



BANKWEST CURTIN ECONOMICS CENTRE

AUTISM IN THE WORKPLACE

Maximising the potential of
employees on the autism spectrum

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About the Centre

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Briefing note with contributions from Delia Hendrie, Marita Falkmer, Torbjörn Falkmer, Andrew Jacob, Richard Parsons and Melissa Scott.

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Key Project Findings

- Employing an adult with Autism Spectrum Disorder (ASD) provided benefits to employers and their organisations without incurring additional costs.
- Reported benefits from hiring an adult with ASD included the employees' attention to detail, their high standard of work ethic, the quality of their work, and the creative skills they brought to the workplace.
- Many employers of an adult with ASD would (i) consider hiring and supporting employees with ASD in their workplace in the future and (ii) recommend employing an adult with ASD.
- Employees with ASD required higher levels of supervision and workplace training than employees without ASD in similar roles.
- Weekly costs were similar for employees with and without ASD.
- Successful employment factors included clearly communicated job expectations, knowledge of the productivity requirements and support in the workplace.
- Regular support from an employment co-ordinator was beneficial, even when an employee's confidence in work skills increases.
- Financial assistance from the employment assistance fund was helpful in allowing workplaces to make workplace adjustments for employees.
- Employees with ASD are less flexible than other employees, suggesting adaptations in some workplace procedures may be required.
- A positive impact of having an employee with ASD in the workplace was an increased awareness regarding autism.
- Education and training on ASD for all staff may support the employee with ASD to feel accepted in the work place.

Introduction

Work is a source of economic independence with its benefits, beyond the obvious financial gains, often overlooked (Reference Group on Welfare Reform, 2014). In addition to providing financial independence and a better standard of living, employment can improve physical and mental health, providing individuals with increased confidence, expanding their social network and social skills, and improving work abilities and future employment opportunities (Krieger, Kinebanian, Prodinger, & Heigl, 2012; Organisation for Economic Co-operation and Development, 2010; Ross & Mirowsky, 1995). Furthermore, the benefits of employment extend beyond the individual to families and the wider society (Reference Group on Welfare Reform, 2014).

Australia has among the lowest rates of employment of people with disability in the OECD, ranking 21st out of 29 countries (Organisation for Economic Co-operation and Development, 2010). While the labour force participation rate for working-age people (15-64 years) without disability increased from 76.9% in 1993 to 82.5% in 2012, for working-age people with disability the rate was lower and relatively stable at 54.9% and 52.8% respectively (Australian Bureau of Statistics, 2012, 2013). Over this same period the unemployment rate for 15 to 64 year olds with disability decreased from 17.8% to 9.4%, compared with a decline in unemployment for those without disability from 12.0% to 4.9% (Australian Bureau of Statistics, 2012, 2013).

Australia's poor performance in the employment of people with disability persists despite efforts to promote their active participation in economic and social life. The *Disability Discrimination Act 1992* requires that a person with a disability be given the same employment opportunities as a person without a disability, making it against the law for an employer to discriminate against someone on the

grounds of disability (Australian Human Rights Commission, n.d.). In addition to legislative protection, under the *National Disability Agreement* the Australian government has been providing employment support for people with disabilities since 2009 (Department of Social Services, n.d.-a), and the *National Disability Strategy 2010-2020* has as one of its outcomes to increase access to employment opportunities for people with a disability (Department of Social Services, n.d.-b). More recently, the roll out of the National Disability Insurance Scheme is underway, with the Scheme to provide funding to support participants with employment where these are beyond the requirements of employment services and employers (National Disability Insurance Scheme, n.d.).

Furthermore, by ratifying in 2008 the *United Nations Convention on the Rights of Persons with Disabilities*, Australia joined other countries in a global effort to promote the equal and active participation of all people with disability (Department of Social Services, 2015; United Nations General Assembly, 2006). The UN Convention contains traditional human rights concepts, including the outlawing of discrimination in all areas of life including employment.

Autism in the workplace

Autism spectrum disorder (ASD) is a lifelong condition that represents a category of developmental disorders characterised by impairments in social reciprocity, communication and unusual or repetitive behaviour (Hendricks, 2010). In Australia there are approximately 157,000 adults with ASD within the working age population of 15 to 64 year olds (Australian Bureau of Statistics, 2016). This represents a prevalence of around 1 in 100 (Autism Advisory Board on Autism Spectrum Disorders, 2012; Autism Spectrum, n.d.; The NHS Information Centre & Brugha, 2012). These numbers are likely to increase, partly

Australia has among the lowest rates of employment of people with disability in the OECD, ranking 21st out of 29 countries.

Labour force participation rates are 42% for adults with ASD, 53% for people with disabilities, and 83% for non-disabled people.

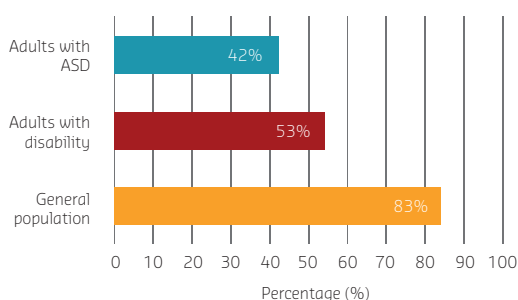
as a result of a change in the diagnostic criteria, resulting in a more accurate and earlier diagnosis (Leonard et al., 2010). Many young adults with ASD are currently transitioning from secondary education into adulthood and will begin seeking employment.

Despite adults with ASD having high levels of skills and the desire to work, they continue to remain under- and unemployed (Australian Bureau of Statistics, 2014; Hendricks, 2010). In Australia, the labour force participation rate for adults with ASD is 42% compared with 53% for all individuals with disabilities, and 83% for individuals without disabilities (Figure 1).

in management practices from employers, which include: job-matching work tasks to the employee's skills and strengths, willingness and flexibility to provide workplace modifications, supportive co-workers and supervisors and on-the-job training (Hagner & Cooney, 2005; Hendricks, 2010). Many employees with ASD have successfully maintained employment in workplaces that have fostered an effective and appropriate level of support (Hagner & Cooney, 2005).

While government support for employers of people with disabilities is available through various pathways (Department of Social Services, 2015, n.d.-a), prospective employers remain hesitant to hire adults with ASD. This may be largely attributed to the perceived unknown costs related to work training, continual supervision and support, and other workplace modifications (Cimera & Cowan, 2009). Additionally, underlying biases, cultural stereotypes and corporate culture may further create obstacles to employment of people with ASD (Office of Disability Employment Policy, 2015; Schur, Kruse, & Blanck, 2005).

Figure 1 Labour force participation in Australia for people with ASD, people with a disability and the general population



Source: Australian Bureau of Statistics. Autism in Australia, 2012. Canberra: ABS, 2014.

For many adults with ASD, their difficulties in social and communication skills result in ongoing problems finding and retaining employment, rather than their actual job performance (Lauer, Brusilovskiy, Salzer, & Mandell, 2009; Tantam, 2000). As a result, the benefits of work participation and previously learnt skills may be lost (Krieger et al., 2012).

Although there are many benefits to employing adults with ASD, these employees require specialised and ongoing support which is essential to maintaining employment (Hagner & Cooney, 2005). Ongoing supports require an adjustment

Maximising the potential of employees on the autism spectrum

Background

This project on employing adults with ASD was motivated by a lack of research on employer benefits and costs of employing people with disabilities (Graffam, Smith, Shinkfield, & Polzin, 2002). These research findings highlight the potential benefits of workers with one type of disability, namely ASD. As well as providing new and important evidence on the particular circumstances and issues faced by employees with ASD and their employers, the methodology developed in this project can be extended to other disability groups after appropriate modification of the approach.

Currently, no studies to date have investigated the benefits and costs of employing people with ASD through a combined survey of workers and their employers. Those few studies that have been carried out to date have adopted perspectives of either the employee, the taxpayer, government or society (Cimera, 2009; Cimera & Cowan, 2009). A strong evidence base on the balance of benefits and costs of employing people with ASD is essential for prospective employers to be fully informed. Without such evidence, the reluctance of some employers to employ a person with ASD may not be so easily overcome.

Objectives

The primary objective of this project was to examine the benefits and costs to employers of employing adults with ASD. A secondary objective was to explore key factors likely to promote retention in employment from the viewpoints of both employees with ASD and employers.

Two studies were conducted:

- In the first study (Study 1), employers of adults with ASD completed a survey to determine the benefits and costs of employing and supporting these employees in the workplace. The survey covered four core areas: employer characteristics, experience employing an adult with ASD, work conditions and employment costs. For areas other than employer characteristics and experience employing an adult with ASD, employers were asked to match the employee with ASD to two employees *without* ASD on the basis of similar jobs to enable comparison between the two groups.
- The second study (Study 2), exploring factors likely to promote retention of adults with ASD in employment, involved adults with ASD and employers of adults with ASD participating in what is termed a 'Q study'. The Q method provides a framework to uncover individual perspectives, beliefs and attitudes regarding a subject such as retention in employment. This approach to identifying points of view around a particular topic is well suited for adults with ASD as it allows for individual viewpoints while reducing the need for verbal communication and social interaction (Corr, 2006).

This study examines the benefits and costs of employing adults with ASD and identifies factors likely to promote higher retention in employment.

Study 1: Employers' experiences in employing adults with ASD

Half of employers recruited through a Disability Employment Service provider and a quarter used wage subsidies in paying employees with ASD.

Employer characteristics

Fifty-nine employers responded to the survey examining the benefits and costs of employing an adult with ASD. The employers provided data on their employee with ASD and 96 employees without ASD (not all employers provided information for two employees without ASD). Most employers were from the services sector (e.g. health care and social assistance, retail trade, education and training). Employers were based in organisations ranging from small and local to larger including international establishments (less than 5 employees to more than 100). Many organisations had more than one experience employing an adult with ASD. Half of the organisations had recruited through a Disability Employment Service provider. Disability Employment Service providers, funded by the Australian Government, provide assistance for people with disability to find and keep a job (Department of Social Services, 2014). Only 25% of employers used financial assistance in the form of a wage subsidy in paying their employee with ASD.

- Solely work-related conversations between workers (11.9%)
- Restricted to greetings between workers. (11.9%)
- Employee struggles with interaction with other workers (18.6%)

A common misconception is that individuals with ASD prefer to be alone or to work in isolation (Hillier et al., 2007; Howlin et al., 2015). Research studies, along with the response of more than 50% of employers reporting positive interactions in the workplace, demonstrate this is not necessarily the case (Hagner & Cooney, 2005; Howlin et al., 2015). Employees with ASD have a desire to engage socially within the workplace, but often find it challenging to navigate social norms and the workplace culture (Hagner & Cooney, 2005; Hurlbutt & Chalmers, 2004). However, they will begin to increase their social interaction and communication as they become more confident in their workplace. Increased confidence appears to be a result of a supportive and approachable employer and the social support of a disability employment service provider (Hendricks, 2010). Longer job retention has been associated with increased levels of social inclusion and social acceptance in the workplace (Hagner & Cooney, 2005). The reported friendly mixed exchanges in the workplace (55.9%) may be a result of half the organisations in this study being associated with Disability Employment Service providers and the type of support (including social support) they provide in the workplace (Hagner & Cooney, 2005).

Employers reported positive interactions between employees with ASD and their co-workers.

Employers' experiences in employing adults with ASD

a. Interactions

Employers were asked about how the employee with autism and fellow employees interacted with one another. Multiple responses were allowed. The majority of responses indicated positive interactions between the employee with ASD and their co-workers, most often of a friendly and social nature but at least professional and cordial.

- Friendly mixed exchanges of both work and out of work conversations (55.9%)
- Employee only interacts with a few of the other workers (20.3%)

b. Impact on workplace

In regard to having an employee with ASD in the workplace, the majority of responses were positive with only a minority of employers indicating problems such as miscommunication resulting from a lack of ASD - specific knowledge and the need

for continuous supervision. No employers indicated that having an employee with ASD in the workplace led to decreased productivity by the team. Specific impacts on the workplace included:

- Increased awareness regarding people with ASD in the workplace (59.3%)
- Positive adaptation in the workplace culture to include the employee with ASD and make them feel part of the team (55.9%)
- New creative and different skills brought to the workplace (32.2%)
- Improvements of workplace morale (23.7%)
- Lack of ASD specific knowledge often leads to miscommunication between colleagues (11.9%)
- Need for continuous workplace supervision has increased workload for other staff (16.9%)

These responses suggest that having an employee with ASD in the workplace has had a positive impact on co-workers, their behaviours and the work environment. Since employing individuals with ASD, 59.3% of employers have found an increased awareness regarding people with ASD in the workplace, and 55.9% of the employers had adjusted the workplace culture to create opportunities for social inclusion. This result is particularly important as it may result in a positive change of workplace attitudes toward employees with ASD and increase employers and co-workers' knowledge of the condition (Hendricks, 2010; Kregel, 1994). Only a minority of employers reported that a lack of ASD knowledge led to miscommunication between colleagues (11.9%), as well as an increased need for continuous supervision (16.9%). Nonetheless, these are issues that need to be considered in the workplace. Employers and co-workers who lack ASD - specific knowledge are more likely to experience difficulties providing effective workplace support and supervision for employees with

ASD. Limited ASD knowledge may result in: misunderstanding behavioural and communication issues, challenges adapting work tasks and providing ambiguous and indirect instructions (Hagner & Cooney, 2005; Nesbitt, 2000). Both knowledge of ASD and appropriate workplace supports are recommended as a prerequisite for hiring and to support individuals with ASD. Workplaces that are knowledgeable regarding ASD and/or have had training about ASD are more likely to be flexible, tolerant and open-minded when supervising, interacting or collaborating with employees with ASD (Hagner & Cooney, 2005; Hendricks, 2010). Hence, workplaces that are willing to train and learn about ASD optimize their possibility to create a work environment where employees with ASD are more likely to be successful (Hendricks, 2010).

c. Opinions on employing an employee with ASD

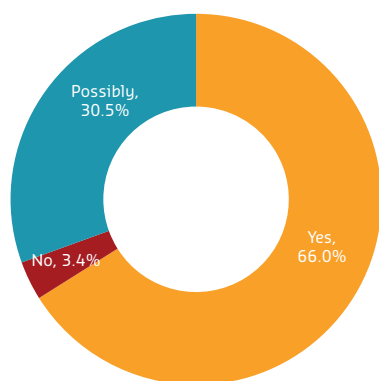
Employers were asked (i) if they would recommend employing an employee with ASD to a business associate and (ii) if the employee with autism left the workplace, who they would consider hiring. Most employers responded that they would recommend employing an employee with ASD (66.1%) and would hire an employee with ASD if the employee with ASD left the workplace (52.5%) (Figures 2 and 3). The benefits and skills gained from employees with ASD to the workplace were most likely contributing factors to the positive experiences and opinions held by employers (Hendricks, 2010).

Employing a person with ASD resulted in a positive workplace culture and brought new, creative and different skills to the workplace.

The majority of employers would recommend hiring an employee with ASD.

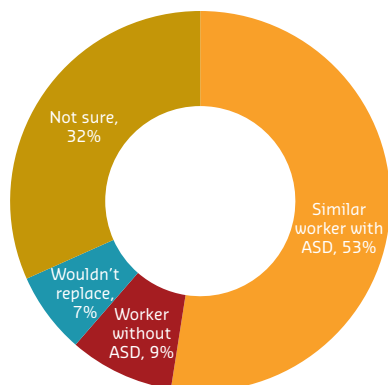
Employees with ASD outperformed co-workers without ASD in regard to work ethic, attention to detail and quality of work.

Figure 2 Extent to which employer would recommend hiring an employee with ASD



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

Figure 3 Attitudes to replacement if employee with ASD left the workplace



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

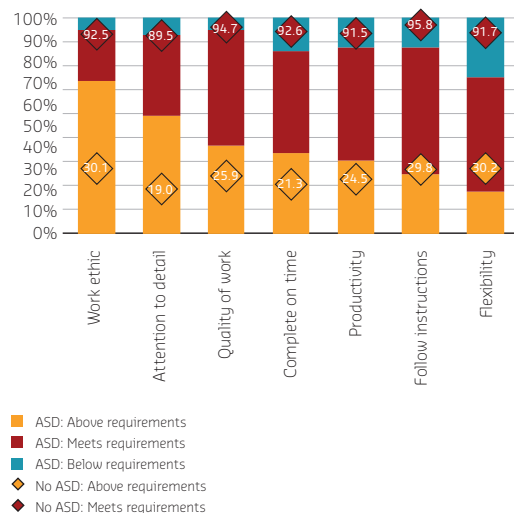
d. Extent to which employees met requirements for good workplace performance

Employers compared the extent to which employees with and without ASD rated in terms of meeting standard requirements for good workplace performance (Figure 4). Employees with ASD exceeded the workplace performance of employees without ASD in regard to work ethic (71% vs 30%), attention to detail (55% vs 19%) and quality of work (41% vs 26%). These particular strengths demonstrated by employees

Employees with ASD perform less well than co-workers without ASD in regard to flexibility in the workplace and following instructions.

with ASD often result in increased work productivity and the completion of work tasks often avoided by others, sometimes due to the repetitive nature of the tasks. Strengths such as work ethic and quality of work demonstrate to an employer the reliability, integrity and accuracy of an employee's work, which are attractive strengths to employers (Hendricks, 2010; Hillier et al., 2007).

Figure 4 Extent to which employees met requirements for good workplace performance



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

There were areas in workplace performance where employees with ASD performed at a below standard level compared with employees without ASD, specifically flexibility (28% vs 8%) and following instructions (14% vs 4%). This below standard performance may be explained by some characteristics of ASD resulting in employees experiencing difficulties in social interaction, communication and executive functions. Such difficulties may present as the employee finding it challenging to transition between work tasks, problem-solve and cope with changes (Garcia-Villamizar & Hughes, 2007; Hillier et al.,

2007). If not addressed, these particular areas of workplace performance may result in miscommunication and become a hindrance to productivity (Hendricks, 2010). Responses for completion on time revealed that employees with ASD were more likely to perform both at above (37% vs 21%) and below (16% vs 8%) standard levels. The extremities in these results may be explained by the fact that ASD ranges across a spectrum from mild to severe, with no two individuals presenting in the same manner. Therefore, in the workplace, some employees with ASD will perform exceedingly well and complete work on time; however, there will also be employees who need more support and might find it challenging to complete work on time (Fleischer, 2011; Hendricks, 2010).

Work conditions and employment costs

Significantly more employees with ASD were working part-time (44.0%) than their counterparts without ASD (23.6%), with the percentages of casual employment in the two groups similar (27.0% and 24.0% respectively). Several reasons may explain why employees with ASD are more likely to be working in part-time or casual employment. A frequently reported explanation is that progressive job opportunities and career advancement are often based on previous job success (Baldwin, 2014). Due to the difficulty of finding and maintaining employment for many individuals with ASD with uneven job histories (Hendricks, 2010; Hillier et al., 2007), employees are likely to be placed into entry-level, part-time positions, despite their obvious levels of skills (Baldwin, 2014). Another explanation is that career development or advancement roles are usually full-time, managerial or executive roles. Such roles carry the expectations of increased socialising and networking, communication, planning, problem-solving

and being responsible for making quick, executive decisions. These roles may be daunting to employees with ASD (Baldwin, 2014). As a result, employees with ASD may choose to remain in roles that are part-time, predictable and comfortable in nature, whether this be a lifestyle choice or a coping strategy (Baldwin, 2014).

The *Autism in the Workplace* survey highlighted some important differences in the proportion of employees with and without ASD requiring supervision, modifications to the workplace (e.g. facilities, job procedures) or additional training (Figure 5). A greater share of employees with ASD (64.7%) required additional workplace supervision compared with 49.0% of employees without ASD who worked in equivalent or similar roles – a difference of 15.7 percentage points. The same share of employees with ASD (64.7%) required additional training. This compared with a share of 55.2% of employees without ASD – a difference of 9.5 percentage points. Workplace modifications were typically required for a much smaller proportion of employees with ASD (11.8%).¹

In terms of actual costs, employees with ASD were paid a slightly lower hourly wage than their counterparts without ASD. Weekly costs, including wages (less any subsidy paid to employers for employees with ASD) and supervision, and the one-off cost of additional training were all similar for the two groups (Figure 6).

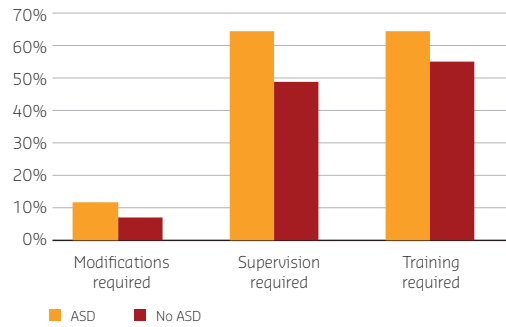
Significantly more employees with ASD were working part-time than their counterparts without ASD.

A greater share of employees with ASD required additional supervision and training compared to employees without ASD in similar roles.

¹ The relatively small sample size in the survey meant that these differences were not statistically significant. Nevertheless, the findings on the benefits of extra supervision and training are consistent with other qualitative studies focusing on employment needs for people with ASD.

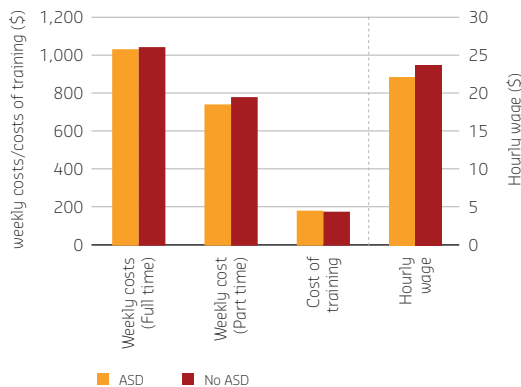
Weekly costs, including wages less wage subsidies and supervision, were similar for employees with and without ASD.

Figure 5 Proportion of employees with and without ASD requiring supervision, workplace modifications and training



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

Figure 6 Employment costs of employees with and without ASD



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

for social and communication needs, such as being clear, direct and specific when providing instructions, avoiding figures of speech when explaining or describing new concepts and providing positive and sensitive feedback on work performance (Hagner & Cooney, 2005; Muller, Schuler, Burton, & Yates, 2003). Workplace modifications specific to the needs of employees with ASD are also advised. Such workplace modifications may include: providing advance warnings for changes in job routine or expectations, using visual strategies for organising and prioritising tasks; such as coloured visual schedule or calendars, modifying the sensory environment and adjusting or breaking down tasks into smaller steps (Hendricks, 2010; Muller et al., 2003). Employees with ASD are found to benefit significantly from such tailored support.

Implementation of ASD-specific support in the workplace improves work outcomes for employees with ASD.

These results indicate that the costs of employing people with ASD are not significantly higher than the costs for employees without ASD performing similar roles. Noting that a higher level of supervision and training is typically required for employees with ASD, it should not be overlooked that working conditions need to be ASD-specific for these employees. Increased employment retention is associated with on-the-job training and supervision that is specific and tailored to the needs of employees with ASD (Hagner & Cooney, 2005). This may include: support

Study 2: Factors for successful employment of people with ASD

Study 2 explored key factors for successful employment that are likely to promote retention of adults with ASD in employment. Two groups participated in the study: 40 adults with ASD who were currently employed or seeking employment and 35 employers who currently employ, or had previously employed, an adult with ASD in their workplace.

Identifying key factors: the Q-sort method

The Q method was used to provide an in-depth understanding of the individuals’ perspectives, beliefs and attitudes regarding a specific topic such as factors for successful employment (Dziopa & Ahern, 2011; Eden, Donaldson, & Walker, 2005; Shinebourne, 2009). The Q-method is well suited for adults with ASD as it allows individuals to express their view on a topic without the demands of verbal communication and social interaction (Corr, 2006). In the Q-method a number of statements are formulated prior to conducting the study. These statements aim to represent known viewpoints on the experiences of ASD workers and are derived from existing literature and expertise. In this study, 52 statements related to factors impacting on employment were developed.

The employees with ASD and employers were required to carefully read through the statements and sort each statement onto

a symmetrical sorting grid with fewer rows at the furthestmost ends than in the neutral column. The grid ranged from ‘strongly agree’ to ‘strongly disagree’ and by placing the statements onto the sorting grid the participants rank the statements based on their viewpoint on the subject. This process is referred to as completing the Q-sort. As only one statement can be placed on each square in the grid, the sorting results in the participants making discriminations between statements that may not be possible to identify in a questionnaire or interview. All participants were reminded there were no right or wrong ways to rank the statements and were given the chance to move statements around on the grid until they were satisfied with their rankings. For illustration, Figure 7 shows a hypothetical arrangement of statements placed into a symmetrical distribution.

The statements and the completed Q-sorts from all survey respondents were analysed using a statistical method (by-person varimax rotation factor analysis) that recovers common themes (factors) among the statements made. Participants who have sorted the statements similarly are grouped together to produce a set of shared views about the topic. Experts in the field of autism research then interpret the viewpoints of each group and name them based on the statements representative of each of the viewpoints. Viewpoints from different groups cannot be compared but they can be contrasted with each other.

Figure 7 An example of a Q-sort grid

					(6)							
				(5)	(5)		(5)	(5)				
		(4)	(4)						(4)	(4)		
	(3)										(3)	
(2)												(2)
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
Strongly Disagree						Neutral		Strongly Agree				

Factors for successful employment of people with ASD

From the analysis in Study 2, three different viewpoints on successful employment

were identified in each of the employer group and the employee group with ASD. The viewpoints and a summary of the statements representing these viewpoints are shown below (Figures 8 and 9).

Figure 8 Viewpoints of employers on factors for successful employment

1. We rely on external support.

- Employers sharing this viewpoint were open-minded about employing adults with ASD in their workplace and viewed working as an important factor to increasing people's life satisfaction.
- Employers felt more confident hiring and supporting employees with ASD when they received ongoing, external support from disability employment service providers.
- The support that employers relied on from disability employment service providers included: assistance with difficult work situations, periods of transitions (such as adjustments in work hours or employee's supervisor being on annual leave) and carrying out job trials in their workplace to identify areas where more support might be needed.
- Employers viewed having a designated Disability Employment Service provider as a key factor for successful employment of employees with ASD.

2. We provide internal support.

- Employers sharing this viewpoint were not overly reliant on support from an external source such as Disability Employment Service providers.
- Instead, employers welcomed the opportunity to hire and support employees with ASD in their workplace, with the approach of providing support for the employee with ASD from within their team.
- Team support included: providing on-the-job training, explaining the workplace culture (such as dress code, lunch times, social events), and encouraging effective and useful communication skills.
- The team support was reliant on a manager who promoted a fair workplace, provided honest and constructive feedback and was approachable.

3. We give the opportunity, you work it out.

- Employers sharing this viewpoint considered work as an important factor for independence and were willing to provide adults with ASD work opportunities, but the support ended with providing employees with ASD with a job.
- Employers expected these employees to fit into their workplace.
- Employers' expectations of employees included: having a good understanding of the job expectations for productivity, employees to work within a team and interact socially with their colleagues.
- Employers did not view job matching employees with ASD to the workplace as particularly important.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates based on Autism in the workplace study 1.

Figure 9 Viewpoints of employees on factors for successful employment

1. I commit to work and work commits to me.

- Employees sharing this viewpoint thought it was important for managers to be approachable.
- Employees believed honest feedback assisted with personal and professional development.
- Ongoing support assisted with work performance.
- A good manager assisted in resolving conflict between employees to help keep the workplace fair and equal.
- A support plan helped to clarify the roles and responsibilities between employees and employers.
- Ongoing support from employment co-ordinator assisted with work performance.

2. I'm motivated when I have the right job.

- Employees sharing this viewpoint considered being able to work as important for independence.
- Employees believed a good understanding of the workplace culture was important when beginning a new job.
- Reporting to one manager was preferable to reporting to several different managers.
- Support plans in the workplace needed to be agreed upon by the entire team involved and not just the manager.
- Ongoing support from an employment co-ordinator enhanced work performance.
- Job matching employees to their specific interests motivated work participation.
- Constant, high level of support from an employment co-ordinator was required, even when an employee's confidence in work skills increased.

3. I am confident in a structured work environment.

- Employees sharing this viewpoint believed it would be good if an employee could have weekly contact with an employment co-ordinator to discuss their work tasks.
- Employees thought lighting of the room can affect an employee's ability to work.
- Constant, high level of support from an employment co-ordinator was required, even when an employee's confident in work skills increase.
- Short, regular breaks assisted with concentration.
- Education training on ASD was necessary in the work environment.
- Employees believed job trials were helpful to demonstrate specific skills required in a workplace.
- It was helpful when the support required from an employment co-ordinator was re-assessed and adjusted after the probation period.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Autism in the workplace Study 2.

Communication between employees with ASD and employers to ensure a clear understanding of the needs of both groups are met is important for successful employment.

Further analysis of the viewpoints of employers and employees in this BCEC *Autism in the Workplace* survey highlighted differences that may explain why successfully gaining and maintaining employment for individuals with ASD is a challenge.

- **Workplace support:** The viewpoint of employees, *'I commit to work and work commits to me'*, suggested that support from within the organisation to provide an inclusive workplace whereby their talents and skills were valued and they were actively involved in workplace decisions was an important facilitator to encourage work participation. In contrast, the viewpoint of employers, *'We rely on external support'*, indicated a lack of confidence to provide support internally to employees with ASD without the assistance and guidance of disability employment organisations. These findings indicate that while both the employee and employer groups view support in the workplace as important, the type of support that each group requires differs significantly. The discrepancy in the type of support required by each group may in part account for miscommunication between employees and employers when trying to create a successful workplace.
- **Work productivity:** The viewpoint of the employees, *'I'm motivated to work in the right job,'* and the employers, *'We provide internal support'*, reflected agreement on the importance of work productivity. However, the understanding of the job expectations required to achieve the goal of productivity differed. Employees expected responsibility, career advancement, fair pay and job tasks to match their skills and abilities. Employers expected hard work, loyalty, minimum length of stay and productivity. These unclear or conflicting expectations between employees and employers in achieving work productivity may result in demotivated employees, poor work performance, stress and increased employee turnover. Successful work environments depend on clear descriptions of the specific requirements of the job, a shared understanding of the time in which tasks need to be completed, appropriate training, the necessary resources and a supportive workplace culture. It is likely that work environments which adopt these approaches will create workplaces in which individuals with ASD can perform well.
- **Job retention:** The viewpoint of employees, *'I'm confident in a structured work environment'*, and employers, *'We give the opportunity, you work it out'*, differed significantly in their approaches towards successful employment. Employees sharing this viewpoint required a supportive, structured and task-adapted work environment to perform their jobs successfully. In contrast, employers sharing this viewpoint believed that once they had provided the opportunity to work it was then the employee's responsibility to meet the productivity requirements in order to maintain their job. The strong differences in viewpoints regarding job retention may explain the difficulty employees have in maintaining a job, which likely results from the lack of available support. Also, if an employee cannot meet the productivity requirements this may impact and lower the organisation's profitability. As a result of lowered productivity employers may find it difficult to retain the jobs of employees who are not performing according to the productivity requirements of the organisation. This suggests that if job retention is regarded as both the responsibility of the employee and the employer then effective communication regarding productivity in the workplace is required.

Lessons for policy and practice

This project has identified benefits to workplaces of employing people with ASD without additional costs to employers. No significant differences were found between employees with and without ASD in the need for supervision, modifications to the workplace or additional training, and weekly costs were similar for the two groups. Employees with ASD on average performed better than their counterparts without ASD in some areas including attention to detail, work ethic and quality of work. However, a higher proportion were less flexible and proved less able to follow instructions compared to employees without ASD. The results of the research indicate overall positive effects of employing a worker with ASD, including the greater acceptance of diversity and different skills brought to the workplace.

Key factors for successful employment from the viewpoints of both adults with ASD and employers were also explored, and included clearly communicated job expectations, knowledge of the productivity requirements and support in the workplace to assist in creating an inclusive and modified environment. In particular, the findings highlighted the need for an approach which facilitates communication between employees and employers.

Implications for policy

Despite efforts to increase the employment of people with disability, employment levels are low compared to people without disability. Reasons for limited employment opportunities include: (i) concerns about potential unknown costs associated with employment of workers with disability including of supervision, training and loss of productivity (Graffam et al., 2002) and (ii) other barriers such as the obstacles created by corporate culture and prejudicial attitudes towards hiring people with disability (Schur et al., 2005). This project

has focused on the first of these factors showing that, in the case of people with ASD, employers who have hired a person with ASD are positive about the experience and report cost neutral or potentially cost beneficial effects. The economic business case for employing people with ASD needs to be further substantiated in larger scale studies across a range of organisations in order to allay preconceived ideas about the costs and any negative effects of employing people with ASD. Hard evidence of specific costs and benefits of employing a worker with disability is difficult to find. Costs and benefits are most often reported in qualitative terms, partly a result of the difficulty in quantifying intangible factors such as the improved self-esteem and personal satisfaction for individuals of being employed rather than welfare recipients, the benefits of accepting diversity in the workplace, or negative reactions from customers or co-workers (Graffam et al., 2002; Hasluck, 2006). However, making an economic business case for increasing employment of individuals with disabilities is likely to be insufficient to persuade employers to increase their efforts at disability recruitment and retention and policy must also be addressed at the underlying biases and cultural stereotypes toward employing people with disability (Office of Disability Employment Policy, 2015; Schur et al., 2005).

The research also highlighted the important role played by Disability Employment Service providers in facilitating the hiring of employees with ASD and their retention in successful employment through the provision of ASD specific support in the workplace. Employers and employees valued both the employment assistance and ongoing support phases of the current service model, but the specific needs of employees with ASD and the importance of ensuring an appropriate job match requires greater focus to be placed on sustained

The business case for employing people with ASD is strong. Employers who have hired a person with ASD report positive experiences and cost neutrality or potentially cost beneficial effects.

Focus should be on creating long term employment outcomes so jobseekers with ASD achieve sustainable work.

job placement rather than on short term employment outcomes. Furthermore, initiatives to promote greater awareness among employers of the existence and role of Disability Employment Service providers and the financial assistance available to employers may improve employment opportunities and labour market outcomes for adults with ASD.

Implications for practice

Employees with ASD were typically less flexible than other employees, which is supported by the diagnostic criteria for ASD. Therefore, organisations and businesses need to consider a number of procedures to optimise the outcome of hiring an employee with ASD. Given the relative lack of flexibility among employees with ASD, the human resources procedures have to be flexible, particularly during the recruitment and interview processes. For example, people with ASD will generally not perform well at any interview as a result of their difficulties with social communication and interaction. Instead of the traditional interview, alternate options can be made available such as, work experience, job trials, and the use of portfolios of work experiences rather than a resume. More flexible processes during the recruitment and interview procedures for employees with ASD provide a better opportunity for these people to demonstrate their talents, whilst reducing social anxiety and stress levels.

The practice implication to the work environment also needs to be considered. This is particularly important in regard to social interaction and communication. Expectations have to be made clear and preferably be in writing, as verbal communication might be harder to remember for people with ASD. The same applies to work instructions, occupational health and safety and general workplace information, such as workplace culture

and social rules and expectations. To support employers in the endeavour to employ people with ASD, a tool for Integrated Employment Success; IESTTM², is currently being trialled across Australia in a randomised controlled trial, finishing at the end of 2016. This tool is addressing these procedures amongst several others, including the need for a mentor/supervisor who is a well-informed employee with some knowledge about ASD. One important aspect of the role is to set up regular meetings with the employee with ASD regardless of whether any special issue has arisen or not. Another area where support often is needed is problem-solving in unexpected and stressful situations. What the mentor needs to do is to assist the employee with ASD to plan for the unplanned basically decide together 'what to do when you don't know what to do' and provide instructions of what to do in case it does not work as planned. That may be as simple as a call to the supervisor, or a written flow chart of actions to be taken when it happens.

Furthermore, employees with ASD who work part time need to be given challenging work opportunities that allow for solid work experiences that include achieving their support plan outcomes. Given that people who are employed become taxpayers means that any investment to get unemployed people with ASD into employment is a sound financial investment from a societal perspective (Deloitte Access Economics, 2011).

Attention to the strengths and needs of job seekers and employees with ASD, coupled with appropriate support in the workplace, is central to success in employing people with ASD.

² <http://www.autismcrc.com.au/project-3014rc-%E2%80%93-step-and-iest-vocational-tools>

Conclusions

The benefits and costs experienced by employers when employing a person with ASD have received little attention to date in Australia. This research has identified benefits to employers and their organisations from employing an adult with ASD without additional costs being incurred. Factors for successful employment likely to promote job retention for people with ASD were also explored. Clearly communicated job expectations, knowledge of the productivity requirements and support in the workplace to assist in creating an inclusive and modified environment were all factors influencing successful employment of people with ASD.

This research on employing adults with ASD was designed as a proof of concept project. A future large scale study across multiple disability groups and diverse organisations is needed to provide a comprehensive evidence base to employers about the benefits and costs of employing people with disability and factors promoting successful job retention. Concerns by employers about the costs of employing a person with disability and perceptions about the impact on workplaces act as major barriers to increasing the number of people with disability in employment across Australia. Like many other countries, Australia has anti-discrimination and equal employment opportunity legislation and is also a signatory of international conventions endorsing equal opportunity in employment for people with disability. To fulfil these obligations and improve the employment prospects of people with disability, further research in this area would provide better guidance to employers on the real benefits and costs of employing a person with disability. Additionally, such research would guide the government in determining the appropriate levels of support to employers and employment services in their task of facilitating the employment of people with disability and creating a more inclusive environment.

A solid evidence base of the benefits and costs of employing people with disability and factors promoting successful employment is required to improve employment outcomes for people with disabilities.

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