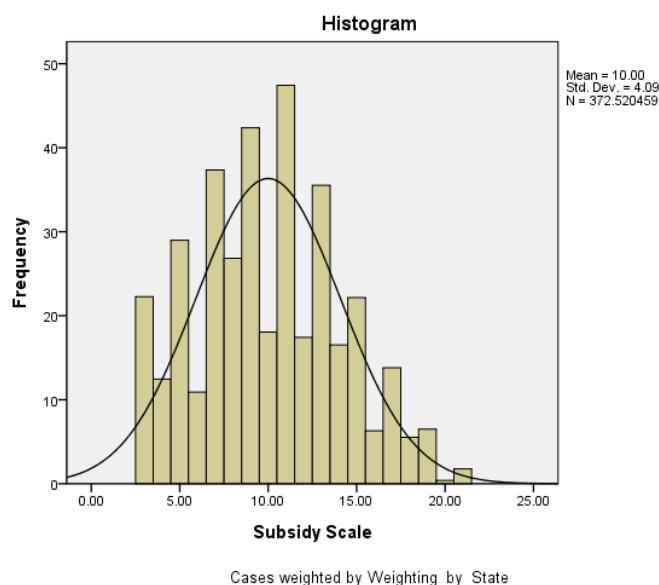
## Appendix 3 – Subsidy Scale

In order to make the analysis more sensitive, the various questions on subsidies used in the survey were combined to form a 'subsidy scale'. Each of these questions measured the influence of subsidies on increasing apprenticeship hires. Therefore, it is reasonable to add their individual scores together to provide an overall measure on the effect of subsidies on hiring apprentices.

There were four areas within the survey that explored the influence of subsidies. They included a measure of subsidies as:

1. **a reason for hiring** (binary scale; 0-not a reason to 1-reason for hiring)
2. **a trigger for timing of a hire** (Likert scale 1-unlikely to 5-likely)
3. **whether a contractor agreed with the following contrary statements:**
  - a. "I've hired more apprentices because of the subsidies and grants" (Likert scale 1-strongly disagree to 5-Strongly agree)
  - b. "I don't think it's the money that entices me to take on an apprentice. It's just a sweetener" (Likert scale 1-strongly disagree to 5-Strongly agree). This scale and attributed scores were transformed into the opposite direction to match the other measures.
4. **Believe the subsidy helps them 'get over the line to hire an apprentice'** (binary scale; 0-no help, 1-helps)

The two binary measures were doubled to allow a slightly more weighted influence without inducing an overly positive skew. The resulting graph shows a relatively normal distribution which supports the use of this simple scale within the analysis. The Cronbach's Alpha was 0.5 which show the internal reliability to be useable, but not overwhelmingly strong. It should be acknowledged that this scale lacks sensitivity with two binary variables.



### Statistics

#### Subsidy Scale

N	Valid	373
	Missing	80
Mean		9.9971
Std. Error of Mean		.21190
Median		10.0000
Std. Deviation		4.08991
Variance		16.727
Skewness		.218
Std. Error of Skewness		.126
Kurtosis		-.564
Std. Error of Kurtosis		.252
Minimum		3.00
Maximum		21.00





## Appendix 4 – Segmentation

Segmentation within this study was conducted through the use of cluster analysis. This is a multivariate statistical method used for detecting natural groupings in the data that can be used to place the most similar individuals into the same groups. These groups will share certain properties in common and it is hoped that their resultant membership will be useful in some meaningful way.

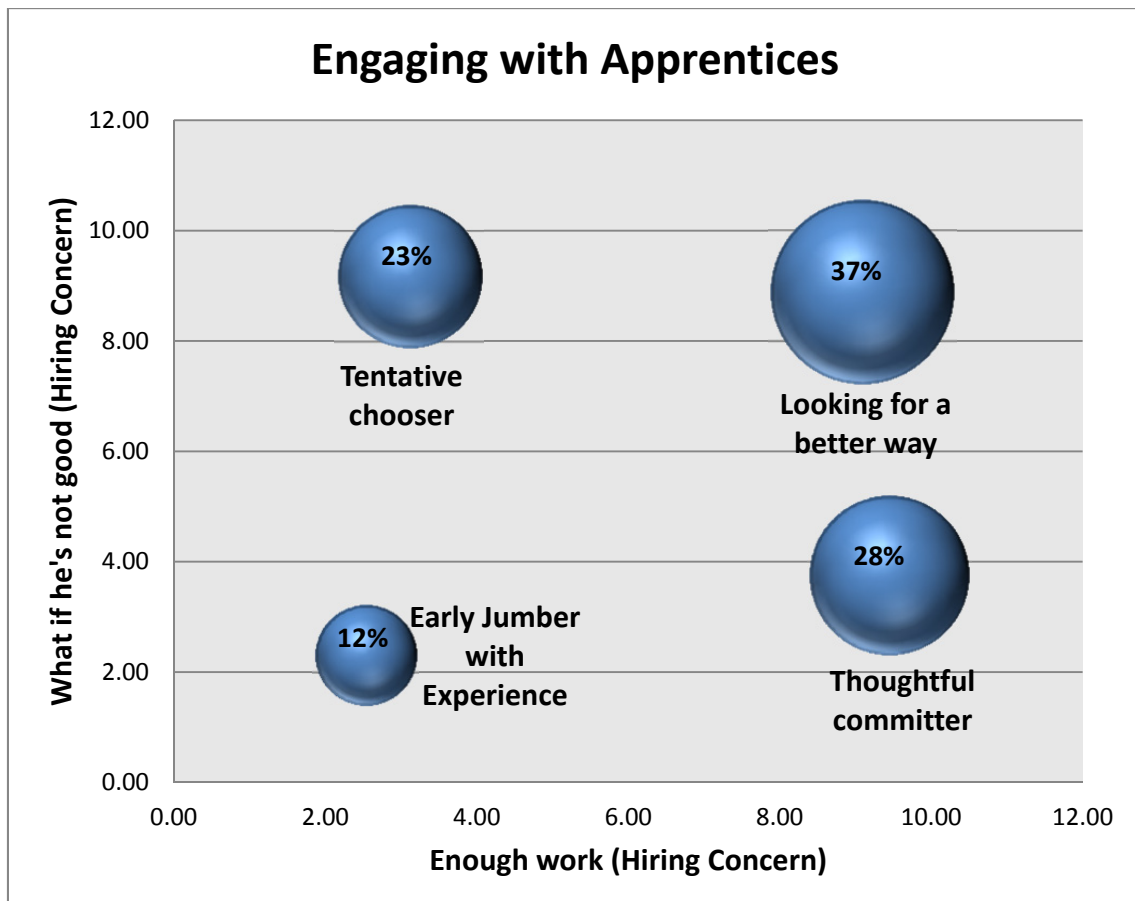
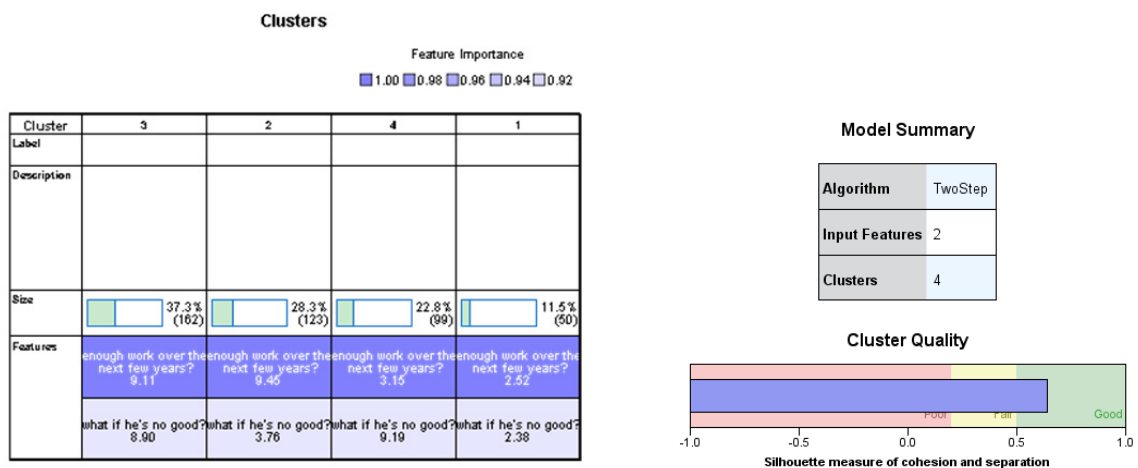
Choosing the properties to group members by can vary and is exploratory. Segmentation is often used within business marketing to explore different ways of finding unmet needs within the marketplace.

This analysis used the Two Step cluster algorithm. This approach can use both continuous and categorical variables and is fairly robust to violations in normal distribution.

There were two separate cluster analysis performed. Their data output is presented in the next two pages.

## Engaging with Apprentices

The first market segmentation was devised by looking at the varying hiring concerns of employers. Two hiring concerns, in particular, were successful in clustering contractors into separate segments that had meaningful differences – ‘What if he’s no good?’ and ‘enough work over the next three years’. The figures below highlight the strength of clustering and the chart on the following page highlights significant differences in survey questions.

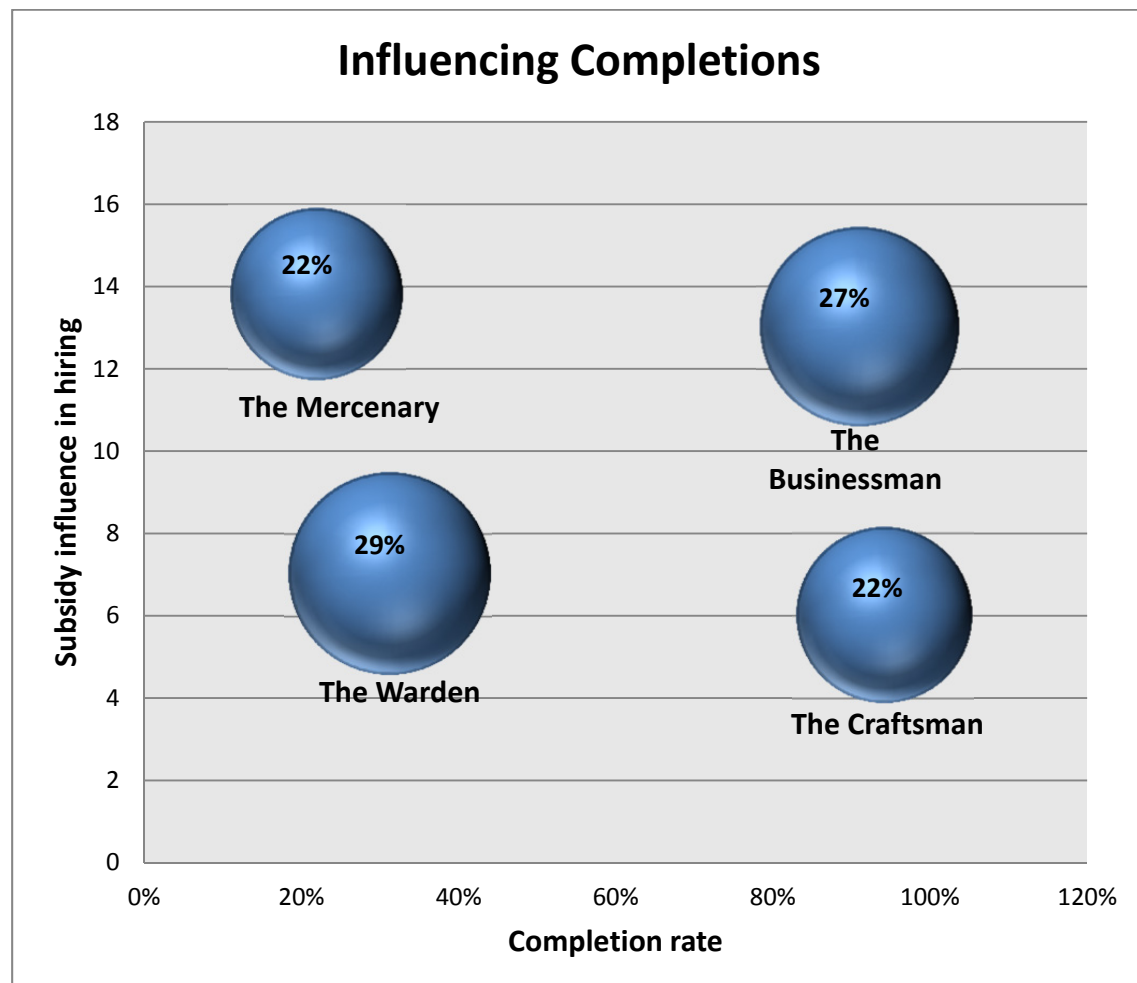
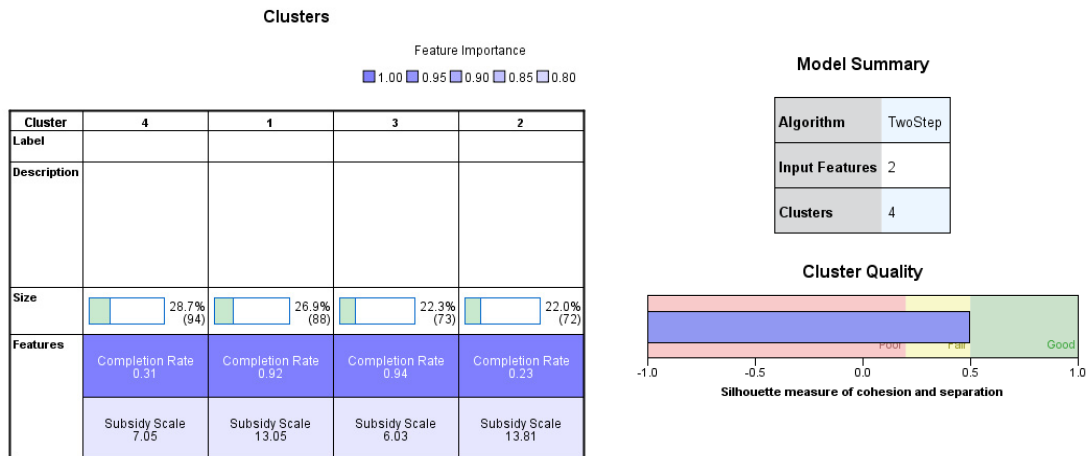


## Engaging with Apprentices (Segmenting variables)

Both	Enough work (Hiring Concern)
<ul style="list-style-type: none"> <li>▪ most worried about 'slowing me down'</li> <li>▪ much more challenged with 'negotiating with builders' than APP NO GOOD</li> <li>▪ More influenced by subsidy than NO WORRIES</li> <li>▪ <i>a bit less likely to hire app 'to train my way'</i></li> <li>▪ <i>more likely to hire due to subsidies</i></li> <li>▪ <i>a bit more challenged in 'how to run a profitable business' when 1<sup>st</sup> contracting</i></li> <li>▪ <i>more challenged in 'negotiating with builders'</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ less concerned than other worries about 'whether to keep them'</li> <li>▪ believe you need to take an interest in your app more than Both</li> <li>▪ <i>less likely to hire due to subsidies</i></li> <li>▪ <i>more unlikely to hire a 2<sup>nd</sup>/3<sup>rd</sup> yr app</i></li> </ul>
APP no good (Hiring Concern)	No worries (Neither)
<ul style="list-style-type: none"> <li>▪ less experience before 1<sup>st</sup> app</li> <li>▪ most worried about 'whether to keep them'</li> <li>▪ least challenged with 'negotiating with builders'</li> <li>▪ <i>more likely to hire if 'a good kid comes along'</i></li> <li>▪ <i>hiring due to 'lots of work' is much less influential'</i></li> <li>▪ <i>more likely to hire a 2<sup>nd</sup> / 3<sup>rd</sup> yr app</i></li> <li>▪ <i>hire a 2<sup>nd</sup> / 3<sup>rd</sup> yr – most concerned in 'getting them trained in our method' and 'why did they leave their last employer' and 'laying enough bricks'</i></li> <li>▪ <i>least challenged with 'negotiating with builders'</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ employ larger gangs (5.1 vs. 3.9 avg)</li> <li>▪ took on 1<sup>st</sup> app earlier than the rest</li> <li>▪ least experience before 1<sup>st</sup> app</li> <li>▪ least worried about 'slowing me down'</li> <li>▪ least worried about 'whether to keep them'</li> <li>▪ not worried about 'can I afford to take someone on'</li> <li>▪ most challenged with 'negotiating with builders'</li> <li>▪ <i>most likely to have had a good experience with 1<sup>st</sup> apprentice</i></li> <li>▪ <i>believe there are very many employers out there who should not be employing app</i></li> <li>▪ <i>least challenged by labour laws when 1<sup>st</sup> contracting</i></li> <li>▪ <i>least challenged about 'can I afford to take someone on' when 1<sup>st</sup> contracting</i></li> <li>▪ <i>most challenged with 'negotiating with builders'</i></li> </ul>

## Influencing completions

The second market segmentation was devised by looking at the varying completion rates and influence of subsidies (i.e. using the subsidy scale). The figures below highlight the strength of clustering and the chart on the following page highlights significant differences in survey questions.



# Influencing completions (Segmenting variables)

	High Completions	Low Completions
High Subsidy Influence	<ul style="list-style-type: none"> <li>worry more about 'what if he's not good'</li> <li>most likely to see App as profitable, especially compared to low completion / no influence</li> <li><i>most likely to hire for financial incentives (2x more than low completions / influenced)</i></li> <li><i>see subsidies paying for 'time off site at training school'</i></li> </ul>	<ul style="list-style-type: none"> <li>high avg. no. of apprentices</li> <li>most likely to feel 'they slow me down a lot'</li> <li>much more concerned with 'deciding whether to keep them or not' compared to good completers/no influence</li> <li><i>QLD has signif. fewer in this category</i></li> <li><i>more likely to see subsidy paying for 'my time training' 35% vs. avg 25%</i></li> </ul>
Low Subsidy Influence	<ul style="list-style-type: none"> <li>4.5 yrs older than poor completer (no influence)</li> <li>5 yrs more experience since 1<sup>st</sup> app all poor completers</li> <li>worry least about 'what if he's not good'</li> <li>worry least about 'will he stay'</li> <li>least worried about 'they slow me down' compared to all poor completions</li> <li>least worried about 'deciding whether to keep them or not' than all influenced contractors</li> <li><i>Find it less difficult to find apprentices (30% easy vs. avg of 22%)</i></li> <li><i>least challenged as contractor starting out ... 'can I afford to take someone on'</i></li> <li><i>least likely to see subsidy as paying for 'time off site at training school'</i></li> <li><i>least likely to see subsidy paying for 'my time training'</i></li> <li><i>least likely to see subsidy paying for 'productivity loss'</i></li> </ul>	<ul style="list-style-type: none"> <li>high avg. no. of apprentices</li> <li>worry more than all good completions about 'will he stay'</li> <li>worry more about 'taking up too much of my time' than influenced high completions</li> <li>more concerned with 'keep them moving' than all good completions</li> <li>less likely to see app as profitable</li> <li><i>most unlikely to hire 'if a good kid comes along'</i></li> <li><i>least likely to hire to 'replace an app'</i></li> <li></li> </ul>

