Perceptions of employers towards the employment of people with autism spectrum disorder within the service industry in Singapore

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PERCEPTIONS OF EMPLOYERS TOWARDS
THE EMPLOYMENT OF PEOPLE WITH
AUTISM SPECTRUM DISORDER WITHIN
THE SERVICE INDUSTRY IN SINGAPORE

Eva Siew-Lian Lim

A thesis submitted in partial fulfilment
of the requirements of the degree of
DOCTOR OF BUSINESS ADMINISTRATION

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DECLARATION

No part of this thesis has been previously submitted for a degree or diploma at any other educational institution. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made.

Eva Siew-Lian Lim
Date: April, 2017
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Conducting this research and writing this thesis has been a long and difficult journey over several years. Without help and support from many people, I would not have been able to bring it to completion.

In particular, I would like to thank my supervisors, Dr Tay Kin Bee, and Associate Professor Michelle Wallace, who were like beacons, guiding the ship to the shore. I am grateful for their unwavering guidance and patience.

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I would also like to thank the interview participants for their contribution in this research study.

I am also grateful to my family and their understanding for all the time and effort that I have dedicated to completing this thesis over the years.

Finally, I would also like to acknowledge my faith, which sustained me throughout. Without it, I could not have endured the difficult times, and had the courage and strength to reach the end.
This study is informed by previously published international research identifying key issues that relate to the employment of people with disabilities. There is a dearth of studies on this topic in the Singaporean context. Indeed, in a developed country such as Australia, only 1 per cent of current research on disability focuses on employment issues.

This study utilises a demand-side approach and strengths perspective, and positions people with Autism Spectrum Disorder (ASD) as a valuable human resource for businesses. It examines the transition from skills taught in school to skills needed in the workforce. External forces, pressures, and structures such as discrimination against the people with disabilities are examined as they operate on individuals, groups, organisations or societies to produce low employment rates among people with ASD.

The research particularly focuses on employers’ perspectives, their concerns and requirements. This research thus investigates employers’ concerns to create more robust job opportunities for people with ASD who are exploring employment options.

This research is placed within a qualitative, interpretive paradigm of inquiry and has used a combination of two methods within an overall qualitative methodology. One part of the study is a descriptive analysis of organisations that already have experience working with employees with ASD, especially in relation to their organisational culture/ethos and human resource management activities with these employees. The second part of the study comprises semi-structured interviews with employers who have, and also those employers who do not have, experience working with employees with ASD and who are interested in recruiting employees with ASD.

This research was conducted in Singapore to answer the following research questions:

- How would the proposed factors identified in the literature review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?

- What are the main concerns of employers that encourage or inhibit the employment of people with ASD in organisations?
From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?

The research involved interviews with employers mainly in the food and beverage industry. There were twenty-four interviewees representing twenty-four organisations, mainly representing the food and beverage services industry in Singapore. Twelve organisations had employed people with ASD and twelve organisations did not. Through an initial proposed framework model, the study explored what employment of people with ASD meant to business owners and management and how employees with ASD were integrated within organisations. The study proposed that there is no difference in responses between employers who had employed people with ASD and those who had not. The skills and abilities of people with ASD were also discussed in this study. The resultant models from the findings show differences between employers who had employed people with ASD and those who had not. It also found additional elements such as workplace partnerships and type and nature of work were factors that influenced successful recruitment and retention.

In summary, this study contributes to extant literature as it reveals that there is a shortage of literature on the employment of people with ASD in the Singaporean service industry. It also contributes to filling the knowledge gap about employment of people with ASD recruitment and retention in the service industry (mainly food and beverage) in Singapore. It provides important insights into employers’ perspectives on employment of people with ASD, and includes significant findings about the work challenges faced by people with ASD in the Singaporean service industry. Finally, it provides important suggestions for Singapore business operators on how to improve their policies and practices to recruit and retain employees with ASD in the service industry.

Key words: employment; recruitment and retention; autism spectrum disorders; employers; Singapore
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CHAPTER 1  INTRODUCTION AND SCOPE OF THE RESEARCH

1. Introduction

This study aims to identify and explore the main concerns of employers when employing people with Autism Spectrum Disorder (ASD) in the service industry in Singapore, in order to improve employment conditions for people with ASD. Although there have been occasional studies undertaken in this area, they were not conducted in the Singapore service industry. Also, these studies were mainly quantitative in nature and were administered via questionnaires.

The literature suggests that there are significant indications of employment concerns and challenges identified by employers in the employment of people with ASD such as organisational climate and culture (Brooks 2002; Dammen 2001; Probst et al. 1998), job design (Hashim & Wok 2013), and workplace modifications and adjustments (Burkhauser et al. 1995; Campolieti 2009). In this study, themes are explored to understand the dimensions of influence in the employment of people with ASD for companies in the Singapore service industry. This study seeks to identify and develop a model addressing the employment concerns of businesses in Singapore. This study also contributes by providing recommendations for practitioners and policymakers in the employment practices of businesses in the service industry in Singapore.

This chapter has eleven sections. Section 1.1 introduces the topic and aim of this research. Section 1.2 sets the scene by providing the background to the research and situating the research for this study. Section 1.3 presents the objective of this research and the preliminary conceptual model comprised of main themes identified from literature. Section 1.4 presents the research questions and problem. Section 1.5 presents the researcher’s background. Section 1.6 discusses the justification for this study. Section 1.7 states the research methodology and design. Section 1.8 presents the significance of this research. Section 1.9 presents the definitions for this study. Section 1.10 presents the limitations and delimitations of scope of this study. Section 1.11 summarises the organisation of this thesis. Figure 1.1 illustrates the structure of the chapter.
Figure 1.1 Structure of Chapter 1
Source: Developed for this research
1.2 Research Background and Problem

The question ‘Why focus on employees with ASD as a workforce issue?’ may arise when considering the researcher’s choice to focus on people with this disability. Employment experiences for people with a disability are not exclusive to people with ASD, but there is an increasing acceptance and publicity of the existence of people with ASD with characteristics of focus, loyalty and diligence that places them as the ideal employee (Kopelson 2015). In Singapore, there is a growing number of people with ASD (Enabling Masterplan 2017-2021). In 2014, 76 percent more children were diagnosed with developmental issues as compared to 2010 (Enabling Masterplan 2017-2021). The ASD incidence among children currently is 1 in 150 in Singapore (Enabling Masterplan 2017-2021). Also, there is a growing awareness and availability of resources for people with ASD in Singapore (Tan 2016). Government institutions such as Pathlight School, Autism Resource Centre have moved to the frontlines to provide educational services for people with ASD, while major corporate entities and entrepreneurial endeavours have been mobilised to engage and provide employment for people with ASD in Singapore. Employability is an important concern in Singapore since it does not function as a welfare state, and citizens are expected to be self-reliant in the long run. Singaporeans need to pay for their own housing, education, medical care and retirement.

Another reason to explore employment for people with ASD in Singapore is because the literature is at an early stage of development. This area is mostly under-researched by researchers and the business management community. Advances in this area are mainly spearheaded by such recent initiatives as the Governments’ Enabling Masterplans (2012-2016; 2017-2021).

The question ‘Why the service industry?’ may also arise when considering the researcher’s choice to focus on the service industry in Singapore for this study. The service industry in Singapore has been a bulwark during times of economic downturn because of its relative stability compared to other economic sectors. In 1998, it represented approximately 66 percent of value-added and 70 percent of employment in Singapore (Monetary Authority of Singapore 1998). In 2010, services were the largest contributor to Singapore’s GDP at 72.8 percent (Economy Watch 2010). Successful employment of people with ASD is the result of a combination of organisational structure (Brooks 2002; Dammen 2001; Morris & Steers 1980; Worthy 1950), employer organisational commitment (Hagner & Cooney 2005; Hashim & Wok 2013; Jacob et al. 2015), workplace accommodation (Copeland et al.2010; Schartz et al. 2006), organisational rewards (Ali, Schur & Blanck 2011; Benavides et al. 2002; Kuper et al. 2002),
return to work (Saunders et al. 2006), employee organisational commitment (Mathieu & Zajac 1990; Meyer & Allen 1997; Mowday 1998; Randall 1987), skills and abilities (Hendricks & Wehman 2009; Kavale & Forness 1999), career and organisational development (Rothwell, Sullivan & McLean 1995; Luecking 2003) and government subsidies, insurance and taxation (Howlin, Alcock & Burkin 2005). The growing share of services in the economy suggests that an increase in total efficiency and standard of living in Singapore are significantly impacted by such changes in the services industry. Thus, increasing output and employment in the services industry is important for economic development in Singapore.

Service occupations hire the most people with disabilities in the United States (US) (Donnelly & Joseph 2012). There is also a high percentage of employees with disabilities in service industries particularly for food preparation and serving there (Donnelly & Joseph 2012). In Singapore, the organisations and companies that hire people with disability and partner with special schools for people with disability are mainly from the service industries (SG Enable 2016). As such, the researcher chose to focus on the service industry for this study.

In the following sections, themes that have been cited in literature about the employment of people with ASD are summarised. This study mainly present perspectives from the employers that consider the skills and abilities of people with disability, organisational structure, employee organisational commitment, employer organisational commitment, return to work options, workplace accommodation, organisational rewards, career development, organisation development, government subsidies, insurance and taxation. The researcher did not interview employees with ASD because of ethical considerations. The researcher fully recognises the vulnerability of people with ASD, and, did not solicit input for this research from them.

1.2.1 Skills and Abilities

The skills and abilities of people with ASD that are needed for employment is a theme that has arisen in research studies. These studies suggest that it is important for people with ASD to develop skills in personal independence and social responsibility (Kavale & Forness 1999). In other words, people with ASD need to acquire skills in academic achievements, social skills, language and communication, self-management, freedom of choice, home living, employment, and society (Hendricks & Wehman 2009). When an individual fluidly applies knowledge in a variety of life environments, skill competence is demonstrated. Iovannone et al. (2003) found that plans for improving communication, socialisation, and behavioural difficulties that strongly impact the individual are important for a successful transition to employment.
Studies also confirm that factors and dimensions that contribute to successful employment involve achievement of communication and interpersonal skills and managing stereotyped patterns of behaviour (Burt, Fuller & Lewis 1991; Hendricks & Wehman 2009). Dedicated remediation can help the individual to be ready for employment by training critical abilities required in the vocational environment (Hendricks & Wehman 2009). Jacob et al. (2015) suggest that people with ASD need workplace skills such as dealing with communication difficulties amongst colleagues with ASD, deliberating over the necessity for supervision, and being clear about social rules in the workplace. Literature asserts that pre-employment training for people with ASD should be functional and concentrate on skills required in present and imminent situations (Iovannone et al. 2003; Wehmeyer 2002), and, highlights the need to address communication and social skills in community (Schall et al. 2006) through goal setting in the various employment settings, as well as goals to maximise functional independence (Cameto, Levine & Wagner 2004).

1.2.2 Pre-employment training

Studies of pre-employment training have shown improvement in skills developed in the areas of communication and technology (Wittich et al. 2013), but also indicate a high turnover of employees with a disability (Wittich et al. 2013). Tsang (1999) found that pre-employment vocational training was more expensive than in-service training. It also been found that vocational/technical education was more costly than academic programmes (Tsang 1999). Other research on training has focused on job-site training of supported workers with ASD and suggests that the best practice for training vocational skills is to combine job-site training with simulation training (Lattimore, Parsons & Reid 2006).

1.2.3 Organisational Structure

Organisational structure research focuses on the hierarchical configuration of institutions, the centralisation of decision making, formal standardisation, horizontal integration, as well as strategic orientation or the corporate strategy (Doherty, Champion & Wang 2010). Traditional hierarchical organisations are based on the fundamentals of hierarchical authority, job specialisation, and official rules (Muchinsky 1990). High performance organisations meanwhile, are ‘organisations that create respect and a deep appreciation for the value of its people; is cohesive and adaptable; has good strategy; and its leaders understand that good people are a competitive advantage’ (People Process Culture Handbook, p.12). Research suggests that an important connection occurs between the organisational set-up and general levels of trust and job satisfaction (Dammen 2001). Organisational structure can also be viewed
in terms of delegation of decision making, formalisation of procedures and processes, functional dependence and job level. These were discovered to be positively associated to organisational commitment, whereas size and span of control were not associated (Worthy 1950; Morris & Steers 1980; Brooks 2002).

The structure of major organisations has been shown to be changing, in that structures reflected through organisational charts are more team-oriented and less steep. Organisations focus on efficiency of output, being flexible and socialising and interaction at work (Burke et al. 2013; Chan et al. 2010; Gilbride & Stensrud 1992). The organisational structure of a company affects the employability of people with ASD because they are more likely to be employed when organisations are more flexible, social and team-oriented, with less hierarchical organisational charts and structures. Researchers like Burke et al. (2013) have suggested that rehabilitation professionals could focus on helping people with disabilities gain employment by developing this area. This may thus boost demand for employment of people with disabilities.

1.2.4 Employee Organisational Commitment

Organisational commitment is about believing and accepting the organisation’s goals and values, and about putting in significant effort for the organisation with a desire to continue being part of the organisation (Mowday, Porter & Steers 1982). Another framework of organisational commitment has been proposed by Meyer and Allen (1997) with three components: employee emotional attachment, identification and involvement (affective commitment); feelings of obligation to remain in employment (normative commitment); and deliberation of costs related to exit (continuance commitment). All these dimensions contribute to determining whether an employee is committed to an organisation. Organisational commitment by an employee affects the employability of people with ASD when individuals are emotionally committed, obliged to remain committed and when it is costly to leave the organisation.

1.2.5 Employer Organisational Commitment

Advances in theory also allow organisational commitment to be defined as commitment from the employers themselves (Brooks 2002). This author suggests that the organisations’ commitment to employees is the greatest factor in employees’ commitment to the organisation. Shedding employees by an organisation demonstrates that the organisation is less committed to its employees (Mowday 1998; Brooks 2002). Hashim and Wok (2013) suggested that organisational commitment is a result of the companies’ capacity to reorganise their job scope
to match the requirements of employees with disabilities. Employers also demonstrate organisational commitment in their decision to employ people with disabilities by viewing them as organisational assets (Pitt-Catsouphes & Butterworth 1998). When people with ASD are viewed as organisational assets, employers provide opportunities for return to work.

1.2.6 Return to Work

Possible concerns of employers that encourage or inhibit the employment of school-leavers with disabilities in organisations could include the items listed in the Menninger Return to Work (RTW) Scale or other return to work options (Saunders et al. 2006). Variables on the RTW Scale were: disability, age, sex, education, marital status, occupation, residence, employer, sources of support, and wage replacement (Martin et al. 1994). Return to work opportunities are a means for people with ASD to have ‘time out’ until they are ready for work again (Hesmondhalgh 2010). Kenyon (2015) suggests that alternative work activities or temporary redeployment are also useful examples of return to work schemes that organisations have implemented. Employers that create and implement return to work options for people with disabilities in the organisation thus encourage the employment of people with disabilities.

1.2.7 Workplace Accommodation

More than assisting employees, studies have shown that supported hiring programmes can be advantageous to employers too. Almost 100 Iowan employers were surveyed in a study that stressed that management that employed people with disabilities with the assistance of supported hiring regarded these practices to be beneficial and useful (Nietupski et al. 1996). Likewise, Schartz, Hendricks and Blanck (2006) looked at workplace accommodations and decided that these accommodations can improve efficiency and production for employers at a minimum price. Hornberger and Milley (2005) suggested that employers often had a negative perception of the need and cost associated with reasonable accommodations. The participants interviewed did not mention their concerns with cost in implementing accommodations. Studies by Copeland et al. (2010) listed accommodations like adding staff, buying special software, and adding an elevator.

Organisations that provide workplace accommodations are more likely to hire people with ASD (Baldwin, Costley & Warren 2014). These accommodations were perceived as critical for employers to be able to employ a person with disability successfully (Gustafsson, Peralta & Danermark 2014). Soft accommodations include adjusting working hours, rate of doing work tasks. Hard accommodations include technical and physical changes in the work
environment. These accommodations add to the positive experiences of employment for people with ASD (Baldwin et al. 2014) and affect job development and career as well (Gustafsson et al. 2014). Workplace accommodations enable employers to employ people with ASD by making soft and hard accommodations, such as flexible working hours, rate of completing work tasks and technical and physical changes in the work environment.

1.2.8 Organisational Rewards

Organisational rewards include a variety of dimensions such as security, self-esteem, chances, independence, the requirements of work (workload, pace), being in control of work (autonomy, learning, participation), to the generic circumstances of living in and outside the workplace (Benavides, Benach & Muntaner 2002; Kuper et al. 2002). Day et al. (2014) suggested that organisational rewards should be related to employee need and equality, rather than based on equity or performance. There are also financial incentives or rewards, as well as opportunities for promotion that reward employee performance (Day et al. 2014). Dichter et al. (2012) also found differences in the impact of social rewards and monetary rewards on people with ASD.

Employers who provide both social and monetary rewards for people with ASD are more likely to be successful in employing people with ASD (Dichter et al. 2012). Employees can be trained in an organisation’s reward system as they assimilate and process rewards (Cavagnoli 2011). Such rewards could include controlling how quickly job tasks are completed, as well as job development opportunities (Cavagnoli 2011). Employers are more successful in employing people with ASD when they provide social and monetary rewards.

1.2.9 Career Development or Organisation Development

Research presents career development from the viewpoint of the employee or potential employee, while from the employer or organisation’s point of view it is also known as organisation development. Examples of organisation development include supervising, teaching, performance evaluation structures, job evaluation and descriptions and enhancement of processes (Luecking 2003; Rothwell, Sullivan & McLean 1995). It essentially means that the organisation experiences a process of planned change to increase organisation effectiveness and health (Chao, Lee & Ling 2012). Some organisations go through that planned change by developing supported employment capabilities or providing vocational rehabilitation and training for people with disability (Howlin, Alcock & Burkin 2005).

Employers who provide opportunities for people with ASD to develop and grow were sought out and preferred by people with ASD (Scott et al. 2015). Potential of employees with ASD
was maximised through the provision of career planning and development instruments, more supervision and learning, modifying performance evaluation criteria, extending health benefits and mental health supports and stretching the time taken for promotion (Tompa, Dolinschi & De Oliveira 2006). These are supportive organisation development measures to help people with disabilities in the work environment to thrive and do well in workplaces and their careers in general. Such organisations were deemed as supportive employers and some of these organisations had the support and advice of disability employment organisations (Scott et al. 2015). Career development or organisational development affects the employability of people with ASD because there are organisational measures that allow people with ASD to thrive in workplaces and careers.

1.2.10 Government Subsidies, Insurance and Taxation

Globally, the greater the number of people with ASD who are employed, the less government expenditure on subsidies, insurance and taxation. Although the data for this are not available in Singapore, government funds and networks such as the Open Door Fund and the Enabling Employers Network have been set up by the Singapore Government to support the employment of people with disability. Factors and dimensions such as physical and attitudinal barriers, health insurance issues, and work disincentives often function as deterrents to career maintenance and advancement (Roessler & Bolton 1985). In Singapore, to enable people with disability to be independent through employment, a value-chain employment framework was implemented and the Open Door Fund was also launched to encourage employers to re-design jobs, modify workplaces and provide paid internships. The Enabling Employers’ Network (EEN) was also established to advocate for employment opportunities for people with disability (Enabling Masterplan 2012-2016).

Howlin, Alcock and Burkin (2005) studied participants with ASD who were part of a supported employment programme in the United Kingdom. Their study assessed the results of supported employment over a duration of eight years. Research outcomes revealed that the total savings to the Exchequer across the eight years was a total of £179,095 for the 114 employment positions in the programme. This was relative to a decrease in benefits and national insurance and increased tax contribution. A significant cut in the number of benefits received was also seen once these participants were employed. The outcomes of this research show that employment of people with ASD helps to minimise government expenditure, by diminishing the amount of benefits people with ASD need during unemployment.
Most of these studies have been developed in countries outside of Singapore. There is scant information on the employment of people with ASD in the service industry in Singapore. Thus, an exploratory method was used in this study, given the lack of material in existing literature that relates to employment in ASD. Although the topic of this study is people with disabilities, this study’s viewpoint stems from the field of business administration and focuses on the employers’ perspective. In contrast, most studies conducted on people with disabilities are purely developmental, social sciences, allied health approaches. This study uses the knowledge base of the business administration researcher, who has inside knowledge of the topic of disability, having been trained as both a social worker and a speech pathologist.

Human capital theory is the mechanism by which businesses and individuals invest in skills acquisition. Higher education levels increase income and work productivity (Becker 1993). At the individual level, human capital theory explains individual data in terms of supply in the labour market. For organisations, human capital theory can be used to explain phenomena occurring in the firm using terms such as productivity, investment and turnover. For governments, both supply and demand should be considered in national policymaking (Bae & Patterson 2014). The Singapore Government believes in equal employment opportunity. One of the four principles of governance in Singapore is to ensure ‘A Stake for Everyone, and Opportunities for All’ (Lee 2004).

1.3 Objective of the Research

As mentioned, this study seeks to answer questions concerning the skills and abilities needed for people with ASD to successfully navigate a path to independence and job employment. It also seeks to discover and support employers’ concerns regarding the employment of a person with ASD.

Figure 1.2 illustrates the proposed conceptual model created for this research. First, the aim was to understand the relevant issues associated with the topic at hand in the context of employee recruitment and retention. Then, from themes highlighted in the literature, the key dimensions of employment issues and concerns for employers and managers of employees with ASD could be identified, and, integrated into a proposed conceptual model. The themes are explained in further detail in Chapter 2 (Section 2.6).

This proposed model does not differentiate between the employers who had employed people with ASD and those who had not. However, it also categorises the proposed themes into two
subcategories: namely the employers’ concerns and the employers’ consideration for employees. Employers’ concerns were more generic and address areas that are specific to the employers’ needs and the organisation. The employers’ considerations for employees address the needs and issues concerning the employee. The research questions and interview questions were developed from consideration of the themes in the conceptual model.

**Figure 1.2  Proposed Conceptual Model**  
Source: Developed for this research

### 1.4 Research Questions

The research questions were generated from consideration of the research problem. The main research problem is the lack of documentation of studies relating to the employment of people with disabilities in the Singaporean context. The researcher was not able to unearth any studies from Singapore in the literature review that have explored the cost of ASD to governments and employers. This is further discussed in Chapter 2 and Chapter 5.

Therefore, the following research questions guided this study:

RQ 1: What skills and abilities would help people with ASD successfully transition into the workforce?

RQ 2: What are the main concerns of employers that encourage or inhibit the employment of people with ASD in organisations?
RQ 3: Are people with ASD able to successfully navigate themselves on a path to independence and employment?

These questions were considered in formulating corresponding interview questions to be used for gathering data, as discussed in detail in Chapter 3.

1.5 The Researcher’s Background

The researcher has spent eight years working as a speech-language pathologist and therapist. The researcher was also previously trained as a social worker and graduated with a double degree in psychology and social work. These experiences have given the researcher keen insight and interest in disability and working with people with ASD. Being involved in the processes of employment and hiring in more recent years has helped the researcher to understand the challenges that employers face in the hiring process.

1.6 Justification for the Research

Most past and current studies have focused on the stages of career exploration and decision-making and career planning (Flexer, Simmons & Tankersly 1997). However, few have dealt with the area of job development and placement incorporating inputs from informal and employer contacts able to advise on prospective employees and valued skill sets that they are seeking. This neglect is being rectified with enhanced prospects for employment of the people with disabilities, but the number of disabled who have job placements has not increased significantly (Vasoo 1997). Estimates based on 2010 data from the Health and Education ministries suggest that Singapore has around 97,200 people with disabilities; the majority – approximately 77,200 – are over the age of 18 (Yong 2014). The Enabling Masterplan 2012-2016 uses these estimates to suggest a prevalence rate of three per cent of the general population (Enabling Masterplan 2012-2016).

Current generic disability research focuses on the cost of disability being borne by the government through welfare (Stapleton & Burkhauser 2003) and the relationship between income, standard of living and disability. Even fewer studies have covered employment research for people with ASD. By generating greater employment prospects for people with disability, the extra cost of disability can be self-borne or co-borne with their employer. As such, it is important to share the intrinsic and relative value (Damodaran 2011) of employing a person with disability to a prospective employer. Employment generating extra income can
play an important role in raising self-esteem and improving connections into social and community networks, thereby combating social exclusion.

Application of factors or skills that employers look out for in potential employees may increase the incidence of employability in people with disability in Singapore. Therefore, this would result in significant savings to businesses, increased income for people with disability, and ultimately, less of a burden on the state. Finally, this research could advance academic knowledge in an area of significant healthcare and social service activity not previously researched in Singapore. Singapore is an important context to consider the topic of business employment as it was the top-ranked Asian country in terms of investment potential of cities ranking 76 on the Business Environment Risk Intelligence (BERI) Report 2014, top in the general ease of doing business, top in its labour force evaluation in the BERI 2014 Labour Force Evaluation and also top in its innovation input on the Global Innovation Index 2015 (Economic Development Board Singapore 2015).

Of all the factors identified, a key factor to the employment gap has been the mindsets of employers concerning employing people with disabilities (Greenwood & Johnson 1987; Hernandez et al. 2000; Hernandez & McDonald 2010; Wilgosh & Skaret 1987). It is increasingly important for employers to recognise the significance of employing people with disabilities. By doing so, employers boost their image in the community (Nietupski et al. 1996; Olson et al. 2000), reinforce their pledge to corporate social responsibility (Pitt-Catsouphes & Butterworth 1998) and grow the diversity of their workforce to acknowledge the reality of existing societal imperfections.

However, only a handful of studies were available in this area. That shows the inadequacy of the present systematic evaluation. Some countries are studied in the review, i.e., UK, USA, Australia, Malaysia, Sweden, Taiwan, South Korea and Singapore. Although some of these countries are almost similar relative to GDP per capita (2014 the World Bank reported that in US $ GDP/ capita was; 45,603 in U.K, 54,630 in USA and 58,887 in Sweden), the labour markets and service arrangements are different. These studies were completed between 2005 to 2014. Some results may be dated because of modifications related to employment and service provision in UK, USA and Sweden. Thus, an exact across the country appraisal of expenditure and benefits was not possible due to a dearth of information. The outcomes of the existing evaluation ought to thus be understood with suitable care and can only relate to countries with comparable economic formations. Nevertheless, it is safe to say that in these
countries hiring adults with disability as competitive hires was economically advantageous for society. Additionally, it can be surmised that through the generation of job competition prospects for people with ASD, the societal social capital is undoubtedly fortified. Social capital is the system of relations amongst people co-existing in a specific society through activities like work, allowing that society to operate successfully and collectively.

1.7 Research Methodology and Design

This section sets out to justify the use of qualitative semi-structured interviews in an interpretive approach. It provides an overview of the exploratory nature of this research design and methodology in the quest to understand the concerns and dimensions in employment of people with ASD. A detailed research methodology is explained in Chapter 3.

Themes were identified and proposed before and during the data collection stage. Analysis of emergent themes enabled a redefinition of the proposed model as they arose. Finally, these themes were woven into the model, resulting in an emergent model.

Figure 1.3 elaborates on the research design of the study where the goal was to triangulate the results from two main groups of participants and conduct interviews with potential and existing employers using semi-structured interviews.

Figure 1.3 Initial Research Design
Source: Developed for this research

Given the exploratory nature of the research questions, the researcher decided to use a qualitative approach in gathering information from employers. Instead of choosing between a
rigid idiographic/nomothetic dichotomy, the researcher sought to develop descriptions or generalisations that are referenced to existing facts and settings, using a simpler, less abstract theory, built on existing facts (Neuman 2011). The goal of this study was to generate a representative depiction of social life and arouse awareness and understanding beyond investigating a causal hypothesis. Descriptions veered towards detail, and consideration of background and setting, which could demonstrate the multifaceted practices of social life. The aim was to organise detailed aspects into clear representation, model, or picture of connected concepts.

Because qualitative explanations can vary according to likelihood or acceptability, the researcher supplied supportive evidence to remove selected theoretical reasons from consideration, and to increase the probability of others (Neuman 2011). Also, qualitative analysis can remove an explanation by demonstrating that an extensive selection of evidence challenges it. The data may back more than one reason, but all descriptions will not be consistent with it. Complementary to removing less likely reasons, qualitative data analysis assists to validate a progression of events or the phases of a method. This chronological sequence is the root of discovering relationships among variables, and it supports causal arguments.

1.7.1 Data Collection

Detailed discussion is provided in the data collection methodology section of Chapter 3. There were three stages involved in data collection. During the initial stage of this study, data collection was exploratory and concentrated on identifying the underlying dimensions that shape the employment concerns of employers. The next stage involved an in-depth study based on the findings to see if there were other dimensions or themes to construct. Triangulation of data occurred between the existing literature articles and the findings for this study. The final stage was to merge the themes into an emergent model to ensure the integrity of the data and emergent themes. The employees with ASD were not interviewed due to ethical considerations. Thus, from an ethics point of view, this study is regarded as low risk. Even so, direct quotes were used with care so as not to expose the identity of the interviewees and to ensure confidentiality. The interviewees’ privacy was protected through the use of pseudonyms. There were no discussions of any information during the interviews that was prejudiced, disrespectful or left any negative impression with regard to any individual or organisation.
1.7.2 Data Analysis

The main sources of data available for analysis included transcripts of audio-recorded interviews and memo notes from post-interview reflections. Thus, thematic analysis was selected as the best method of analysis in order to identify patterns in the qualitative data to convert into meaningful themes as suggested by Patton (2015). Themes were extracted from data relative to the research question. This research took an interpretivist approach in order to make transparent the assumptions about the data (Braun & Clarke 2006). The researcher also used qualitative coding to arrange data into categories for analysis with NVivo. The four phases of theme development in qualitative content and thematic analysis proposed by Vaismoradi et al. (2016) guided the researcher’s analysis (see Sections 3.13 through to 3.16).

1.8 Significance of the Research

The initial literature review identified that there was a significant research gap in the area of employment in people with ASD, especially in the context of companies in Singapore. This study makes a significant contribution by filling this knowledge gap. Such a study could be useful as it would enable companies to understand the concerns of employers regarding employment of people with disability. The dimensions identified would provide further insight in employment in the future. Such a study would contribute a framework or model to identify the dimensions involved in the employment of people with ASD in Singapore. This research sought to create more knowledge for policymakers and businesses to help change employment conditions and build a better Singapore for people with ASD.

Given the significance of employment and work in Singapore, it is important to understand how people with ASD can orientate themselves through the workplace. The exploration of these issues is legitimate and essential. The employment trends impacting the business landscape in Singapore such as the changing nature and need for manpower internationally, make this a topic of significance in the context of employment and the perspective of the employer.

1.9 Operational Definitions

The operational definitions or terms used in this study are listed below:

Autism Spectrum Disorder (ASD) – an individual with a diagnosis of ASD who has difficulties with speech and language, social communication and repetitive behaviours diagnosed using two main diagnostic manuals: the DSM-5 and ICD-10 (APA 2013).
Potential Employer – refers to a business owner or management that is not currently employing people with disability in their organisation.

Existing Employer – refers to a business owner or management that is currently employing people with disability in their organisation.

Employee – refers to a person who works in the organisation.

1.10 Delimitations of the Study

The main delimitation of this study was that the sample was made up of Singaporean companies in the service industry. While the results may not be applicable to the practices carried out in other countries or other industries, the contextual boundary of Singapore is ideal for this study as Singapore is home to many major businesses (Economic Development Board Singapore 2015).

A further delimitation was the focus on food and beverage industries within the service industries in Singapore. However, this delimitation aimed to move the study into a focused arena, which enabled conflicts and ambiguities that may have arisen during data collection to be minimised. The researcher focused on the employers’ view of job development and placement in Singapore.

To some extent, the findings of the study were delimited by the fact that data were not obtained from employees with ASD. This reduces the level of contextual understanding. However, this was important because employees with ASD have vulnerabilities that would raise ethical concerns if interviewed.

Further concerns of delimitation relate to sampling. The small sample size of the study could be said to limit the value of findings (Carson et al. 2001; de Ruyter & Scholl 1998; Perry 2001), but the researcher does not claim that findings are generalisable. The approach taken for this study was interpretivist, and so the sample size was appropriate in this case.

While the subjective nature of interview data could also be said to compromise validity of findings, again, the approach taken for the study was interpretivist, which offsets these concerns. As an interpretivist, the researcher accepts the interviewees’ views as true and valid.
Some interviewees may have reported only perspectives about employment that were acceptable for disclosure, or, may have felt uncomfortable talking about their own worldview. The researcher tried to minimise these possibilities by conducting the interviews onsite at the interviewees’ work spaces and offices, in a non-threatening and supportive environment where the interviewees could express themselves freely. The status of the data collected from interviews is further discussed in Section 3.16.

1.11 Overview of the Thesis

This final section of Chapter 1 presents the organisation of this thesis. This thesis is developed from the five-chapter format to a DBA thesis by Perry (2002). An overview diagram is illustrated in Figure 1.4.

Chapter One (Introduction) provided the context to the thesis subject and presents the research problem. The study is defended and the methodology of the study reviewed. Limitations and delimitations of the study are discussed.

Chapter Two (Literature Review) introduces prior and current research of employment of people with disability. An exhaustive examination of the literature concerning the employment of people with disability was carried out, focused on various definitions, background, measurements, aims, and methods. The products of the literature review comprised possible variations of the conceptual model relating to: the skills and abilities of people with disability, organisational structure, employee organisational commitment, employer organisational commitment, return to work options, workplace accommodation, organisational rewards, career development, organisation development, government subsidies, insurance and taxation. The main output of the literature review allowed identification of the gaps and the development of the research framework and proposed model for this study.

Chapter Three (Methodology) reviews the various research paradigms, and explains the choice of a qualitative, interpretivist paradigm as most appropriate for this study. An explanation is also offered for choosing the semi-structured interview technique as the most appropriate data collection process. Chapter Three also lists the procedures and methods that were used in carrying out the semi-structured interviews, and, deals with concerns involving whether the research is valid and reliable, as well as ethical concerns such as informed consent and confidentiality through the use of pseudonyms. An ethics proposal that detailed the process that
the study would undertake was submitted to the Southern Cross University Research Ethics Committee (see Appendix A). The study was evaluated to be ‘low risk’. It then went through the Expedited Ethics Committee’s thorough review process. Ethical responsibilities were considered carefully from the initial planning phase to ensure the methods were consistent with the ethical obligations laid out by the Southern Cross University Research Ethics Committee Guidelines. Material prepared for the interviewees was informative and prepared the interviewees according to the Australian Code of Conduct for the Responsible Conduct of Research 2007 and the Southern Cross University Guidelines (2011). Interviewees were not pressured to participate (Robson 2002) and had the right to withdraw from the study at any time. There were no known risks identified in participating in this study. The characteristics of the interview subject population are considered, and the data collection structure presented.

Chapter Four (Data Analysis) presents the results from the semi-structured interviews.

Chapter Five (Conclusions and Recommendations) discusses the results from the interviews in relation to findings from the literature review. Conclusions about the research issues are presented and a conceptual structure is given as an answer to the research questions. Also, a revised conceptual model or models for successful employment of people with ASD is proposed. The limitations of the research study are considered, and areas for further research proposed.
Figure 1.4   Overview of the Thesis
Source: Developed for this research
CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This study set out to identify key dimensions that relate to the employment of people with ASD in Singapore, particularly focusing on the employer’s concerns and requirements. This issue of interest allows the Singapore government, SG Enable and Voluntary Welfare Organisations (VWOs) to gain a better picture of the skills and abilities that a potential employer requires to employ a person with ASD. SG Enable is an agency in Singapore that provides information and referral services for child and adult disability schemes, administers grants, enhances employability, improves transition management and gathers stakeholder support in enabling people with disabilities (SG Enable 2017). Results from this study thus pave the way for enhanced employment opportunities and improved job match for people with ASD with their potential employers, as well as increased investment from the Singapore government, SG Enable, VWOs and philanthropic agents. Such increased investment could occur through the allocation of resources in the form of grants, donations and other forms of planning toward improving the employability of people with ASD.

This chapter has 11 sections. Section 2.1 introduces the chapter. Section 2.2 presents the definition and characteristics of disability and autism spectrum disorder (ASD). Section 2.3 presents a discussion of disability and work participation. Section 2.4 discusses the business metrics of employment of people with disability. Section 2.5 involves the various dimensions involved in employment of people with disability. Section 2.6 identifies and discusses main themes from the literature: skills and abilities, pre-employment training, organisational structure, employee organisational commitment, employer organisational commitment, return to work, workplace accommodation, organisational rewards, career development and government subsidies, insurance and taxation. Section 2.7 states the effects of disability on human resource judgements. Section 2.8 presents consumer-centric supported employment and the consumer model. Section 2.9 presents the employers’ perspectives. Section 2.10 presents the field of study and major contributions, and, includes the conceptual model. Section 2.11 summarises the chapter. The structure of Chapter 2 is illustrated in Figure 2.1.
Figure 2.1    Structure of Chapter 2

Source: Developed for this research
To achieve this, this study positions people with ASD as a valuable resource to businesses and examines the skills needed in the workforce. It seeks to explore the type of relationships between ASD and employability, and to look for associated dimensions or mechanisms. External forces, pressures, and structures such as discrimination against people with disabilities could operate on individuals, groups, organisations, or societies to produce low employment rates among people with disability (Burke et al. 2013). This research thus attempts to investigate what employers are looking for in their staff to create more robust job opportunities for people with ASD. The search strategy that was implemented in this study to locate the studies reviewed is outlined as follows. The databases used were Business Source Premier (Ebsco) and ProQuest. The search terms were ‘employment and disability’, ‘employer perspectives towards individuals with disability’ and ‘predictors of employment for individuals with disability’. Other search limits (date or publication type) were full-text and peer-reviewed articles.

Employment and community involvement appear to be ‘frontline solutions for undoing the disempowerment dependency cycle for people with disabilities’ (Citron, Brooks-Lane & Crandell 2008, p. 170). Burkhauser and Stapleton’s (2004) report of an unprecedented fall in the employment rate of working age people with disabilities in the 1990s in the United States was recorded as a direct effect of the unintended consequences of public policies. Besides policy involvement, stakeholders are interested in increasing investment in the economic value of people with disabilities (increasing the skills they have) and minimising perceived barriers to their employment (perceived costs of workplace accommodations and litigation) (Burkhauser & Stapleton 2004). The connection between employers and people with disability looking for employment options needs to be explored for positive change to occur.

In developed countries, employment is an external indicator of successful transition to adulthood (Schmidt & Smith 2007). An understanding of the challenges faced by persons with ASD and dimensions that support their successful employment would contribute to the effective implementation of social policies and other related initiatives. Research published in the 1980s discovered that persons with physical disabilities in the United States were more likely than those without disabilities peers to be unemployed (Murphy, Molnar & Lankasky 2000; Thomas et al. 1985). More recent literature indicates that employment for persons with developmental motor disabilities has improved in developed countries (Andersson & Mattsson 2001; Michelsen et al. 2006), but they are still poorly integrated in paid employment (Van der Dussen et al. 2001). Pascall and Hendey (2004) noted that young persons with disabilities in
the United States were half as likely to be employed as those with no disability. Direct comparisons between studies are not possible because definitions of employment differ and samples vary in age, diagnoses, and severity of disability and co-morbidities (Andersson & Mattsson 2001; Michelsen et al. 2006). However, there is consistency across studies indicating a high rate of unemployment in persons with disability in developed countries (Magill-Evans et al. 2008).

Employers are the key to addressing the employment rates of persons with disabilities (Unger 2002). A demand-side approach emphasizes the opinions and behaviours of the employer, and how these related to job placement and the interaction of these dimensions with the environment (Kang 2013). A demand-side employment approach mobilises existing support networks to sustain long-term employment opportunities (Huang & Chen 2016).

### 2.2 Definition and Characteristics of Disability and ASD

Disability is a multidimensional, heterogeneous concept that is differently defined in different disciplines (Ward et al. 2012). The World Health Organization’s International Classification of Functioning, Disability and Health (ICF) (WHO 2001) is a common conceptual model of disability used in the United States and Australia. It is a medical-environmental model that defines disability dynamically, concerning the interaction of a person’s health status with the physical and social environments. It is an alternative to the medical model that propositions that health conditions are the sole reason for disability. In this research study, the researcher has adopted elements of medical and ICF concepts to generate functional definitions of disability as shown in Figure 2.2.
Figure 2.2  ICF Conceptual Model of Disability

Source: WHO (2011, p. 9)

The dimensions in the ICF model are: impairment, activity limitation and participation restriction (WHO 2001). A requirement for each of these dimensions is the presence of a health condition. Cases of health conditions are recorded in the International Classification of Diseases, Tenth Edition (ICD-10), and they include diseases, injuries, health disorders and other health-related ailments. Singapore’s definition of disability echoes the ICF model with two components. One component involves the medical definition or diagnosis, the other is a socio-functional aspect that examines the level of functionality in the person with disability (Enabling Masterplan 2012-2016).

Where the domains of body functions, activities and participation in the ICF model overlap, it shows that a disability may affect more than one dimension. Activity limitations are difficulties an individual may have in executing activities such as work, managing money, shopping, doing housework, and visiting friends. Participation restrictions are problems an individual may experience in involvement in life situations. Impairments are problems in body function or structure such as an important deviation or loss. One of the main highlights of the ICF model is the impact of environmental factors on the complete community participation of persons with disabilities in every facet of life, as well as employment (Burke et al. 2013). Employment and work activities are perceived as basic to individual health (Dutta et al. 2008), presented as a fundamental human right (Burke et al. 2013). The ICF demonstrates a concrete system for the classification of individuals in the domains of body functions, activities and participation. The capacity and performance qualifier can be denoted as an activity or participation item. The
scaling for the qualifiers can range from 0 to 9 (Mitra 2006). For example, the extent of the impairment in coding body structures is used in an ordinal manner from 0 to 4 (0 = No impairment, 1 = Mild impairment, 2 = Moderate impairment, 3 = Severe impairment, 4 = Complete impairment), with 8 and 9 usually used as labels (8 = Not specified, 9 = Not applicable). It could also be used in an ordinal fashion from 0 to 7, with 8 to 9 used as labels to denote the location of the impairment (ICF 2001). One scale is the capacity qualifier that assesses an individual’s capability to perform responsibilities in a standardised setting to neutralise the effect of various situations on the capabilities of the individual. The other scale is the performance qualifier that assesses the tangible lived knowledge of people in the setting they live in. Although the ICF model does not include situations that are not health-related such as socioeconomic factors (Bickensack et al. 1999), it has an interest for an extensive variety of functionings in a person’s life (Mitra 2006).

Work participation is a key concept in the ICF model (Holwerda et al. 2012). Persons with ASD are hindered in their integration into the work force (Ballaban-Gil et al. 1996; Jennes-Coussens, Magill-Evans & Koning 2006) and only 25 percent of persons with ASD (mostly high-functioning) are employed (Magill-Evans et al. 2008). Employment benefits persons with ASD personally and socially (Ridley & Hunter 2006).

Altman (2011) highlighted that disability does not have a unique definition although it is considered to be associated with the health, functioning, and social context of an individual. For Altman, the unit of analysis stems from the diagnosis of the individual, and risk of disability is not based on based on his or her limitations in basic actions; the approach tends to be a more medical/bioepidemiological approach. Disability is regarded as a continuum, not a dichotomy, and variation in question language and answer categories can result in widely different estimates from national surveys (Altman 2011). The broad range of purposes, applications, data sources, and measures preclude a ‘one-size-fits-all’ solution for research. Zanoni (2011) found that the concept of disability includes two important requirements of the labour market: the lack of capability and flexibility (Jessop 1994; Magnusson 1999, 2006).

Stone and Colella (1996) had previously suggested that variables influencing the handling of persons with disabilities at work include the qualities of the person with disability (i.e., disability type, race, social status, and interpersonal communication style). They concluded that the type of disability was the most critical factor (Combs & Omvig 1986) as participants have significantly diverse typecasts for persons with different disabilities and react differently. For example, participants may infer that persons with disabilities that are not physically evident
are more volatile concerning their behaviour or performance, and, relating with them might develop significant apprehension or distress (Paetzold 2005), while wheelchair-bound persons could induce completely different responses. They are frequently thought to be brave and extremely driven, although perceived as hostile (Stone & Colella 1996). Overall, a diversity of qualities of disabilities – for example, the way they look aesthetically, cause, progression, ability to conceal, unruliness, and degree of danger – might elicit diverse reactions from people (Stone & Colella 1996). With such research grounds, the researcher would anticipate that persons with mental disabilities receive more adverse prejudice than persons with physical disabilities. Ren et al. (2008) tested this factor using the following hypotheses: (1) The affirmative impact of disability on performance appraisals would be less for people who are mentally disabled compared to people who are physically disabled. (2) The adverse impact of disability on performance expectancies would be greater for people who are mentally disabled compared to people who are physically disabled. (3) The adverse impact of disability on employment choices would be greater for people who are mentally disabled compared to people who are physically disabled. Ren et al. (2008) found that there was significant negative impact of disability for performance expectations and employment choices. However, results showed that regardless of disabilities being mental or physical there was no distinction in the evaluation of the performance of people with disabilities.

2.3 Disability and Work Participation

In 1980, Foucault wrote of the way a society’s key activities, such as employment, life at home and leisure, show the fundamental values and symbolic representations that encourage or discourage specific types of social relationships (Foucault 1979). More recent research confirms understanding of how such power relationships can incapacitate certain groups in a society (Kitchin & Law 2001). Studies of disability further confirm the way disability is spatially and relatively determined in socio-spatially ways (Finkelstein 1993; Ingstad & Whyte 2007), where embodied social differences emerge from, and are maintained by, cultural and socio-economic processes (McDowell 1997; Holt 2008).

Globally, people with disabilities are disadvantaged in the job market (Commission for Social Development 2008; Hall 1999; Oliver 1991). Research has examined how embodied disparities, such as age, disability, gender and ethnicity, create patterns of job market discrimination (Holt 2008; McDowell 2000; Schriner 2001). Granovetter (1985) defines embeddedness as a person’s networks of connection and economic activity in social life. A person’s physical and social situation affects accessibility to work resources through embedded
inequalities (Hanson & Pratt 1995). Embeddedness is always in place (Casey 1993) and thus accessibility to employment because of relationships between people with disabilities and those without is always location-based. Embodied differences reflect cultural values, expectations and norms and structural access to prospects, including jobs.

Wilcock’s (1998) Triangle of Health and Wellbeing acknowledges that occupational participation is important for vigor and healthiness for humans. This model describes *doing* as a work activity that sets out to meet fundamental individual wants to develop vigor and healthiness. Inner motivation to do things with other people toward a common goal offers feelings of belonging and meaning (Wilcock 1998). *Doing* and *belonging* lets a person advance and develop wellness and health. For example, occupational therapy looks at different means for persons with ASD to be involved in significant events (Jacob et al. 2015), for example employment (*doing*). Nonetheless, by offering these adults with a chance for employment, job coaches or therapists must be assured that employers are ready to handle these relationships at work, to ensure that there are reciprocal benefits. Additional research that investigates both the employers’ viewpoint and the view of employees with ASD could enlighten therapists or job coaches about how they could help employers in creating a job setting that allows persons with ASD to work competently. Moreover, it could raise corporate consciousness that employment of persons with ASD is significant and valuable to businesses.

The concept of S-functionings was developed by Sen (1999b) to refer to the various things that a person values doing or being. When a person achieves a combination of S-functionings, he or she is actually living a life (Sen 1999b). A life can be lived in various states, from a simple physical state of being adequately nourished to including more complex activities like community participation (Robeyns 2005). Capabilities are the real opportunities that a person has for S-functioning in the way that he or she values and are derivatives of S-functionings (Sen 1999b). In the functionings and capabilities framework, a disability, being a limitation of institutional capabilities, also limits the fundamental freedom of choice in the combinations of institutional S-functionings (Sen 1999b). Thus, the limitations of workplace capabilities are a subset of institutional capabilities, becoming an example of workplace disability (Ward et al. 2012). This capability approach by Sen (1999b) adds an economic dimension to disability (Mitra 2006).

Disabilities at the workplace are therefore a result of a limitation of freedom. To understand this better, Berlin (2008c) suggests that freedom takes on two distinct forms: negative freedom
and positive freedom. Negative freedom is the absence of frustration and obstacles to actual and possible choices and activities whether they are desired or not (Berlin 2008c). Limitations are when other human beings deliberately interfere in the areas we act in (Berlin 2008d). The extent of the limitation is determined by the possibility of employment and the obstacles in that employment path (Berlin 2008a). Negative freedom answers the question of ‘How far am I controlled?’; while positive freedom answers the question of ‘Who controls me?’ Positive freedom is about the values that a person attributes to possible combinations of S-functionings, to be ‘self-directed’ and is about the opportunity to act while taking everything into account (Christman 2005; Puttermann 2006; Sen 1988a). Positive freedom according to Berlin (2008c) is not about the freedom to do what you want or to have the goods you desire. It is idealistic to imagine total or perfect positive freedom (Ward et al. 2012) and these limitations are the same whether the person is disabled or non-disabled. These limitations only appear to be different when persons with disabilities internalise the values and norms of a society that imagines or perceives that persons with disabilities are not normal (Ward et al. 2012). Part of the evaluative process is to identify those responsible for limiting the positive and negative freedoms of people, and to recognise limitations of institutional capabilities in workplace disability issues (Ward et al. 2012).

2.4 Business Metrics of Employment of People with Disability

Valuation, a term used to appraise the value of a firm, should not only be seen through the lenses of accounting, because accounting is about the past, but valuation is about the future (Miller 2010). Valuation is a craft because it is only through experience that one acquires technique and nuance to enable delivery. Miller (2010) has identified a valuation framework, as shown in Figure 2.3, which identifies causal relationships that show how value is created, how the durability of value-creating mechanisms is assessed, and how replication and imitation by competitors is made more difficult and impossible.

Disability is an ongoing condition that limits activities of daily living (Disability Services Commission Australia 2017). Enabling Masterplan 2012-2016 Singapore defines disability as having two components: a medical diagnosis and socio-functional limitations (Enabling Masterplan 2012-2016). Medical diagnoses include the sub-classifications of disability such as physical disabilities, sensory disabilities, intellectual disabilities and other developmental disorders (Enabling Masterplan 2012-2016). ASD falls under the developmental disorders sub-classification.
The framework in Figure 2.3 has 5 elements commonly used in the valuation of Small and Medium Enterprises (SMEs) globally: strategy, people, architecture, routines, and cultures (Miller 2010). It is a tri-level unsystematic risk framework tool that searches out value drivers and sources of risk. The outermost hexagon is the macro-environment (including the macro-economy), which is the total of influences on the company. The inner triangle of the framework containing SPARC represents the resources that provide the direct context for value drivers. Resources are a non-financial metric in terms of human capital and organisational capital. Resources are quantified and measurable in this research study in the form of employees with disability. Such employees add to the value of human and organisational capital in any organisation, but employers are either unaware or prejudiced toward their employment.

![Figure 2.3 SPARC framework](image)

*Figure 2.3 SPARC framework
Source: Miller (2010, p.16)*

The expenditure equivalence approach (Stapleton, Protik & Stone 2008) has commonly been used to value disability by estimating the variance between the expenditure that a person with a disability would require to incur to reach certain goals, in comparison to someone similar without a disability who has an identical goal. The expenditure equivalence approach, however, assumes that if the cost of disability is reimbursed, persons with disabilities would attain the equivalent level of utility as individuals without disabilities at an equal level of income (not inclusive of the compensation). A person with disabilities needs to expend more to realise a certain standard of living than an otherwise similar person. The extra expenditure incurred is the ‘extra cost of disability’ (Saunders 2006; Zaidi & Burchardt 2005).
Figure 2.4 displays hypothetical associations between income and an impartial measure of standard of living for two people, the sole difference being that one has a disability and the other does not. At any level of income, the person without the disability reaches a better standard of living because it costs more for the person with a disability to reach any standard of living. The variance in standard of living amplifies as the income rises, on the hypothesis that the marginal cost of increases in standard of living are more for the person with the disability. Rather than providing cash benefits for people who require a lot of help with personal care and/or mobility as seen in welfare states, another option to address the extra cost of disability is to encourage independence by getting persons with disability to earn their keep.

Figure 2.4 Expenditure Equivalence Example

Source: Stapleton et al., 2008, p.12.

In an Australian study, Jacob et al. (2015) found that employment wages allow persons with ASD to be financially independent, reducing dependence on government payments. Thus, hiring persons with ASD can reduce the expense of community supports, like adult care and daytime activities. Also, the potentially valued input of persons with ASD results in missing output, which is approximately costing Australia between AUD$8.1 – 11.2 billion per annum (Synergies Economic Consulting 2011). The societal financial impact of persons with ASD without employment may be harming the economy (Wellman, Cross & Watson 2001).

Another proposed framework for employment is the ‘Value Chain’ Employment Framework by the Singapore Government (Enabling Masterplan 2012-2016) seen in Figure 2.5. The main components of the value chain are: assessment, training, placement and support. These
components can be re-accessed anytime during employment as a characteristic of lifelong learning and re-skilling. It maps out how the person with disability can transit from school to open or sheltered employment.

Figure 2.5 ‘Value Chain’ Employment Framework
Source: Enabling Masterplan (2012-2016, p. 36)

2.4.1 Cost to the Government

As mentioned in section 1.2.10, within the sample studied in Howlin et al. (2005), persons with ASD in a supported employment programme in the United Kingdom yielded overall savings to the Exchequer of £179,095 over eight years for 114 jobs in the programme, relative to decrease in aids and national financial coverage and added tax contributions. Thus, employing persons with ASD can save government costs when the effect to the whole economy is incrementally applied. This can be done by decreasing the number of benefits people with ASD need during unemployment. Similarly, a Swedish study found that higher employment rates will decrease the expense of day-to-day activities and carers for the government (Järbrink et al. 2007). Comparing job support with day facilities for persons with ASD in the United Kingdom, Mavranezouli et al. (2013) found that persons with ASD with job support had improved results compared to standardised care for persons with ASD. Offering supported employment simply
included additional expenditure of £5,600 for each quality-altered life year or £18 for each extra week employed. These outcomes concur with Cimera et al.'s (2012) results, showing possible economic advantage for the government to offer job support facilities. In Singapore, it was projected that a cost of about SGD260,000 for a person with disability to be at a day activity centre for most of his/her adult years (Enabling Masterplan 2012-2016). Another United Kingdom study found that employers expressed positive attitudes about applicants with disabilities, but few had experience with hiring persons with disabilities although they indicated interest (Stevens 2002). The cost savings in the United Kingdom for job support compared to daycare facilities for persons with ASD was also reinforced by Mavranezouli et al. (2013). The results in the study concur with Cimera et al.’s outcomes (2012) demonstrating the possibility of economic benefit for the government to offer job support facilities.

2.4.2 Cost to Society

An estimate of the economic importance of ASD in the United Kingdom, revealed that the mean yearly costs (with lost employment, not including benefits), for a person with ASD and a further intellectual impairment who lives in a family household was £36,507, in supported accommodation £87,662, in residential care £88,937 and in chronic hospital care £97,863 (Knapp, Romeo & Beecham 2009). Further, this research showed that for persons with ASD without an intellectual disability who live in a family household, the yearly expense was £32,681, a main component of which was the price of lost output for society and tax revenue for the Exchequer and lost employment for the person with ASD (Knapp et al. 2009). The total countrywide cost was £25 billion. Knapp et al.’s (2009) study found that the expense of providing support to adults with an intellectual impairment (incorporating lost employment) accounts for approximately 66 percent of these expenses (£17 billion). Publicly financed facilities made up for 59 percent of this aggregate. Lost employment for the person with ASD (36%) and family expenditure (5%) represented the rest of the aggregate. This study also stated that among persons with ASD that do not have an intellectual disability, this category has a yearly expense of £32,681 where the most share was due to lost employment and lost output, when they could otherwise be in employment, and contribute a valued repayment to society and tax revenue (Knapp et al. 2009). Unlike the UK, Singapore does not provide unemployment wages; thus, the cost savings remain unknown because the direct costs to the government are lower.

The employment results and service expenditure for persons with ASD was assessed in a research of the vocational rehabilitative scheme in the United States from 2002 to 2006 (Cimera
et al. 2009). The study stated that the hiring rates for persons with ASD was 40.85%. This demonstrates that it was more productive for persons with ASD to undergo vocational rehabilitation services, because unemployment for persons with ASD totals up to higher expenditure. Further, this study shows that persons with ASD have significant opportunity to gain employment once they have suitable supports, and thus have valuable investment potential for vocational rehabilitation services (Cimera et al. 2009).

Järbrink and Knapp (2001) also investigated the repercussions of the expense of ASD in the United Kingdom. If 5 in 10,000 persons have ASD, then the study projected yearly expenditure to be greater than £1 billion. The person with ASDs’ lifelong expenditure was more than £2.4 million. The main expenses incurred were living supports and daycare activities. Family expenditure denoted 2.3 percent of the aggregate expense of ASD in the United Kingdom. The lifelong expenditure of putting a person with ASD in sheltered work was £16,200, 0.6 percent of the aggregate expenditure of ASD. The aggregate lifelong expenditure of putting a person with ASD in sheltered work was 8.6 percent of the aggregate expenditure. There is substantial lifelong expenditure (£67,800) for the community to put a person with ASD in a sheltered workplace, when otherwise these persons in employment with their capabilities, would be a cost saving to taxpayers of £67,800 for each person with ASD through their lifespan.

Ganz (2007) studied outcomes when people underestimate the importance of employment of persons with ASD in the United States. Hypothetically projecting costs for an ASD group, the research sought to show expenditure throughout a lifespan of ASD and age-related expenses. Ganz (2007) found that lifelong society expenditure of ASD totalled US$3.2 million for each person. Further, the study discovered that lost output and day activities were the main sources of these expenses. Thus, employment of persons with ASD would considerably decrease the lifetime expenditure of ASD for lost output. Moreover, hiring persons with ASD will reduce the dependence on adult care or day programmes, eventually considerably decreasing these societal expenses.

2.5 Employment of Persons with Disability Internationally and in Singapore

The employment of people with disability has been of critical political and economic concern internationally since the 1990s. In Article 27 (Office of the United Nations High Commissioner for Human Rights, 1996-2007, 1B) the United Nations Convention on the Rights of Persons with Disabilities (CRPD) ‘recognizes the right of persons with disabilities to work, on an equal basis with others; this includes the opportunity to gain a living by work freely chosen or
accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities’. In addition, the CRPD forbids all types of employment discrimination, encourages access to vocational training, supports opportunities for self-employment, and calls for reasonable accommodation in the workplace, among other provisions. This set of legal obligations must be implemented through various local policies and action plans by governments that are on board. In terms of implementation, disability policy is traditionally provided through specialist institutions, and more recently through community-based rehabilitation. There is also a growing trend towards mainstream provision within public services to facilitate social inclusion (Hemphill & Kulik 2016).

**United States of America**

In July 1990, the United States passed the *Americans with Disabilities Act* (ADA) (Picchi 2017), which was a civil rights law that guaranteed legal protection and enhanced physical accessibility to schools, public spaces and other buildings. This paved the way for providing workplace accommodations for employees with disabilities, and it has become one of the United States’ major exports. Since 2000, inspired by the ADA, 181 countries have passed disability civil rights laws (Shapiro 2015).

The public policy initiatives related to employers and work disability include the Occupational Safety and Health Act (OSHA) initiated in 1970. OSHA developed into the Ticket to Work and Work Incentives Improvement Act (TWWIIA) of 1999 (Hunt 1999). There are also three tax subsidies for private companies to use in costs incurred from workplace accommodations (Donnelly & Joseph 2012). In the United States, service occupations hire the highest percentage of persons with disabilities – there are 8.7 percent of persons with disabilities working in the service industry (Smith & Clark 2007). 7.8 percent of these jobs in the service industry are related to food preparation and serving. These numbers are projected to increase in the coming years and persons with disabilities are viewed as an important source of manpower (Smith & Clark 2007). These authors conclude that Disability inclusiveness should be a key strategy of companies when preparing for upcoming workforce changes.

However, 40 percent of small business owners are oblivious to the American with Disabilities Act (1990) and 30 percent stated that they were aware of the legal implications but did not have the finances to create structural modifications. Also, only 17.9 percent of persons with disabilities aged 16 years and above are hired, in comparison to 63.7 percent of individuals who are not disabled (US Department of Labor, 2012a; 2012b). In addition, approximately 66
percent of unemployed individuals with chronic illness and disability reveal their preference to work yet are unable to find employment (National Council on Disability 2007). The recent financial crisis has led to the quantity of employees with disabilities decreasing at a rate of about two to three times that of employees without disabilities (Fogg, Harrington & McMahon 2011; Kaye 2010).

American studies have proven that persons with disabilities are consistently rated by employers as average or above average in performance, quality and quantity of work, flexibility, and attendance (Job Accommodation Network 2007). The amount of research and literature in this area is well-developed and more comprehensive in America with multiple sources and articles. The studies reflected from the other countries are solo research articles representing each country and reflect slightly different results. However, all studies are congruent in proving that persons with disabilities are well evaluated in terms of tenure and attendance/absenteeism across all countries.

Australia
Singapore cooperates with Australia on trade issues, and the two countries have a Joint Declaration on the Comprehensive Strategic Partnership (CSP). Since 2003, the Singapore–Australia Free Trade Agreement (SAFTA) has led to collaboration in areas such as education, labour mobility and professional services. Thus, Australia is an important country of reference in terms of employment policies and plans. The number of working age adults with ASD was projected to rise over the next 10 years to 181,000 in Australia (ABS 2010). Therefore, there is a growing need to recognise the factors that facilitate and prevent employment outcomes for persons with disabilities (Hendricks 2010). The Australian Human Rights Commission held a National Disability Forum and conducted a National Disability Survey in 2014. The results showed that people with disabilities in Australia identify access to employment as the most critical human rights issue that they face, and they experience significant employment discrimination (Australian Human Rights Commission, National Disability Forum 2014). Although it is not statistically significant, a national study showed that Australian employers want to exercise social responsibility and employ persons with disabilities (Graffam et al. 2002).

Employment not only enhances quality of life and self-esteem, but also enables a person to obtain income for self-support and future development (Hendricks 2010). Employment also creates a sense of purpose, significance, self-reliance and identity for a person (Department of
Social Services Australia, Shut Out 2012), and it provides economic profit for both employers and governments (Jacob et al. 2015). Jacob et al. (2015) found that the recruitment and retention of persons with ASD can be difficult because of social interaction and communication requirements in the workplace. Scott et al. (2015) conducted a study on employer and employee viewpoints concerning factors for successful employment for adults with ASD in Australia. They found that differences between employer and employee viewpoints, such as type of workplace support required, job expectations and productivity requirements, can be an obstruction to successful employment.

Malaysia
In Malaysia, legislation, policies and programmes are initiated to increase the understanding of the entitlement of persons with disability, and to encourage job prospects to jobseekers with disabilities (Khor 2002). The Malaysian Disabilities Act 2008 states a clause about access to employment for the disabled. It states that persons with disabilities are entitled to access employment on an equal basis with individuals without disabilities. Second, the employer (including the Government of Malaysia) needs to defend the rights of the person with or without disabilities to impartial and encouraging work settings, involving: equal chances and equal compensation for work of equal worth; protected and beneficial work environments; safety from harassment; and the redress of grievances. Third, the employer, in accomplishing their social duty, strive to encourage stable employment for persons with disabilities by suitably assessing their capabilities, offering appropriate places of employment and showing suitable employment management. Fourth, the relevant council must prepare suitable procedures and actions that may involve positive action programmes and other measures, to encourage hiring of persons with disabilities in the private sector. Fifth, the council must encourage: prospects for teaching for persons with disabilities in the job market; prospects for self-employment; entrepreneurship; the progress of cooperatives; beginning one’s own business; and provision of chances to work from home (Laws of Malaysia 2014). Disability research studies from Asia are scarce and provide an important reference point for research studies in Singapore.

Taiwan
In Taiwan, disability policies such as the 1991 Handicapped Welfare Act, the Physically and Mentally Disabled Citizens Protection Act 1997, and the People With Disabilities Rights Protection Act 2007 have been implemented. It is mandatory in Taiwan for each 100 employees hired by private companies to hire one employee with a disability. Failure to comply with the quota will lead to a monetary fine for employers (Jang, Wang & Lin 2014). The Workforce
Development Agency in Taiwan (2012) stated that the workforce participation rate for persons with disabilities in Taiwan in 2009 was at 26.5 percent. Disability research studies from Asia are scarce, and Taiwan is an important partner for Singapore in terms of economic imperatives such as work and employment (Freeman & Bower 2010).

South Korea
In South Korea, the unemployment rate of persons with disabilities (8.3 percent) is about 2.5 times that of the Korean population (3.3%). The monthly average income of disability households is KRW 1,819,000 (Kang 2013). The anti-discrimination policy regarding hiring of persons with disabilities in South Korea was legislated in 2007. The employment policy for disability incorporates a quota system in the Employment Promotion Act for people with disabilities effective since 1990. The quota system makes it compulsory for employers (private and public) to hire enough persons with disabilities to make up at least 2.7 percent of the total number of employees. Private companies with more than 50 employees must comply with this quota, and the government must abide by this rule no matter how many employees are hired (Kang 2013). If there is no employee with disability in the company, the employer will be charged an amount equal to the legal minimum wage of KRW 902,880 (Kang 2013). Singapore and South Korea face challenges relating to the slow pace of economic growth and global uncertainties (Wee 2017). Thus, South Korea is also an important reference point for Singapore in terms of employment policies and plans.

Sweden
In Sweden, about one in ten people of working maturity report having disability based on the United Nations’ standard regulations (Statistics Sweden 2009). Swedish law does not allow bias and prejudice against persons with disability in the work environment (Swedish Government 1999). However, the discrimination of persons with disabilities still occurs with elevated unemployment rates for people with disability, despite operating labour market practices to deal with the difficulty (Jones 2008; Statistics Sweden 2009). This occurs in other countries in the Organisation for Economic Co-operation and Development (OECD) as well (OECD 2009). Sweden and Singapore are both small, open, knowledge-based and export-oriented economies that advocate free trade to create new jobs and prosperous economies (Linde 2016). Thus, Sweden is an important country of reference for Singapore in terms of employment policies and plans.
To solve this, Sweden has launched policies such as employment programmes to increase employment rates for persons with disabilities, namely wage subsidy or workplace accommodation programmes. Income subsidies are a type of financial aid for employers who hire individuals with less abilities to work (Gustafsson et al. 2014). To qualify for assistance, a person who applies should have a medical certificate of work disability. However, this policy was criticised as having an absence of work and career advancement, and the ‘pinning down’ of applicants to lower paying work. Other methods for encouraging employment of persons with disabilities in Sweden is through supported employment. The criterion for inclusion in a supported employment programme is reduced workability (Swedish Ministry of Employment 2003; Swedish National Audit Office 2007).

**United Kingdom**

The United Kingdom passed the *Disability Discrimination Act* in 1995. The act is a civil rights law that forced the government to end state and business discrimination against people with disabilities. In 2010, the act was replaced with the *Equality Act* (except in Northern Ireland), which requires employers to make reasonable adjustments so that people with disabilities are not disadvantaged. However, UK governments prefer governance through persuasion and education rather than legislation and monetary rewards. Quotas were abolished because they were viewed as an intervention in the labour market, resulting in a policy vacuum with no sanctions on non-compliant employers (Thornton & Lunt 1995).

Figure 2.6 shows that there were 7.1 million people with disabilities of working age in the United Kingdom in 2001 as recorded by the Office of National Statistics in the UK (Smith & Twomey 2002). In other words, approximately 19 percent of people of working age are not sufficiently utilised to add economic and social value in the workplace. Gingerich (1996) reported that 33 percent of college graduates with disabilities are unemployed as compared to approximately 2 percent of college graduates without disabilities. Frank, Karst and Boles (1989) explained findings of similar gaps in employment rates with reports that college graduates with disabilities required more time to find work, were more frequently employed outside of their field of interest, and, were more likely to be unemployed following graduation.
Figure 2.6 Definitions of Disability of Working Age Persons in the United Kingdom 2001

Source: Smith & Twomey (2002, p. 420)

**Denmark**

The Convention on the Rights of Persons with Disabilities (CRPD) and its Optional Protocol was adopted on 13 December 2006 at the United Nations Headquarters in New York. The CRPD promotes, protects and ensures the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and it promotes respect for inherent dignity. Denmark ratified the CRPD in July 2009, and the Danish Parliament appointed the Danish Institute for Human Rights to promote and monitor the implementation of the CRPD (Danish Institute for Human Rights 2018). In Denmark, only around 50 per cent of persons with disabilities are employed, compared with nearly 80 per cent of those without disabilities. Further, employers are not required to provide reasonable accommodations in the workplace for persons with disabilities (Danish Institute for Human Rights 2018).

Danish social entrepreneur Thorkil Sonne spoke at the 4th Singapore International Foundation ‘Ideas For A Better World’ Forum recently (‘Those with autism have much to offer’ 2011). He advocated providing job opportunities for those with autism and started a successful social entrepreneurship model, *Specialisterne 2004*, working with companies with such employees. He highlighted that transitioning from school into work may require much preparation and hard work. Specialisterne employees, for example, typically have to complete a five-month training course to prepare them for work. Although many of children with chronic conditions (i.e., autism, global developmental delay) may move smoothly into adulthood, some may face
difficulties, especially in moving from child- to adult-focused healthcare providers. Because the transition to adulthood represents a critical turning point in their life course, suboptimal transition experiences may affect the future ability of adults with chronic childhood conditions to optimise their quality of life.

**Singapore**

In Singapore, estimates based on the 2010 data from the Health and Education ministries suggest that Singapore has around 97,200 people with disabilities (Yong 2014). As there is no official central registry of people with disabilities in Singapore, there is no means of verifying the number of persons with ASD in Singapore. However, for the pre-school cohort (0-6 years old) in Singapore, about 1,400 children (3.2 percent of the cohort) are diagnosed annually to have patterns of developmental problems (Ministry of Social and Family Development Enabling Masterplan 2012-2016). More than 200 new cases of children with autism are diagnosed annually in Singapore (Autism Resource Centre Singapore 2016). Also, although there is no exact prevalence rate, based on prevalence rates worldwide, the figure should be in the region of 1 percent of the total population (approximately 50, 000 persons with ASD in the total population of 5 million) in Singapore (Autism Resource Centre Singapore 2016).

Ragnunathan et al. (2015) also suggested that persons with disabilities felt that employment was an important concern and voiced their need for assistance in securing a job to curb discrimination in the workplace. Improving income rates for people with disabilities, together with addressing structural and societal issues related to equity and access were highlighted as key to ensuring a smoother transition to employment and independent living. The employment opportunities for with disability have increased because of strong economic development in Singapore (Bizlink 1995). Based on the 1985 Ministry of Community Development, Youth & Sports (MCYS) data from voluntary service agencies, it is evaluated that unemployment rate remains high among people with visual, intellectual and neuro-muscular disabilities. Majority of them fall between 21 and 35 years old. These groups of people with disabilities will continue to dominate and there is a good potential for promoting their employability (Bizlink 1995). Despite the better prospects for employment of people with disabilities, the number of people with disabilities who have job placements has not grown significantly. Bizlink Centre, a one-stop job placement centre for people with disability in Singapore, placed an average of about 225 people with disabilities annually onto jobs excluding the attrition resulting from job mismatch (Bizlink 1995a). The connection between employers and people with disability who are looking for employment options needs to be explored for positive change to take place.
For many individuals in Asian societies, employment has a major impact on personal worth and social status. After career planning and development, individuals encounter challenges until they are gainfully employed as part of the workforce. Hagner et al. (1996) identified a variety of interrelated factors that contribute to the high unemployment rate among people with disabilities including (a) discrimination in employment and other aspects of life; (b) practical issues (e.g., transportation, non-traditional means of communication) that make it difficult to seek and secure employment; (c) limited access to the ‘hidden job market;’ and (d) employer presumptions about the characteristics and abilities of qualified job applicants. Once employed, people with disabilities are often designated a series of entry-level positions interspersed with extended periods of unemployment (Roessler & Bolton 1985). Factors such as physical and attitudinal barriers, health insurance issues, and work disincentives often function as deterrents to career maintenance and advancement.

2.6 Main Themes from the Literature

The next section explores the various themes that influence the employment of people with disability. These include: skills and abilities; pre-employment training and education; organisational structure; employee organisational commitment; employer organisational commitment; return to work; workplace accommodation; organisational rewards; career development or organisation development; and government incentives, insurance and taxation. The literature concerning each of these themes is discussed in the following sections.

2.6.1 Skills and Abilities Theme

Various studies support the development of meaningful integrated employment for persons with ASD (Hendricks & Wehman 2009, Luecking & Gramlich 2003, Wehman et al. 2007, Wehman, Revell & Brooke 2003). Employment outcomes are improved when persons with ASD learn to grow relationships, and have useful work skills, and a robust work ethic (Fast 2004; Gustafsson et al. 2014; Targett 2006). Traits like intelligence, dependability, stability and potential for success have been named as traits valued by employers (Christman & Slaten 1991). Kavale and Forness (1999) found that it is also important for persons with ASD to develop skills in personal independence and social responsibility. Hendricks and Wehman (2009) propose that they need to acquire skills in academic achievement, social skills, communicating with language, and self-management. Studies confirm that factors that contribute to positive employment include achievement of communication and interpersonal
skills and managing stereotypical behavioural patterns (Burt et al. 1991; Hendricks & Wehman 2009).

Strategies to address communication, socialisation, and behavioural difficulties are, therefore important (Iovannone et al. 2003). Hendricks (2010) suggests that the deficits in social interaction and communication affect areas such as successfully relating with supervisors and co-workers, understanding and inferring about social rules, working independently and being willing to adapt to workplace change. Specific remediation can allow the individual to get ready for employment by instructing about critical skills necessary in the vocational environment (Hendricks & Wehman 2009). Jacob et al. (2015) propose that the features of ASD, specifically social and communication deficits, present difficulties to persons at work that need management and the support of colleagues to improve formerly untapped skills and abilities. Jacob (2015) suggests that the skills might comprise of triumph over communication problems amongst co-workers with ASD, reflecting on the necessity for likely guidance, and offering simplicity and transparency to these persons about social rules at work. Employers and colleagues also should think through likely restrained or amplified reactions to sensory stimulation from persons with ASD, and, giving time for modification in the workplace (Jacob et al. 2015).

Adults with ASD could have skills that benefit the employer such as trustworthiness, less absenteeism, responsibility, detailed, significantly accurate in visual tasks, valuable long-term memory and focus (Hendricks 2010). Besides all this, there are also output advantages, such as the greater work ethic and superior concentration that persons with ASD use in job positions as well as tasks that are tedious, or involve isolation from others, or which other workers may be unwilling to do (Hendricks 2010). Research suggests that employees with disabilities frequently produce fruitful and dependable work and make good, loyal employees (Bricout & Bentley 2000; Christie & Kleiner 2001). Other studies named elevated levels of collaboration, general positive work habits, low absenteeism, and elevated quality of performance as benefits of hiring persons with disabilities (McLoughlin 2002). Frontline supervisors were pleased with the work performance of persons with disabilities in timelines, punctuality, attendance and consistency in task (Unger 2002). Research studies have also zoomed in on the distinctive requirements of persons with ASD at work and behavioural strategies to minimise unsuitable behaviour, involving hostility, self-harm, property damage, and the eating disorder known as ‘pica’ (Berkman & Meyer 1988; Kemp & Carr 1995; Smith 1986, 1987; Smith & Coleman 1986).
Much of the literature asserts that pre-employment training for persons with ASD should be functional and emphasise skills needed in existing and imminent situations (Wehmeyer 2002; Iovannone et al. 2003). Research highlights the need to address communication and social skills through goal setting in the various employment settings (Schall et al. 2006). Goal-setting is also needed to maximise functional independence (Cameto et al. 2004). An individual should first be able to meet the job-related needs of the position and meet the requisites in terms of education, training and work experience. Once the job prerequisites are met, the employer must determine whether the individual can execute all the basic requirements of the job with or without workplace modifications (Granger & Kleiner 2003). According to Burkhauser and Stapleton (2004), besides policy involvement, stakeholders are interested in increasing investment in ‘human capital’ of persons with disabilities (increasing the skills they have) and minimising perceived barriers to their employment (perceived costs of workplace accommodations and litigation).

Skills and abilities are terms for consideration when the employee needs to be matched to the job that needs to be done. Employers described skills that were attractive as being loyalty, enthusiasm, readiness to labour, dedication, and having a robust work ethic, as well as readiness and devotion (Gustafsson et al. 2014). One study has shown that, in fact, persons with disabilities were found to have similar or superior production, precision, and general job performance ratings (Hernandez & McDonald 2010).

2.6.2 Pre-employment Training and Education Theme

Studies of pre-employment training have shown improvement in skills developed in the areas of communication and technology (Wittich et al. 2013). However, there was also a high turnover of employees with disability (Wittich et al. 2013). Tsang (1999) found that pre-employment vocational training was more expensive than in-service training. It also found that vocational/technical education was more costly than academic programmes (Tsang 1999). Other research on training focused on job-site training of supported workers with ASD and has suggested that the best practice for teaching vocational skills is to combine job-site training with simulation training (Lattimore et al. 2006). Getzel and Wehman (2005) found that persons with ASD will need specialised teaching approaches, supports and accommodations in the post-secondary environment for a positive outcome.
Job-site training supports the notion that training for persons with disabilities should occur in natural community environments, rather than segregated, readiness-type settings (Thompson et al. 2004). This is because of the difficulties that persons with disabilities have in generalising skills gained in non-work settings to actual job sites or settings (Inge et al. 1996, Lattimore et al. 2006). These studies suggest that time is needed to adequately train workers in relevant work skills while on the job (Flynn et al. 1991). Simulation based training is commonly recommended for students with disabilities, but not for adults with disabilities (Lattimore et al. 2006).

Most employers in Unger’s (1999) study paired new employees with experienced co-workers to guide them. Employers also offered supervisor training, orientation sessions, and corporate videos to develop skills in new employees. Job coaches also identified a variety of employer or workplace supports available for employee training within the participating businesses (Unger 1999).

Pre-employment training and education can also occur through having work-based learning programmes that provide learning opportunities at the worksite (Lynn & Wills 1994). Employers are motivated by the idea of community service and the ability to access a source of entry level labour (Lynn & Wills 1994). An American study by the National Employer Leadership Council (1999) found that providing work placements from schools reduced recruitment costs, reduced training and supervision costs, reduced turnover and increased retention rates.

2.6.3 Organisational Structure Theme

Organisational structure research focus on the hierarchical configuration of institutions, the centralisation of decision, formal standardisation, horizontal integration, and strategic orientation, or corporate strategy (Doherty et al. 2010). Traditional hierarchical organisations are based on the fundamentals of hierarchical authority, job specialisation, and official rules (Muchinsky 1990). High performance organisations meanwhile, are ‘organisations that create respect and a deep appreciation for the value of its people; is cohesive and adaptable; has good strategy; and its leaders understand that good people are a competitive advantage’ (People Process Culture Handbook, p.12). Research suggests that a significant relationship exists between organisational structure and overall levels of trust and job satisfaction (Dammen 2001). It is part of the environmental component in the ICF model where persons with ASD
require a supportive, structured and task-adapted work environment to perform their jobs successfully (Hendricks 2010).

Organisational structure features such as delegation of decision making, formal procedures and processes, functional dependence (or the extent that one’s work depends on others’ input or influence) and job level (rank) have been linked to organisational commitment (Worthy 1950; Morris & Steers 1980; Brooks 2002). However, Mathieu and Zajc’s (1990) study did not provide evidence for the effect of decentralisation on organisational commitment. Size and span of control were also not found to be related to organisational commitment (Worthy 1950; Morris & Steers 1980; Brooks 2002).

Miles et al. (1997) proposes an evolutionary model of company structure that rests on the types of knowledge underlying its functions. This evolutionary model suggests that there are three types of knowledge (operational, investment, and adaptation) that exist at any of three organisation levels: top, middle, lower. A functional organisation holds operational knowledge at any organisation level, while investment and adaptation knowledge is held only at the top level of the organisation. As the organisation evolves into a cellular form, all three types of knowledge are held by all levels of the organisation. This cellular form is meant to represent an independent organisation in each cell with employee ownership of its assets (Brooks 2002). This suggests that there would be increased employee organisational commitment in the cellular form.

Research shows that smaller, independent businesses practise better levels of organisational commitment, as they are seen to have less hindrances to communication and better levels of commitment (Varona 1996; Kalleberg & Martekaasa 1998). Such organisational structures are usually more team-based, with an emphasis on elasticity, output and workplace social skills (Chan et al. 2010; Gilbride & Stensrud 1992). A study on work context found that company representatives had affirmative behavioural opinions comparable to the obligation and reliability in employees with disabilities, benevolent feelings, and the advantages of federal financial incentives for hiring. Nevertheless, they voiced their worries associated with loss of revenue, involvement in litigation, and problems related to physical and structural barriers at workplaces (Fraser et al. 2012). Organisational structures that have clear codes of conduct, job descriptions and competency frameworks, with Occupational Health, line managers and HR in place are better able to support persons with ASD at work (Hagner & Cooney 2003; Schall 2010).
2.6.4 Employee Organisational Commitment Theme

Organisational commitment is commonly defined as an outlook of the individual employee believing and accepting the organisation’s goals and values, exerting labour for the organisation, with a wish to continue organisational membership (Mowday 1998). Another framework of organisational commitment with three parts has been proposed by Meyer and Allen (1997). It entails: employee emotional connection, identification and participation (affective commitment); thoughts of duty to remain in employment (normative commitment); and deliberation of expenses related to separation (continuance commitment). There are two traditional approaches to organisational commitment, namely attitudinal and behavioural. Attitudinal commitment is a mindset where the individual’s values and goals are compatible with the organisation, while behavioural commitment is the process where individuals are locked in organisations and how they solve the problem (Mowday 1997).

Encouraging organisational commitment from employees benefits both the employee and employer. The employee experiences better well-being from better morale and less pressure and the employer can benefit from less absence at work, lateness and resignations, as well as better output (Mathieu & Zajac 1990; Meyer & Allen 1997; Mowday 1998; Randall 1987). Management policies are strongly focused on increasing organisational performance and commitment (Bray et al. 2005; Spreitzer 1995).

In a study of medical residency programmes, elevated levels of organisational performance were related to elevated levels of organisational commitment (Probst et al. 1998). Other research has also shown that there were better levels of organisational commitment for persons who viewed their occupational status highly (Mathieu & Zajac 1990; Witt 1993) as they were better able to evaluate their values and goals in congruence with the organisation they were working in (Brooks 2002). Work teams or groups that needed to work together in terms of task interdependence had greater commitment to the organisation and team (Brooks 2002). When outcome interdependence was low, the connection did not have a positive or negative impact (Van der Veight et al. 2000).

Commitment from the employer also determines the employees’ organisational commitment. The organisational commitment of the employee also declines when the employee is undermined either in fact or perception (Pagon et al. 1998; Schappe & Doran 1997; Singh & Billingsley 1998). Occurrences of aberrant behaviour, gloominess and worry in employees may be elevated in such circumstances (Lu 1999). Such an environment would create negative and
unsatisfactory outcomes for all stakeholders involved (Brooks 2002). Conversely, persons with ASD revealed that their commitment was enhanced when participation in their job was valued, encouraged and supported, and they were more motivated when there was a job match to their interests and skills (Scott et al. 2015).

2.6.5 Employer Organisational Commitment Theme

It has been suggested by Brooks (2002) that the organisations’ commitment to employees is the most robust factor in employees’ commitment to the organisation (Brooks 2002; Mowday 1998). Commitment from management or employers has been found to be the best method for reducing unemployment and advancement barriers (Houtenville & Kalargyrou 2012). Another study by Pitt-Catsouphes and Butterworth (1998) discovered that employers made a commitment to employ persons with disabilities and saw them as a benefit to their organization. Also, Hashim and Wok (2013) have suggested that organisational commitment is a result of the organisations’ ability to reorganise their job scope and environment to meet the requests of employees with disabilities.

Employers who promote an environment of shared support and a worker-friendly atmosphere that is advantageous to both the employee with ASD and the employer generate a more inclusive workplace and eventually a more inclusive community (Hagner & Cooney 2005). Employers of persons with ASD were more confident of employing persons with ASD when they received ongoing, external support from disability employment service providers especially during periods of workplace transition (Scott et al. 2015). Other employers of persons with ASD provided support internally within the team such as on the job training and explaining workplace culture (Scott et al. 2015). Houtenville and Kalargyrou (2012) cite Marriott International as a leader in disability initiatives, as it employs persons with disabilities and runs a non-profit organisation for special education high school graduates in job placement.

2.6.6 Return to Work Theme

Different return-to-work (RTW) remediations have been established and assessed in order to reduce sickness absence due to work disability. The result, and sometimes the cost-effectiveness, of RTW interventions have been proven in many observational studies (Anderzen & Arnetz 2005; Franche et al. 2007; Post, Krol & Grothoff 2005; Meerding et al. 2004; Mushet et al. 1996; Young et al. 2005); randomized controlled trials (Brouwers et al. 2006; Lambeek et al. 2010; Uegaki et al. 2010; van Oostrom et al. 2008) and reviews (Franche et al. 2005; Tompa et al. 2015). For example, Franche et al. (2005) established that work-based
RTW treatment among employees with work-disability because of musculoskeletal or other pain-related conditions can decrease work disability duration and related expenditure. Lambeek et al. (2010) demonstrated that an integrated care programme for work-disabled individuals with chronic low back pain is likely to significantly decrease societal costs and develop care effectiveness, quality of life and function on a wide scale. Other research also indicates that executing preventive treatment before sickness absence happens can succeed in averting chronic illness absence (Brouwers et al. 2006; Kant et al. 2009; Kant et al. 2008; Post et al. 2005). Although these outcomes are hopeful for society, participants, and employers, further research is needed to verify the long-term outcomes and cost-effectiveness of such treatment. Yet, methodological restrictions in the current literature create difficulty in assessing the viability of the different treatments proposed. These limits comprise of limitation of the population of interest due to the strict inclusion standards, limitations in the basis of treatment assessed, limitations in study-design and the measurement of results. There is also, a lack of transparency and agreement regarding the way to handle trial-based economic evaluations in the general arena of employability.

These authors (1994) also posited that length of employment was an added dimension to consider in evaluating the return to work dimension. Recommended guidelines for return-to-work for persons with ASD include temporary redeployment or alternative work activities or some time off to attend programmes to improve performance or attendance (Kenyon 2015). Martin et al. (1994) posited that length of employment should be considered when evaluating the return-to-work dimension. Recommended guidelines for return-to-work for persons with ASD include temporary redeployment or alternative work activities, or time off to attend programmes to improve performance or attendance (Kenyon 2015).

2.6.7 Workplace Accommodation Theme

With the United Kingdom’s Disability Discrimination Act (Office of Public Sector Information 1995), the Unites States’ Americans with Disabilities Act (Legal Information Institute and U.S. Equal Employment Opportunity Commission 1990), Canada’s Employment Equity Act (Human Resources and Skills Development Canada 2010), and comparable laws internationally, persons with a developmental disability onset currently have better chances of receiving reasonable accommodation at work. Accommodations comprise of offering a disabled-friendly work environment as well as adapted workplaces, instruments, work periods and other job constituents to permit employees with disabilities to execute a wider selection of work responsibilities. ‘Reasonableness’ of accommodations implies that employers must offer
workplace modifications up to a sum where doing so could lead to unnecessary financial difficulty (Human Resources and Skills Development Canada 2010). Singapore has tried to improve workplace accommodations through the Enabling Masterplan 2012-2016, as well as the Building Construction Authority’s Code on Accessibility in 2013 with requirements in building mandates to cater to people with different disabilities. The ENABLE Fund also provides funding assistance to employers who need to redesign jobs, modify workplaces, or implement training when they employ persons with disabilities (Enabling Masterplan 2012-2016).

The aim of workplace modifications for persons with developmental disability is to boost their proficiency to be in careers that they originally dreamed of, grew interested in, and eventually chose as their preferred vocation (Beveridge et al. 2002). Although these aims are encouraging, research exploring whether accommodations really help them to establish and sustain a fulfilling career is limited (Balser & Harris 2008). Some research has studied the predictors of getting modifications (Balser 2007; Balser & Harris 2008; Campolieti 2004, 2009) and demonstrated that getting modifications in the work environment is affirmatively related to job retention (Burkhauser et al. 1995; Campolieti 2009). However, previous disability research has either omitted workers with developmental disability, or, did not study age at disability onset as a predictor.

Stigmatization theory (Major 2006) advises that acknowledgement of required workplace modifications improves psychological health because of providing support to cope with occupational stressors. There are several reasons why workplace modifications are more critical to the health of employees with developmental disability than to their peers whose disabilities started late in life. Initial job capabilities are significant stepping stones for vocational health (Beveridge et al. 2002; Hirschi 2010; Noack et al. 2010). Restricted occupational readiness prospects, scarcity of knowledge concerning job opportunities, and weakened job self-efficiency mean that employees with developmental disability start their jobs with a clear drawback (Beveridge et al. 2002). Employees with developmental disability need modifications during the whole period of employment, so that once required modifications are not imminent, occupational progress is liable to be suspended. Getting necessary modifications enables progression in different types of work responsibilities that can be completed, allowing for vocational progress and promotion prospects. Thus, employees with developmental disability can only start to achieve their job aspirations when modifications have been put in place.
In contrast, employees with disabilities beginning in adulthood have a chance to develop their job skills. Lifetime accomplishments before the beginning of disability strengthen the person’s awareness of life fulfilment, so that the affirmative association with workplace accommodations will have a less steep progressive gradient for this group (Beveridge et al. 2002). The amount of time spent in employment before experiencing a disability boosts the degree to which employees with adult disability onset associate with and comprehend the intentions of decision-makers that affect workplace modification choices (Beveridge et al. 2002). Thus, the adverse connection between receiving accommodations and opinions of bias will have a gradient that is less steep for this group (Story 2007).

In conclusion, workplace modifications are more significant for the occupational health of employees with developmental disabilities if they began their career with fewer alternate resources, relatively less understanding of the work environment and less awareness of self-confidence and achievement (Beveridge et al. 2002). Providing these accommodations is an important means of generating life fulfilment, and they also contribute to a sense of impartiality for employees with developmental disabilities.

Workplace accommodations should be identified and accessible for employees with disabilities (Unger 1999). Examples of such business mediated supports are assistive technology, job restructuring and schedule modification (Unger 1999). Workplace accommodations such as wellness programmes, employee assistance programmes, fundamental skills training, coaching, mentoring, and internships are further examples (Hanley-Maxwell & Millington 1992). Employers may not know that there are economical and discreet accommodations or supports that are accessible (Unger 1999). Many studies have evidenced that about 436 accommodations reported from 1978 to 1996 in the United States required little to no cost (Blanck 1996). Also, the Job Accommodation Network (JAN) specified that for every dollar invested in workplace accommodations, there was an average of US $40 in benefits (Job Accommodation Network 2007).

There are both formal and informal workplace supports. Informal workplace supports are those that have evolved from daily workplace activities and routines on a random or ad-hoc basis (Unger 1999). For instance, a co-worker may help another employee to finish a task. Proper employer supports are usually company-sponsored programmes or help that are methodically developed and accessed. Some businesses and organisations have employees with disabilities
who have benefited from employee assistance programmes for job redesign and restructuring of the work setting (Kiernan & McGaughey 1992). Other research has identified accommodations as ‘soft’ and ‘hard’. Soft accommodations include changes in working hours, speed or type of responsibilities (Gustafsson et al. 2014). ‘Hard’ accommodations usually include different types of technical and physical modifications to the work environment (Gustafsson et al. 2014).

Besides co-workers that help employees, employees who need accommodation to tackle support needs may need adjustment of the physical work environment or changing work stations (Unger 1999). Unger (1999) also highlighted that workplace supports could include dealing with communication issues and addressing hostile, unsettling or challenging behaviours. Aligned with attribution theory, accommodations also changed employers’ views of their employees’ skills and capabilities by allowing them to see the abilities not as internal, stable variables, but rather as external, unstable variables (Weiner 2010). This view of handicap relative to the environment allows the development of positive attitudes towards persons with disabilities (Copeland et al. 2010; Knutsson & Persson 2001; Unger 2002). Employer knowledge of job accommodations was also significantly associated with a company’s commitment to hire persons with disabilities in the United States (Chan et al. 2010). Workplace accommodations also positively affect the individual’s ability to retain a job (Johansson, Lundberg & Lundberg 2006).

A team approach should be taken to determine workplace accommodations through the integration of activities of human resource professionals, safety professionals, safety professionals, top management and employees with disabilities (Gustafsson et al. 2014). The organisation may be characterised by inadequate communication between human resource professionals and representatives from all parts of the organisation regarding disability-related employment issues. It is suggested that collective knowledge is more beneficial to the business (Unger 1999). Companies such as Universal Studios Hollywood (Weinder & Zivolich 1998), MBNA, and Prudential Insurance Company (Miano, Nalven & Hoff 1996) have assumed the lead role in employing and supporting persons with disabilities. Burt et al. (1991) found that workplace modifications, or modifications of the environment, was one of the elements of employer support that promoted job success. Other specific accommodations and adjustments made within the workplace for persons with ASD included modifications to job content and working conditions such as flexible hours, special lighting, permitting exemption from customer-facing tasks, and tailored supervision strategies such as written instruction, ‘checking
in’ regularly, and showing leniency when individual has a bad day (Baldwin, Costley & Warren 2014). Some employers for persons with ASD indicated a lack of confidence implementing workplace modifications without the support and guidance of disability employment organisations (Scott et al. 2015).

2.6.8 Organisational Rewards Theme

Organisational rewards include a variety of dimensions such as: security; self-esteem; chances; independence; the requirements of work (workload, pace); being in control of work (autonomy, learning, participation); and generic circumstances of living in and outside the workplace (Benavides et al. 2002; Kuper et al. 2002). Day et al. (2013) have suggested that organisational rewards should be related to employee need and equality, rather than based on equity or performance.

Organisation culture significantly influences the reward system and the need to be innovative (Danison & Mishra 1995; Kerr & Slocum 2005). Although commitment responds to non-pecuniary incentives, and these incentives meet the desire for self-esteem and recognition (Amabile 1997), management prerogatives strongly influence human behaviour in organisations. Similar to coercion, rewards alter the thought, feeling and behavioural processes of people (Deci & Ryan 1985; Deci, Koestner & Ryan 1999). In particular, rewards that gratify the need for self-esteem and belonging, or the non-pecuniary or ‘immaterial’, strongly influence human behaviour. They influence how willing individuals are to commit to a variety of activities (Cavagnoli 2011). Thus, habits of behaviour and thought can be sustained and reinforced by a scheme of reward that can regulate or deregulate strategy, or, could be a combination of both. Rewards also have power over the way people learn as they continue and develop the individual’s values and beliefs of what to learn, and, may affect adaptation and innovation (Cavagnoli 2011). Training and task complexity are also other types of rewards. These rewards relate to job opportunities and the control over the pace of work. Both affect the employees’ sense of self-esteem and pecuniary compensation (Cavagnoli 2011).

Organisational rewards have been found to impact different parts of the brain. Monetary rewards activate the anterior cingulate cortex and hippocampus, associated with mental health, while the amygdala and insular cortex are activated by social incentives or rewards (Dichter et al. 2012). Persons with ASD may favour non-social rewards to social rewards (Dichter et al. 2012). An effective reward system for persons with ASD include the use of token reinforcers
(McDonald & Hemmes 2003). Token reinforcers are tokens or symbols that can be exchanged for other reinforcers.

**2.6.9 Career Development and Organisation Development Theme**

Career advancement needs are about an individual’s ability to progress within or between jobs, and, includes activities such as acquiring knowledge about added responsibilities, chasing chances for job advancement, and other related desires (Unger 1999). In Unger’s study most employers changed employee job responsibilities through career advancement or lateral job changes. Organisation development refers to a field in business and human resource management that addresses the management of changing workplace requirements. It has been defined as ‘a series of planned processes by which human resources are identified, utilised, and developed in ways that strengthen organisational effectiveness by increasing problem-solving capabilities and planning’ (Rothwell, Sullivan & McLean 1995, p.7). Organisation development pushes for constant change (Luecking 2003). Scott et al. (2015) found that the use of an ASD-specific workplace tool may facilitate that change.

Experientially based career development interventions can be implemented within the context of transition planning, such as (a) career exploration and decision-making; (b) career planning; (c) job development and placement; and (d) career maintenance. Most research by rehabilitation professionals focuses on (a) and (b). This research focuses on (c): job development and placement. When the individual with a disability is ready to look for employment, whether it be intermediate or long-term, the focus of the transition team shifts to (a) developing a strategy for locating a job compatible with the individual’s objectives and (b) carrying out the necessary steps to assist the individual with securing employment.

In the case of students’ job placement, the transition team must assess the student’s placement readiness and develop a detailed plan for removing barriers to successful placement prior to initiating a job search. The job search plan is an important component of the career planner that includes: (a) the target occupation and alternative occupations; (b) a brief statement of the skills and abilities the student has to offer an employer; (c) an evaluation of the student’s job-seeking skills training needs; (d) consideration of job search needs such as transportation and interview attire; (e) the cooperation of the student’s family; (f) likely job accommodations and modifications (e.g., instructional strategies that might be needed at the job site); (g) a list of potential job search leads; (h) assignment of respective student and transition team member job
search responsibilities; and (i) a timetable for conducting the job search (Flexer, Simmons & Tankersly 1997).

Supported employment can be described as ‘a job placement and training model designed to prepare people with severe disabilities for competitive employment in regular community settings’ (Reed & Rumrill 1997, p. 238). Supported employment service delivery options consist of four basic approaches – individual placement, clustered placement, mobile work crew, and entrepreneurial endeavors (Hanley-Maxwell, Szymanski & Owens-Johnson 1998; Reed & Rumrill 1997). Individual placement, viewed as the most inclusive of the four approaches, involves matching the strengths, interests, and needs of the student with the requirements of a targeted job. Clustered placement, also referred to as enclave placement, involves the collective training of a small group of three to ten supported employees at a specific job site. Mobile work crews consist of a group of supported employees who perform contracted work (e.g., janitorial service, landscaping, delivery service) for a variety of businesses. Entrepreneurial approaches require the establishment of small businesses that employ supported workers as well as workers without disabilities. In organisation development, Vogeley et al. (2013) suggest that the first step is the identification of specific needs of the autistic person and the working environment. Other elements include having the person with ASD complete an Autism Work Skills Questionnaire (AWSQ) to have a good person-job match. Job coaching is also important as it allows the person with ASD to receive on-the-job support.

However, these are interventions initiated by the employee and the transition team. Questions remain concerning employer-related initiatives. Literature contextualises employer-related interventions as part of partnership building activities (Koch 2000). Beyond transition team members’ collaboration with the student to develop job opportunities, it is especially important to establish community linkages with informal and employer contacts. One strategy for establishing these linkages is through the professional board of directors (Hecklinger & Black 1991). The board of directors is essentially a list of people who can provide advice and encouragement to the student as she or he conducts a job search. The transition team plays a key role in helping the student to identify board members who input the student values (e.g., family members, close friends, mentors, counselors, teachers). New members can be added to the board as the student confronts new challenges in the job search process. Students can either invite board members to participate in transition team meetings or seek out support from them on a more informal basis. Partnership-building strategies that can be implemented at the
systems level include mentoring programmes, central clearinghouses for job referrals, and employer advisory boards (Baer, Martonyi & Simmons 1994). Each of these strategies relies heavily on the direct involvement of employers in designing and implementing programmes to prepare students with disabilities to secure employment and succeed in the workplace.

2.6.10 Government Subsidies, Insurance and Taxation Theme

While supports outside the workplace for helping persons with disabilities obtain and maintain employment are available, there is still doubt about employers’ level of knowledge and access to supports like government assistance (O’Leary & Dean 1998). Such assistance comes through financial benefits or government funded job training and employment programmes like supported employment and training and technical assistance on employment policies and workplace supports for access (O’Leary & Dean 1998). In the United States, employers have access to vocational rehabilitation and supported employment resources like the Job Accommodation Network (JAN) Business and Disability Technical Assistance Centers (DBTACs). Employers may be aware of resources but they may experience information overloading (O’Leary & Dean 1998).

In addition, in recent years, the tax system has been used to address a growing number of social issues in America, as indicated by the creation of the earned income tax credit as a means of enhancing the income of low-paid workers, the creation and expansion of the childcare tax credit, and the disabled access credit (Alstott 1995; Bush 2001). In the United States, Personal Assistance Services (PAS) include a variety of services that support persons with disability and functional limitations in the community, rather than in an institution (Mendelsohn, Myhill & Morris 2012). A source for PAS is the American Federal Vocational Rehabilitation (VR) system. VR covers PAS services when they are needed to achieve an employment outcome (Mendelsohn et al 2012). In America, there is also the disabled access credit which is a tax benefit available to small businesses who make eligible access expenditures to accommodate persons with disability (Mendelsohn et al. 2012). Butterworth and Pitt-Catsouphes (1997) found that human resource administrators, supervisors, and co-workers who worked with persons with disabilities shared worries about lack of resources such as time, money, experience and skill, to sufficiently help employees with disabilities. Employers may share readiness to employ persons with disabilities but have concerns about how to recognise and improve appropriate workplace supports.

In Singapore, Raghunathan et al. (2015) reported a case study where an employer put an
individual with an acquired disability on a prolonged illness support where she was given full salary for the first six months and received half a month’s pay for the following six months. The prolonged illness leave is dependent on individual employers’ employment contracts and provisions, and not part of a government subsidy, insurance or taxation. However, the Singapore government does provide/supply employers Special Employment Credit (SEC) for individuals who earn less than S$4000 and are more than 50 years. There is also the Open Door Programme (ODP) which is a government funded initiative by the Workforce Development Agency (WDA) and the Ministry of Social and Family Development (MSF), administered by SG Enable. The Programme aims to encourage employers to hire, train and integrate persons with disabilities. Employers are eligible for grants and employment support services under the Programme for on-the-job training to support employment and retention of persons with disabilities, job redesign grant to support re-designing of jobs such as purchases of equipment and workplace modification, training grant for skills upgrading of persons with disabilities, and training of employees with no disabilities, and recruitment and job support services (SG Enable 2016). Research on insurance and taxation was few. For countries like the United States, special needs trusts are set up as a grantor trust to prevent it from being taxed at the trust rate of 39.6 percent on trust income exceeding US$7,900 (Hook 1996). In Israel, a study conducted by Vinzer and Roth (2013) found resistance to issuing insurance policies to employers on account of stereotype and prejudice.

2.7 Disability and Human Resource Judgments

From the time when the Americans with Disabilities Act (ADA) was accepted in 1990, there has been a growing number of research studies focusing on the bias against people with disabilities in the workplace. Labour statistics show that people with disabilities have a higher likelihood of unemployment and receive lower remuneration than people without disabilities (Ren, Paetzold & Colella 2008). Results from the Harris Poll organisation (Taylor 2000) show only 31 percent of all people in the United States with disabilities are in full or part time employment.

The most significant obstacles to employability were employers’ mindsets, transport, and prejudice in employment (Cruden & Mcbroom 1999). More recently, Bruyère, Erickson and VanLooy (2004) surveyed employers and twenty-three percent of them acknowledged that mindsets and labels were mainly why they did not employ people with disabilities. Showing more positive results, Bruyère (2000) showed that more than 1700 employer groups from both
public and private American organisations were receptive to disability concerns in the workplace and tried to create practical accommodations. Such surveys are vulnerable to a social desirability bias, where human resource managers are more optimistic than others (Colella & Stone 2005). One of the biggest problems suggested by human resource managers was the way coworkers (this does not include human resource management) respond to persons with disabilities (Bruyère 2000; Greenwood, Shiner & Johnson 1991). Also, perplexity about the definition of a person with disability under the ADA may imply that even an unstinting reply from employers might not include every employee legally worthy of reasonable accommodation (Ren et al. 2008).

HR professionals in another American study felt that persons with disabilities could be employed and that their companies were generating inclusive job settings by hiring persons with disabilities (Perry & Rutherford 1995). Based on HR practices there are four main parts of the employment process: recruitment, hiring, retention and advancement/career development (Donnelly & Joseph 2012). Recruitment involves the commitment from employers and management to actively seek out persons with disabilities as employees as part of their corporate diversity plans (Donnelly & Joseph 2012). Hiring involves concerns regarding workplace accommodations and the nature of work which may involve the physical appearance, relevant skills and experience of the individual needed for the job, as well as coping with part-time work and multi-tasking (Donnelly & Joseph 2012). Retention usually involves managers, human resource, and transportation according to Donnelly and Joseph (2012). Advancement involves moving beyond entry-level positions and pay (Donnelly & Joseph 2012).

Although experimental studies are important for making causative interpretations concerning the influence that disability has on HR judgments, qualitative studies (Colella & Stone 2005) are also useful in exploring the degree that discrimination occurs in human resource judgments. Ren et al. (2008) is another quantitative study that developed hypotheses concerning the impact of disabilities on human resource decisions and the arbitrating impact of the type of disability, the gender of the target, and the environment for the experiment. Gainful employment enhances an individual’s self-worth and sense of independence. Opportunities in the workplace improve social inclusion and promote recovery (Dunn, Wewiorski & Rogers 2008). Many employers demonstrated readiness to hire workers with disabilities if the business could profit and not invest much to provide accommodation necessary to the person with a disability at the workplace (Bevins 2009).
Actual and perceived adverse employer attitudes can inhibit employment for people with disabilities. Earlier studies have discovered common employment labels and hesitancies concerning persons with disabilities, with the opinion that they will show irregular attendance and be expensive to employ (Jones & Schmidt 2004). Experimental studies with control groups offer verification that the stereotype employer views regarding persons with disabilities could impact job appraisals although there is obvious fair performance data different to the stereotypical view (Colella & Varma 1999). Likewise, Hernandez et al. (2008) found that technical approval of programmes and legalities targeted at hiring people with disabilities might miss the mark if employers do not adhere to the aim of such laws or programmes.

Colella and Varma (1999) conducted a laboratory study where participants assessed the videotaped performance of persons who were or were not physically/mentally disabled, and, discovered that the scores given by participants were not affected by the rated person’s disabilities. Nonetheless, Russell et al. (1985) found that students with disabilities were assessed more adversely in comparison to peers without disabilities for identical levels of performance. Focusing on areas of stereotyping, stigmatisation, negative bias, anxiety, and resentment results in discrimination against people with disabilities (Colella & Stone 2005). When a person with disability is viewed negatively, this person is more liable to be viewed as less proficient and thus receive low performance expectations and may not be hired (Ren et al. 2008). They could trigger worry in observers who may fear enduring the same disability (Livneh 1982) or increase the workload in co-workers. Such special accommodations by co-workers may cause them to feel that the rules of distributive and/or impartiality in processes are violated (Colella 2001; Colella et al. 2004).

Contrary to expectations, persons with disabilities could also be the recipients of more favourable treatment, such as when they are the focus of paternalism and are treated like children (Jones et al. 1984). Co-workers of persons with disability might take effort to demonstrate their kindness (Katz & Glass 1979; Weinberg 1983) or to perform in congruence with kindness as an acceptable behaviour (Hastorf, Northercraft & Piciotto 1979). Also, paternalistic behaviour can demonstrate superiority in the social hierarchy (Fox & Giles 1996a; 1996b). Besides the presence of paternalism, the social desirability partiality might also affect the welfare of co-workers (Stone, Stone & Dipboye 1992).
The rating of observed performance is one type of human resource decision tackled in disability literature. Research that arbitrate the impact of disability on previous, obvious-to-see performance are best disposed to discover that disability outcomes in exaggerated performance scores because of the impact of being socially desirable, paternal, or showing kindness (Colella 1996). In addition, watching a person with disability do well can supersede adverse stereotypes, especially if the person with disability is performing better than initially anticipated and scorers are supplied with specific data concerning their performance. Thus, the effect of disability on assessments of observed performance is expected to be affirmative (Ren et al. 2008).

Another version of performance judgment is where the evaluator is asked to predict potential performance, such as selection interview ratings and promotion appraisals. Expected outcomes include a general adverse impact for disability on scores founded on anticipation about prospective performance for many causes. Firstly, performance anticipation and employment choices are conclusions about individuals who have not joined the workforce, so evaluators do not interact with them (therefore circumventing paternalism). As a result, they are not inevitably victim to being partial to social desirable norms in projections concerning their performance levels, or in choosing not to employ them. Also, as evaluators do not face actual information concerning the person’s performance, stereotypical responses and doubts concerning the dependability and aptitude of persons with disabilities may influence these scores (Ren et al. 2008).

2.8 Consumer-centric Supported Hiring and Employment Practices

Studies have honed in on places where employers could be more open to supportive hiring programmes for persons with disability. Supportive hiring can include helping someone gain employment through placement facilities, teaching, coaching, or workplace modifications (Wehman & Bricout 1999). Supported hiring and employment allows persons with disabilities to obtain on the job guidance through the help of a job coach till they have learnt the required skills for the work. Both the work and support can be modified to meet both employee and employer needs (Wehman 2006). Supported employment programmes frequently pair clients’ individual abilities, requirements, and objectives with employers’, usually with an intermediate organisation in retail and other sectors. Although these programmes and organisations have customarily been government-coordinated vocational therapy organisations, public–private and private organisations have surfaced to put people with disabilities into jobs (Unger 2007). These could be government services or services from the companies themselves. Further, such
programmes frequently offer a job coach or case manager to assist in establishing and maintaining fresh employee–employer relationships.

Through the past 40 years, the focus on supportive hiring policies has moved from an organisation-centric perspective to a consumer-centric perspective. This ‘consumer model’ developed from the autonomous housing undertaking (Wehman & Bricout 1999). In this respect, the model is unlike the ‘consumer marketplace response model’ developed by Kaufman-Scarborough and Baker (2005), that emphasises the customer with disabilities as the ‘consumer’, but that does not deal with queries on employment. With its application to hiring supports, the consumer model is a viewpoint and technique that concentrates on people with disability as consumers with freedom to choose and participate in supportive hiring processes, and who are a contributing party in stating responsibilities and establishing job objectives (Barnes & Mercer 2005; Tower 1994). A consumer model includes numerous supported hiring practices; the main difference between this and other models is the participation and choices offered to the person with disabilities concerning this process. Mowbray et al. (1995) demonstrated that the advantages of a consumer model of supportive hiring derives from observing two distinctive human services organisations; they surmised that organisations require a personalised method to successfully locate jobs for people with disability. While examining the incomes of approximately 900 persons with disability, Kregel and Dean (2002) subsequently provided statistical verification that the number of persons with disability obtaining supportive hiring aid was two and a half times greater than those in average sheltered hiring programmes. A longitudinal case study of employees with psychological disability carried out by Salyers et al. (2004) reinforced the advantages of supported hiring programmes, yet most of the participants in the study were not recipients of health benefits with their employment. Figure 2.7 illustrates the involvement of the person with disabilities in the consumer model.
This illustrative depiction of the consumer model, created by Jasper and Waldhart (2012), depicts the mutual exchange in relationships between stakeholders, with people with disabilities taking the role of a ‘consumer’ contributing to employment choices. Thus, they create consumer preferences as they work in relationship webs of reciprocity. This means that the person with disability has choices and is involved in employment decisions as well. This model would support the need for workplace accommodation in the organisation.

To juxtapose the discussed research, Wolfe and Haveman (2000) discovered that a handful of respondents in supported employment programmes simply are in employment for a brief duration, which might cause the programme expenditure for each respondent to be more than the extra income made upon job placement. Although there has been research that backs supported hiring measures, not much has been done to assess whether employers perceive these employment procedures optimistically. Also, the question remains as to whether all supported practices are perceived as equal, and which procedures are perceived as positive. The existing literature has not provided much information addressing these key queries.

The job coach model of supportive hiring (Rusch 1986; Wehman & Kregel 1985) has been concerned with how persons with disabilities gain employment and support for the period of the person’s employment. This model also supports having colleagues and naturalistic prompts in the job setting to help persons with disabilities (Moon et al. 1986; Rusch & Hughes 1989; Wehman 1981). Employers are moving towards collaborations with employment specialists
and rehabilitation professionals to recognise and improve accommodations in the workplace for employees with disabilities (Unger 1999).

2.9 Employers’ Perspectives

Katz and Glass (1979) developed an ambivalence amplification theory indicating that people frequently have attitudes of ambivalence towards individuals who have been stigmatised, such as an individual with disability. These reactions may lead to extreme affirmative or adverse manifestations (Katz & Glass 1979). It suggests that employers may be prejudiced against individuals with disabilities (Hashim & Wok 2014). Studies have documented negative attitudes toward individuals with mental health issues (Link et al. 1999) and those with communication impairments (Barrette, Garcia & Laroche 2002) in a work environment involving fast communication.

Chan et al. (2002) describe mind-sets as comprising of cognitive, affective and behavioural dimensions. An initial survey by Levy et al. (1992) of executives of Fortune 500 companies showed affirmative employer responses to employing persons with disabilities with autism, cognitive impairments and other psychiatric disabilities. However, a literature review was conducted by Hernandez, Keys and Balcazar (2000) of 37 studies of employer perspectives about the employment and workplace modification of employees with disability. They discovered that although employers conveyed general affirmative perspectives toward employees with disability, they tended to be more negative when specific attitudes were assessed (Hernandez et al. 2000). Employers who have hired persons with disability convey satisfaction with employees’ performance, but those who have not are generally unaware (Luecking 2003). Also, most employers are unaware of the supply of persons with disabilities as an additional labour source (Unger et al. 2002), and do not know how to recognise and use the resources at hand (Butterworth & Pitt-Catsouphes 1997). Small business owners who have never employed workers with disabilities stated doubts concerning complementary skills and job needs, supervision and training time, and expenditure associated to safety and medical insurance premiums (Harrison 1998). On the other hand, employers with familiarity employing persons with developmental disabilities appreciated regular attendance, workplace diversity, less turnover and cooperation among co-workers and an overall positive experience (Morgan & Russel 2003; Morgan & Alexander 2005).

The conventional supply-side method of offering medical, psychology, therapy, education, vocational facilities to enhance functioning, physical endurance and occupation proficiencies
is inadequate for accomplishing significant results (Chan et al 2010; Graffam et al. 2002). It is important to think through demand-side behaviours such as organisational behaviours, employer requirements and perspectives and the shifting labour economy to move persons with disabilities into meaningful outcomes for employment (Chan et al. 2010). Demand-side employment research can assist in identifying employment prospects and the skill and abilities required for vacant jobs (Burke et al. 2013).

Focus group studies with employers by The US Department of Labor-The Office of Disability Employment Policy (DOL-ODEP) and Amir, Strauser and Chan (2009) concluded that more research on employer perception and mind-sets towards employing and keeping people with disability is required. Most responses indicated that employers wanted more information to rule out misperceptions and anxieties concerning employing and retaining persons with disabilities (Grizzard 2005). Also, health care expenditure, worker compensation expenditure, and the terror of litigation were major challenges as well (Domzal, Houtenville & Sharma 2008). Amir et al. (2009) also found that adverse attitudes of colleagues or supervisors and the dearth of competent employees with disabilities were major barriers as well. Employers or management needed to be aware that hiring of persons with disabilities increased their company’s diversity presentation, facilitated the formation of work collaborations, offered tax credits and other hiring enticements, averted disability discrimination lawsuits, and obtained reliable and thankful employees (Burke et al. 2013). Another study also found that employers who have supervised and worked with persons with disabilities had more favourable views and readiness to employ persons with disabilities (Unger 2002). Employers in the United States evaluated employees with and without disabilities in the healthcare, retail and hospitality sectors on work variables such as job performance, amount of supervision needed, tenure, absenteeism, worker’s compensation claims, and accommodations needed (Cimera 2002, 2006).

There are also value-added benefits to employers for a sustainable period when hiring a person with ASD. Schaller and Yang (2005) examined whether the work of persons with ASD working in an integrated employment environment with other employees was statistically significant according to whether they had obtained supportive hiring facilities. Schaller and Yang (2005) analysed benefits to employers by conducting cost-benefit analysis and found support for the employment of individuals with ASD. The study identifies possible themes for this study, which explores the attitudes of employers in Singapore towards individuals with ASD. The results of this study are presented in Chapters 4 and 5. This was concluded relative to effective closure rates for their vocational therapy cases, weekly working hours, weekly income and
average case service expenditure. The standard hours in competitive employment weekly by respondents was 27.19, while the standard working hours for the supportive hiring respondents was 22.21. This highlighted a significant disparity between the groups. The mean expenditure of services for participants working competitively was found to be US$3,341; whereas the supported employment participants was US$6,883, again showing a significant difference (Schaller & Yang 2005). Schaller and Yang (2005) highlighted data on key variables that are part of a cost-benefit ratio for the average hours per week for participants working competitively (27.19). The outcomes show that persons with ASD can unceasingly value-add at a workplace for a meaningful duration of time (Schaller & Yang 2005).

Cimera and Burgess (2011) sought to understand whether community employment was economical when viewed by an employee with ASD. Results showed that community employment was cost-efficient when viewed by the employee with ASD, and the weekly working hours were constant from 2002 to 2007 (mean = 23.7 hours weekly). The research demonstrated that it is advantageous both for persons with ASD in competitive employment and for the employer as well, particularly by keeping regular weekly working hours for a meaningful duration.

Burgess and Cimera (2014) assessed hiring results for persons with ASD, who had activated vocational therapy sources from 2002 to 2011. They found that through this time, the number of weekly working hours (22–26) by persons with ASD was constant across the United States. The study stated that the number of persons expending vocational therapy services had grown in the last decade from just 913 (0.86 %) in 2002 to 8,154 (5.43%) in 2011. The results show that persons with ASD can participate in a job for a meaningful quantity of hours weekly over a prolonged time nationwide, and shows that a growing number of persons with ASD are activating vocational therapy services looking to be employed, indicating a longing and a readiness to value-add and work, a fact that would be of relevance to employers who are searching for reliable employees to contribute to their companies.

2.10 The Field of Study and Major Contributions

There is limited literature about country specific and industry specific employment concerns of employers in the employment of people with disabilities in Singapore. This study seeks to fill this gap. The main research issues are described below.
2.10.1 Importance of this Study

Of all the factors identified, a key factor to the employment gap has been the mindsets of employers concerning employing people with disabilities (Greenwood & Johnson 1987; Hernandez, Keys & Balcazar 2000; Wilgosh & Skaret 1987; Hernandez & McDonald 2010). It is increasingly important for employers to recognise the significance of employing people with disabilities. By doing so, employers boost their image in the community (Nietupski et al. 1996; Olson et al. 2000), reinforce their pledge to corporate social responsibility (Pitt-Catsouphes & Butterworth 1998) and grow the diversity of their workforce to acknowledge the reality of existing societal imperfections.

This study thus seeks to answer the following research questions:

1. How would the proposed factors identified in the literature review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?

2. What are the main employers’ concerns that encourage or inhibit the employment of people with ASD in organisations?

3. From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?

Only a handful of studies were available in this area. That shows the inadequacy of the present systematic evaluation. Some countries are studied in the review, i.e., UK, USA, Australia, Malaysia, Sweden, Taiwan, South Korea and Singapore. Although some of these countries are almost similar relative to GDP per capita (2014 the World Bank reported that in US $ GDP/ capita was; 45,603 in U.K, 54.630 in USA and 58,887 in Sweden), the labour markets and service arrangements are different. These studies were completed between 2005 to 2014. Some results may be dated because of modifications related to employment and service provision in UK, USA and Sweden. Thus, an exact across the country appraisal of expenditure and benefits was not probable due to a dearth of information. The outcomes of the existing evaluation ought to thus be understood with suitable care and can only relate to countries with comparable economic formations. Nevertheless, it is safe to say that in these countries hiring adults with disability as competitive hires was economically advantageous for society. Additionally, it can be surmised that through the generation of job competition prospects for people with ASD, the societal social capital is undoubtedly fortified. Social capital is the system of relations amongst people co-existing in a specific society through activities like work, allowing that society to
operate successfully and collectively.

2.10.2 Conceptual Model

The proposed themes for the interview are included in the conceptual model below. However, the resulting themes might differ between employers who have employed people with ASD and those who have not and may result in variations in the conceptual model eventually. The proposed themes for both groups (employers who have employed people with ASD and those who have not) are the same. The proposed themes were then put into two main groups addressing the employers’ concerns and the employers’ considerations for employees. Employers’ concerns were more generic and address areas that are specific to the employers’ needs and the organisation. The employers’ considerations for employees address the needs and issues concerning the employee. The interview questions were developed around the themes identified in the conceptual models in Figures 2.8 and 2.9. Figures 2.8 and 2.9 map out the associations and links between the themes identified in the Literature Review.

![Conceptual Model Diagram](image)

Figure 2.8: The Research Literature Map for this Research
Source: Developed for this research.

The development of the initial themes identified in this study was influenced by the existing literature presented in the literature review. The international ICF model determined the identified themes at the country level (Singapore). The main factor in the ICF model that was influential in this study was the work participation and employment element. This factor generated an enquiry into the various theoretical approaches to employment (e.g., the valuation technique depicted in Figure 2.8). The evaluation was structured to differentiate between
employers who have employed people with ASD and those who have not (see Figure 2.9). It also delineated between employers’ consideration for employees and employers’ concerns (see Figure 2.9).

The research literature map charts the concepts discussed in the literature review to provide an overview integrated with the themes. The researcher began the study with a basic disability framework. Given that this study of the employment of people with ASD is exploratory, the researcher began with a broad synthesis of the literature. Disability literature has typically focused on the ICF and its components of work, participation and employment (WHO 2001). Other schools of thought regarding disability and employment include the S-functioning or capability approach, various valuation techniques to value disability and Wilcock’s triangle of health and wellbeing.

The current study first outlines the demand-side approach to employment by exploring employer perspectives in theory and practice, with the support of accessible literature. This is followed by an argument on the inquiry of literature on employment issues. This inquiry of the literature is expected to categorise the characteristics of companies and employers that have been exposed in research and the contemporary position of research in employment as seen in Figure 2.8.

The focus on extant literature examines the integration of dimensions such as skills and abilities of individuals, organisational structure and commitment, workplace accommodations, organisational rewards, career development, return-to-work and government subsidies, taxation and insurance. As hiring of people with ASD from the viewpoint of the employer has previously been mostly unexplored, this study conducts an exploratory field study to understand the themes involved in the employment of people with ASD in the Singapore context. Given the nature of the extant research, the current study will add to the database of this phenomenon.

### 2.11 Chapter Summary

In conclusion, the ICF model has been widely used to define and categorise disability. It is a medical-environmental model that involves the interaction of an individual’s well-being with the physical and social environments. In Singapore, the working definition of disability
includes both a medical definition and a socio-functional definition of disability (Enabling Masterplan 2012-2016). Suggested frameworks that can be used to examine resources such as employees with disability are the SPARC framework that is commonly used in the valuation of Small and Medium Enterprises (SMEs) globally (Miller 2010), the Expenditure Equivalence approach (Stapleton et al. 2008), the ‘Value Chain’ employment framework (Enabling Masterplan 2012-2016), as well as the S-Functionings theory (Sen 1999b), the Consumer model (Jasper & Waldhart 2012), the Triangle of Health and Well-Being (Wilcock 1998), and the Ambivalence Amplification theory (Katz & Glass 1979).

The Value Chain framework answers the question of how people with ASD would be able to successfully transit and navigate themselves on a path to either open or sheltered employment. For this study, elements extracted from the SPARC framework include the viewpoint of seeing employees with ASD as resources or value drivers. While from the Ambivalence Amplification theory, it is likely that employees with ASD add to the value of human and organisational capital in any organisation, employers are either unaware or prejudiced toward their employment. These two theories thus address the question of employers’ concerns that encourage or inhibit employment of people with ASD. The theory of S-Functionings emphasises the importance of identifying who is responsible for limiting positive/negative freedoms of people and the limitations of institutional capabilities – translated in this study to mean the employer and the existing workplace limitations and accommodation. Addressing how a person with ASD can successfully be independent in employment, the Consumer Model talks about reciprocal relationships and the need for workplace accommodation and job coaches to support employees with ASD. Also, to bridge the extra cost of disability it is necessary to encourage independence in people with ASD through employment (Expenditure Equivalence approach). Employment or ‘doing’, is what improves health and well-being in people with ASD, according to the Triangle of Health and Well-being model.

In Singapore, the employment opportunities for people with disability have almost tripled within the past two years (Yeo 2016), but the unemployment rate continues to be high among people with disability. Job development and placement are important in developing experientially based career development interventions. Supported employment is a job placement and training model with service delivery options that consists of four basic approaches of interest – individual placement, clustered placement, mobile work crew, and entrepreneurial endeavours (Hanley-Maxwell et al. 1998; Reed & Rumrill 1997).
Also, recent studies have attempted to review and compile the various variables contributing to the employment outcomes of people with disability (Saunders et al. 2006) such as; education; employment expectancy; perceived methods of information dissemination to workers about their rights and entitlements; perceived standards of occupational health and safety characteristics of work places; number of months in the longest lasting job; and transferable skills and wages. These factors include skills and abilities that would help school-leavers with disabilities successfully transition into the workforce. Possible concerns of employers that encourage or inhibit the employment of school-leavers with disabilities in organisations could include diagnosis or disability type, functional status, information/long term memory/richness of environment, referral source, intelligence, aptitude, adaptability, satisfactoriness, Menninger Return to Work (RTW) Scale, working alliance, consumer involvement, programme intervention, and vocational evaluation or assessment.

Based on the review of literature, the proposed themes of the conceptual model were identified, and explained in detail. The key themes for the study are: skills and abilities; pre-employment training and education; organisational structure; employee organisational commitment; employer organisational commitment; return to work; workplace accommodation; organisational rewards; career development or organisation development; and government incentives, insurance and taxation. Most studies have used a meta-analysis to study the problem, although recent studies in Asian countries like Taiwan (Huang & Chen 2016) and South Korea (Kang 2013) have begun to address this problem using qualitative methodological approaches embedded in an exploratory research paradigm. The next chapter describes the interpretive interview methodology used for this study in detail.
CHAPTER 3 METHODOLOGY

3.1 Introduction

This chapter has 12 sections. Section 3.1 introduces the chapter. Section 3.2 presents the research approach and paradigm. Section 3.3 presents the research strategy and design. Section 3.4 describes the process of pilot testing for this study. Section 3.5 discusses the use of the semi-structured interviews. Section 3.6 discusses purposive sampling for this study. Section 3.7 presents the data collection and interview process. Section 3.8 presents the discussion of the research questions and main findings. Section 3.9 presents the phases of qualitative content and thematic analysis: initialisation, construction, rectification and finalisation. Section 3.10 discusses the trustworthiness and rigour of the study. Section 3.11 presents the ethical considerations of this study. Section 3.12 summarizes the chapter. The structure of the chapter is illustrated in Figure 3.1.
Figure 3.1 Structure of Chapter 3
Source: Developed for this research
3.2 Research Approach and Paradigm

For this study, the stance that the nature of knowledge is subjective or relative was adopted, and so the research was embedded within an interpretivist paradigm. An ontological approach that assumed that the nature of society is patterned and predictable would be inappropriate for this study; rather, the researcher considers that social reality is continually being built through interaction and routine (Hesse 1980; Guba & Lincoln 1994). The latter view also holds that names, concepts and labels are used to structure reality (Guba & Lincoln 1994). Conversely, a realist ontological view that assumes that social reality is tangible, existing independently of an individual’s perceptions (Burrell & Morgan 1979), would not be consistent with the aims of this study. Likewise, a research paradigm that focuses on objective reality with discoverable causal relationships would be inappropriate, whereas a paradigm that considers that there are multiple, socially constructed truths of actors in the social world that should be known and explored (Burrell & Morgan 1979) is infinitely appropriate. For this study, a positivist ontological view that ignores cultural, social, political and economic factors when trying to understand the world (Staller 2010) would be unacceptable. So, instead of assigning arbitrary units of analysis to tidy categories, the researcher has sought to explore the meaning of the contextual circumstances that influence authors/speakers (Lacity & Janson 1994).

To explain further, this research study posits the diversity of interpretation of social reality (Denzin & Lincoln 2011; Jennings 2010). This has several implications for the epistemological orientation and methodology of the study: Firstly, multiple realities diverge and ‘each enquiry may raise more questions than it answers’ (Lincoln & Guba 1985, p. 37). Secondly, humans are the primary data collection instrument, interacting with participants to understand multiple constructed realities (Lincoln & Guba 1985). Thirdly, data should be obtained in a naturalistic setting as realities are ‘wholes to be understood in context’ (Lincoln & Guba 1985, p. 39). Fourthly, the researcher is the primary data-gathering instrument to fully understand, respond and describe the complex interactions taking place (Lincoln & Guba 1985), and the role of the interpretivist researcher is as an ‘insider’ rather than an ‘outsider’ (Creswell 2007) This means that such immersion in the field of research could bring change to the researcher and the participants of the study (Ponterotto 2005). Finally, the aim of interpretivist research is to identify contextualised meaning of multiple points of view (Green 2000). This is consistent with a belief system about who can be a knower, how having a grounded understanding of the world is presented through various forms of knowledge, ensuring its legitimacy (Burrell and Morgan 1979). For all these reasons, the researcher has adopted an ontological stance that
allows understanding and interpretation of the needs and concerns of different employers through their own eyes as they speak about their experiences.

The methods of data collection and analysis that follow from this stance is the practice of empathic understanding or verstecken by asking and gaining insight from multiple points of view, regarded as interpretivism in action (Boland 1991; Deetz 1996). Interpretivism presents itself as similar to hermeneutics, which also uses empathic imagination to examine the experience, motivations and context of the speech or text of the speaker/author. Subsequently, a circular analysis alternating between the data text and the situated scene can then be used (Schwandt 2000). According to Gubrium and Holstein (1997), key elements of the interpretivist paradigm are: firstly, interpretivist methodology challenges the real and obvious; secondly, they explore and scrutinise the social world; thirdly, they are agentic individuals; fourthly, interpretivism recognises subjectivity; and finally, interpretivism also recognises the complexity and disorder of the social world. Validity for such interpretivist research is dependent on evidence that supports the researcher’s textual interpretation. Such evidence includes rich descriptions, source and method triangulation, and peer or participant review (Lincoln & Guba 1985).

Through an interpretivist approach, this study identified themes though meaningful statements in the key parts of the data or in a part that bears weighty emotive or practical significance (Gubrium & Holstein 1998). It used semi-structured interviews as the main method for generating data from employers and focused on meanings throughout the process of analysis. The process involved looking for themes, connecting themes (including looking at clustering of themes), and comparison with other cases. The employers’ concerns are subjective and related to their experiences with their employees, and as such, meanings develop through personal experience. Taking this into account, this research sought to understand the employers’ views and experiences concerning the recruitment of individuals with ASD.

The researcher is an important instrument in the process of data collection and analysis due to the level of involvement in the interviewing and transcription and analysis process. While it is not always the case with quantitative research, qualitative research openly acknowledges that the researcher’s biases and values impact the outcome of any study (Merriam 2001). Peshkin (1988, p. 18) states that ‘one’s subjectivities could be seen as virtuous, for bias is the basis from which researcher make a distinctive contribution’, melding personal qualities with the data collected.
In fact, the interaction between and among the researcher and participants leads to interpretation and understanding (Guba & Lincoln 1994). By placing the study in an interpretive paradigm, the researcher is able to identify and explore meaningful social action and multiple realities that emerge from the participants’ worldview (Neuman 2011). The aim of this study is to better understand employers’ concerns in the service industry in Singapore. Having been involved in the employment processes in the service industry, the researcher wanted to better understand and explore those perspectives.

3.3 Research Strategy and Design

Hypothesis testing through a deductive approach, as used with experimentation and statistical analysis of questionnaire data were not applicable to this research, considering its aims and research questions. Using a qualitative interpretivist paradigm meant taking an inductive approach, collecting and analysing data with the purpose of understanding the phenomenon researched from the perspective of an insider. Seidman (2006, p.10) posited that ‘one of the main ways a researcher can investigate an educational organisation, institution or process is through the experience of the individual, the “others” who make up the organisation or carry out the process’. Qualitative methods intent on induction, flexibility and reflexivity, allowed the researcher to explore how and why employers understand, describe and make meaning of their experience in employing people with ASD.

Inductive analysis is the discovery of emerging patterns, themes and categories in data. In deductive analysis, data are analysed using an existing framework. Open coding, or being open to the data, involves developing a codebook for content analysis or determining possible categories, patterns and themes (Strauss & Corbin 1998). Analytic deduction is a distinct qualitative analysis approach that begins a verification process of a proposition or theory-derived hypothesis (Taylor & Bogdan 1984). After or alongside this deductive phase of analysis, the researcher seeks undiscovered patterns and emergent understandings (inductive analysis). Typologies can then develop, which are built on ideal types of illustrative end points rather than a complete and discrete set of categories (Patton 2015).

The design of this study is shown in Figure 3.2. This study was placed within a qualitative interpretive paradigm of inquiry and used a mainly deductive, cross-sectional research strategy. The methods were twofold. The first part involved a descriptive analysis of organisations that have experience working with employees with ASD. This analysis was done in order to explore
where and to what extent employability of people with ASD content was present in the organisational culture/ethos of organisations who have experience working with employees with ASD. The next part included semi-structured interviews of employers who have worked with employees with ASD and those that do not have experience working with employees with ASD but who may be interested in working with employees with ASD.

![Figure 3.2 Design of the Study](image)

Source: Developed for this research

As previously discussed, an interpretive approach is suitable for investigating phenomena which are complicated and where little is known about them (Krathwohl 2009). Although disability, and ASD in particular, have been written about frequently, there is a dearth of research articles in the employers’ viewpoints on employability of people with ASD, as demonstrated earlier. For this reason, and because explanatory research often seeks to establish causal relationships, it was considered that the adoption of an explanatory approach would be premature for this study.

An exploratory approach was regarded as relevant to use initially, on the grounds that it would allow the researcher to develop preliminary ideas and devise additional queries that might help to focus the research, and to plan and implement the next, more systematic and comprehensive phase of the study. It also has the potential to challenge assumptions, and to minimise uncertainties and ambiguities. For the present study, the researcher conducted a pilot test for these reasons, as well as to refine the interview questions. The researcher also sought to limit the study sample to employers that had or had not employed people with ASD only, as during the time of the ethics application, the category of Mild Intellectual Disability (MID) was
included as well.

Given that the type of investigation for this study was for clarification, and thus to some extent exploratory, the main part of the research was also aimed at providing rich description of events as they occurred without intervention by the researcher. Themes and operational definitions were derived from reviewed literature sources, the unit of analysis was individuals representing organisations, and the study setting was non-contrived. The time horizon was cross sectional (one-shot), a method where researchers investigate the state of affairs in a population at a certain point in time (Bethlehem 1999). The sample population, as in the present case, is usually small and randomised (Zheng 2015). A cross sectional strategy was chosen because it allowed the researcher to observe and study many factors at the same time, and to determine the associations and links between identified themes and factors.

3.4 Data Collection and the Interview Process

The data collection process was recognised as emergent, as the researcher was conscious of the link between the epistemological and methodological underpinnings of the study, and the specific tools used to carry out research. As explained by Hesse-Biber and Leavy (2006), emergent methods modify a traditional approach in order to address new questions and create tools for newly emerging issues to delve into previous knowledge. Roles are also fluid throughout the research process such that the researcher is both an insider and outsider to varying degrees within the research process (Hesse-Biber & Leavy 2011).

To accommodate such fluidity, a wide range of interview practices is possible (Dunn 2010; Patton 2015; Seidman 2006). For example, the degree to which an interview is structured lies on a continuum where the more structured an interview is, the easier it is to analyse findings and generalise from them (Krathwohl 2009). On the other end of the continuum are unstructured interview, which are closer to the qualitative tradition (Krathwohl, 2009). In the present study, there are elements of a medium to high structure in the interview format with consistent questions for all participants. At the same time, the research also allows individual interviewees to talk about what is of interest or important to them, which may be a new topic altogether.

Participant interviews spanned a period of six months (April to October 2014). During this period, semi-structured interviews were administered to a purposeful sample of important stakeholders identified using a snowball method suggested by Glaser and Strauss (1967).
Interviewees were asked to comment or identify other organisations that were active in employing people with ASD. In total, 24 interviews were conducted face-to-face onsite at the company location. Setting up the interviews took time and involved some exchanges to finalise a mutually agreeable date and time for the interview. It was important to find the person involved in employing people with ASD: ‘You might like to speak to my colleague instead, he is the operation manager and he handles this area’. Emails were sent to each identified participant, and for those who did not respond to their email, the researcher personally made an onsite visit together with a printed version of the information sheet and consent.

Prior to each interview, the researcher referred to literature regarding employment of people with disability to be more aware of the issues or concerns that may arise from the interview. The researcher also prepared for interviews by reading the company profile where it was available on the Internet. A set of questions was prepared before the interview and the researcher tried to guide the conversation to remain focused on those questions. However, the researcher was careful to give interviewees space for the expression of their personal points of view, minimising and avoiding as much as possible researcher influence (Maxwell 2005). Interviews were initiated by introducing the researcher, the topic, and why it was chosen. Subsequently, the information sheets and consent were presented to participants, and they were given time to read through them. Participants were also informed that the interview would take approximately an hour.

Data was audio-recorded and notes were written down, and later transcribed. Most of the interviews (96%) were conducted onsite at the interviewee’s organisation/company during office hours. The rest of the interviews were conducted at restaurants or cafes. The interviews took place at rectangular meeting room tables, small restaurant or café tables, or sitting or standing around an area in the shop or in an office room. Specific questions were not provided before the interview to avoid ‘inhibit(ing) the naturalness of the discussion’ (Bryman & Cassell 2006, p.52). However, participants often enquired: ‘Can you tell me what the interview is about again?’ Other than this, interviewees seemed satisfied with the information they received. At the beginning of the interview, however, some said: ‘I may not be able to answer some of the questions’.

The tone of the interviews was friendly and conversational. The interview questions were semi-structured to allow the respondent to develop or elaborate on their explanation of an issue or concern. On occasion, the researcher paraphrased back to the interviewee their responses to
ensure clarification of their responses, and to understand the underlying feelings they were trying to convey. Such a nondirective response technique communicates respect for the respondent and also ensures that the researcher is not misrepresenting the interviewees’ replies (Krathwohl 2009).

After a few interviews, the researcher noticed the open-ended questions were rather challenging as many of the interviewees responded: ‘no, I don’t have any main concerns’. Another said: ‘that is very open-ended, I’m not sure what else to add at this point’. The semi-structured questions were sometimes more useful in building or expanding concerns or topic areas. This might be due to cultural context where participants tend to be more reserved in their responses.

After an hour, the interviewees were asked whether they were able to continue, even though they had been given an indication the approximate duration of the interviews would be approximately one hour. It was recognised that many of the interviewees were busy with their work and the interviews were conducted during office hours. Many interviewees drew the interview to a close by responding: ‘No, I don’t have any main concerns’. Interviewee responses varied in length, depending on the experiences and concerns of each interviewee. A few interviewees were animated and passionate in their responses regarding this topic and could elaborate on the history and timeline: ‘In 2010, we were part of the enabling employers network to train people from schools to society’. Interviewees sometimes wondered if their responses were helpful: ‘Did I answer the question?’. The challenge for the researcher was to restrict thoughts and opinions in response to the conversation with the interviewees, as the interview was not about what the researcher thought. A few of them were happy to be contacted again: ‘If you need more information, you can email me’.

3.5 Pilot Testing
Pilot testing the semi-structured interview questions is important according to Kayrooz and Trevitt (2005) and Neuman (2011), because it allows the researcher to help the participant best understand the questions presented, thus giving a better outcome. Taking this advice, the researcher conducted a pilot study with a small sample size of five participants to find out if the semi-structured interview questions were easy to understand for interviewees and whether it would provide opportunity for the interviewees to respond. The aim was to minimise the possibility of misunderstanding resulting from ambiguous terms, long questions and interpretative errors. It also allows the researcher to decide on the sample participants as only
employers of people with ASD, and not people with MID. The pilot study was then conducted between December 2013 and March 2014.

The pilot testing participants represented five different companies in the service industry and were involved in management of employees. They were also individuals who were proficient in the use of the English language, and also proficient in understanding the formal structured language terms in business and law. They were invited to participate voluntarily by meeting up at a location convenient to them. After reading through the questions, they were requested to provide feedback by responding to some evaluation questions in the following areas:

- Is the information sheet and the introduction by the interviewer easily understood? If not, which part is confusing?
- Is the information sheet and the introduction by the interviewer adequate? If not, what else could be added?
- Do you understand all the questions in the interview? If not, which are the questions you do not understand?
- Which questions that need to be modified or changed (if any)?
- All in all, do you find the overall quality of the interview questions satisfactory? If not, which parts can be improved?

Interviewees’ occupational profiles are summarised in Table 3.1 and accurate at the time when the study was conducted.

Table 3.1 Summary of Profiles of Pilot Study Participants

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Occupation</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chief Executive Officer (CEO)</td>
<td>Engineering</td>
</tr>
<tr>
<td>2</td>
<td>Lecturer</td>
<td>Business Law</td>
</tr>
<tr>
<td>3</td>
<td>Life Planner</td>
<td>Insurance</td>
</tr>
<tr>
<td>4</td>
<td>Owner</td>
<td>Healthcare</td>
</tr>
<tr>
<td>5</td>
<td>Owner</td>
<td>Education</td>
</tr>
</tbody>
</table>
The suggestions from the participants of the pilot study are summarised in Table 3.2. All the suggestions were adopted for improving the quality of the survey questionnaire. The finalised version of the interview questions is found in Appendix B.

### Table 3.2 Summary of Suggested Changes from Pilot Study

<table>
<thead>
<tr>
<th>Question/Section</th>
<th>Original Question</th>
<th>Modified Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Organisational Rewards</td>
<td>This section consists of 3 questions.</td>
<td>Added in an additional question: Would you pay your staff with ASD the same salary or pro-rate it? The total number of questions in this section becomes 4.</td>
</tr>
<tr>
<td>7. Skills and Abilities of Employees</td>
<td>This section consists of 3 questions.</td>
<td>Added in an additional question: Do skills and abilities mean the same thing for you as an employer? Please elaborate. The total number of questions in this section becomes 4.</td>
</tr>
<tr>
<td>7. Skills and Abilities of Employees</td>
<td>Between a scale of 1 to 7, how would you rate your staff’s social interaction skills?</td>
<td>Removed question.</td>
</tr>
<tr>
<td>9. Others</td>
<td>No ‘Others’ section.</td>
<td>Added in an additional section, ‘Others’ and question: What are your main concerns regarding this topic area?</td>
</tr>
</tbody>
</table>

After making the changes, the interview schedule was ready to be used for data for the main part of this study.

### 3.6 Semi-Structured Interviews

Qualitative data collection methods such as oral history and focus groups were not regarded as suitable for data collection in this study, because the aim was not to move outside the cross-sectional design of the study into a historical perspective, nor was it to explore group dynamics. Rather, interviews were the data collection method chosen because they are, in fact, guided question-answer conversations, or an exchange of views between two people discussing a theme of mutual interest (Kvale & Brinkmann 2009) with an overarching structure and purpose. While structured interviews are usually necessary for quantitative research, semi-
structured interviews were chosen to collect data for this study to allow participants’ perspectives to be explored.

Using semi-structured interviews gave interviewees the freedom to illustrate important concepts in the way they preferred (Morse 1995). Semi-structured interviews allow the researcher to elicit data on perspectives of salience. Interviewing allows for interactional richness and variety, and the researcher could use prepared stimulus material in the course of the interaction. Participants and the researcher freely discussed a variety of issues concerning the topic, with opportunity to explore other aspects. Semi-structured interviews are ‘most appropriate’ when a description is developed around a topic/subject without formal hypothesis testing. Such an interview is ‘developed around a set of topics rather than word fixing’ (Kayrooz & Trevitt 2005, pp.194-5). Also, open-ended and closed questions were part of the interview questions developed.

King (1994) has asserted that the interviewing methodology was the most suitable for data collection in organisational research. Employability perspectives from interviewees, who had employed people with ASD and those who had not, could be contrasted through interview responses. The sample was also purposeful as ‘particular settings, people or events are selected deliberately in order to provide information that cannot be got as well from other choices’ (Maxwell 1996, p.70).

Clarification, active listening, paraphrasing and other encouraging responses were part of the interview process. To better understand the topic discussed, each theme presented sub-questions in the semi-structured interview questions. For example, the questions addressing the interviewee’s interest in employing people with ASD was part of a series of detailed questions concerning the theme discussed. The interview was designed to be flexible and cover a variety of issues or themes that could be discussed.

3.7 Sampling Strategies

As part of the data collection process, the company profiles that were available on the Internet were compiled. If website information was available from the public domain, it was collected and analysed. Otherwise, information about the interviewees was gathered through the interview process. This study used purposive sampling to examine 12 companies in the service industry in Singapore that previously employed or currently employ people with ASD, as well
as 12 companies that had not employed people with ASD. Purposive sampling is widely used to identify and select interviewees who are most knowledgeable or experienced about a phenomenon or topic being researched (Bryman 2008; Creswell & Plano Clark 2011; Neuman 2011; Patton 2002). It is a nonrandomised technique that does not need underlying theories or a set number of participants (Tongco 2007). Thus, purposive sampling differs from probabilistic or random selection procedures, which aim to ensure the generalisation of findings and minimise bias selection (Palinkas et al. 2015).

There is a lack of companies in Singapore that hire people with ASD. The companies that the researcher approached in the disability sector were identified through newspaper reports and social service organisations as actively hiring people with ASD in Singapore. These companies included both foreign and locally owned corporations. The researcher put together a purposive sample of company representatives involved in employment decisions from each organisation. This included interviewees from organisations in various service industries such as food and beverage, retail, healthcare, and hospitality. The list of organisations was supplemented by suggestions from the networks of some of the companies in the sample.

Interviewees had to be involved in employment decisions from each organisation (e.g., Chief Executive Officers (CEO), Chief Operating Officers (COO), Human Resources (HR) or management). The selection criteria required interviewees to be from:

- organisations that had employed or were currently employing people with ASD
- organisations that had not employed people with ASD and were/were not interested in doing so.

The interviewees who agreed to participate were privy to the interview process and data recording that took place. They gave informed consent to be interviewed and were assured of the confidentiality of the data collected. Figure 3.3 indicates the flow for interviewees from different organisations. Interviewees from organisations that have employed people with ASD (‘Yes’) went through Part 2, while those that would employ more people with ASD if they received more incentives also went through Part 2.1. Interviewees from organisations that have not employed people with ASD (‘No’) went through Part 3, but if they were interested and willing to employ people with ASD if they received incentives, they also went through Part 3.1.
There was little choice in interviewees because the number of companies in Singapore that hire people with ASD is limited. In addition, few companies or people are aware of the possibility or potential of employing people with ASD. Some companies that had employed people with ASD had either closed their business (the researcher discovered this after browsing their website) or were not available to be contacted. Excerpts from web searches showed results such as the following:

*Hi, are you guys still open? I tried calling ur [your] no [number] but the no [number] is no longer in use. Please advise. Thanks!*

*Love the food here but disappointed it has closed since. Do let us know when you are opening again.*

Some of the words like ‘ur’ and ‘no’ were examples of internet slang; abbreviations that are frequently used in texting and social networking websites. Between April and November 2014,
emails were sent to 31 potential participants. Fifteen of them had employed people with ASD and 16 had not. The introductory email included a copy of the information sheet and consent form (see Appendix A and C respectively). Some potential participants responded positively:

Sure, I can meet up next week.

Other potential participants did not respond by email and were approached at the company between April and November 2014. On these occasions, a printed copy of the information sheet and consent form were presented to the potential participants for them to read and give their consent. Simultaneously, a snowballing technique was used whereby potential participants either volunteered or were asked if they could recommend any potential participants (Neuman 2011). Snowballing helped to fill in the gaps and resulted in a final sample size of 24 participants.

The number of participants in sampling is a challenge in qualitative research (Guest, Bunce & Johnson 2006; Lincoln & Guba 1985). The total number of 24 interviews is aligned with Warren’s (2002) suggestion that at least 20–30 participants are required for an interview-based qualitative study to be valid. The researcher used a sample size of 12 for each group because Adler and Adler (1987) suggest that this number allows the researcher to fully plan and structure the interviews, conduct and partially transcribe them, and generate quotes (Baker & Edwards 2012). This number allows theoretical saturation to be achieved (Glaser & Strauss 1967), whereby the researcher is able to sample relevant cases until no new theoretical insights are derived. Corbin and Strauss (2008, p. 149) state that ‘a researcher knows when sufficient sampling has occurred when the major categories show depth and variation in terms of their development’. Total saturation is possibly a myth, and saturation is usually achieved when no new ideas present themselves (Corbin & Strauss 2008). By the twenty-third interview, saturation in the form of information redundancy was obvious. Data collection continued for the remaining participants who had agreed to participate, and upon completion of those interviews, no significantly new issues had emerged.

Twelve interviewees had experience in employing people with ASD, and 12 had not previously employed people with ASD. The response rate was around 80 per cent (12 of 15 interviewees) for employers with experience employing individuals with ASD, and 75 per cent (12 of 16) for employers who had not previously employed people with ASD.
3.8 Discussion of Research Questions and Main Findings

This section presents and discusses the main findings from the interviews. It begins with the results for organisational structure and demographics (refer to Table 3.3), and, proceeds to showing links between the research questions and the corresponding interview questions and themes (refer to Table 3.4).

The interview questions for organisational structure and demographics were derived from Saunders (2006), listing the various topics and key areas impacting employment outcomes. Demographic information seen in Table 3.3 is essential for understand the representation and generalisation of the sample studied.

Table 3.3 Interview Questions for Organisational Structure and Demographics

<table>
<thead>
<tr>
<th></th>
<th>1. Demographics</th>
<th>2. Organisation Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>What type of business are you/ your organisation in?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>How long has your organisation/ business been running for?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>What is the total number of staff employed by your company/ business?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Which age group does most of your employees fall under? a) 15 – 24 years b) 25 – 34 years c) 35 – 44 years d) 45 or more years</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>What is your company’s mission statement and/or statement of values?</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Where is your organisation located (Central, East, West, North, South) in Singapore?</td>
<td></td>
</tr>
</tbody>
</table>

2.1 What are the highest educational qualifications of your employees?
2.2 What are the job designations of your employees?
2.3 What are the monthly wages of most of your employees? a) SGD$0 – 999 b) SGD$1000 – 1999 c) SGD$2000 - SGD$2999 d) $ more than SGD$3000
2.4 Is there job flexibility in your company for employees? Please elaborate (e.g., part time work, work from home, flexible hours, job rotation)

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Interview Questions</th>
</tr>
</thead>
</table>
| Research Question 1: What skills and abilities would help persons with ASD successfully transition into the workforce? | 7.1 Do skills and abilities mean the same thing for you as an employer? Please elaborate.  
7.2 What skills/abilities would you be looking for in a person with ASD?  
7.3 Which educational experiences prepared your employee with ASD for work?  
7.4 Do your employees with ASD use/apply what they studied in school in their work? Give examples. |

Research Question 2: What are the main concerns of employers that encourage or inhibit the employment of persons with ASD in organisations? | Organisational Structure |
|--------------------|---------------------|
| Organisational Structure | 1.1 What type of business are you/your organisation in?  
1.3 What is the total number of staff employed by your company/business?  
1.5 What is your company’s mission statement and/or statement of values?  
2.1 What are the highest educational qualifications of your employees?  
2.2 What are the job designations of your employees?  
2.4 Is there job flexibility in your company for employees? Please elaborate (e.g., part time work, work from home, flexible hours, job rotation)  
Return to work options  
2.4 Is there job flexibility in your company for employees? Please elaborate (e.g., part time work, work from home, flexible hours, job rotation, return-to-work options)  
8.1 Typically how long do your employees with ASD work for your company?  
8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?  
8.3 What is the company staff turnover rates for employees with ASD (ASD employees stay in the job for 0-6 months, 6-12 months, etc.) |

Organisational Commitment – Employers of Persons with ASD

3.1 Why are you interested in employing persons with ASD?  
3.2 How long have you been employing persons with ASD?  
3.3 How many persons with ASD have you employed?
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Question 2: What are the main concerns of employers that encourage or inhibit the employment of persons with ASD in organisations?</td>
<td>3.4 How many persons with ASD do you currently employ?</td>
</tr>
<tr>
<td></td>
<td>3.5 What auxiliary aids or services (workplace accommodation) has been requested for/ set up by you for your employees with ASD? (For example, worksite modification, work-schedule change, job restructuring)</td>
</tr>
<tr>
<td></td>
<td>3.6 How much has your company spent on setting up these auxiliary aids/services?</td>
</tr>
<tr>
<td></td>
<td>3.7 Give examples of how the organisation has gone out of the way to help an employee with ASD beyond their job.</td>
</tr>
<tr>
<td></td>
<td>3.8 What resources does the company invest into making its employees with ASD feel like part of it?</td>
</tr>
<tr>
<td></td>
<td>3.9 Do you provide supported employment opportunities (for example, individual/ clustered placement, mobile work crew) for employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.10 Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.11 Do you have a designated HR officer or staff to handle issues/concerns pertaining to employees with ASD? What does that staff do?</td>
</tr>
<tr>
<td></td>
<td>8.1 Typically how long do your employees with ASD work for your company?</td>
</tr>
<tr>
<td></td>
<td>8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
</tr>
<tr>
<td></td>
<td>8.3 What is the company staff turnover rates for employees with ASD (ASD employees stay in the job for 0-6 months, 6-12 months, etc.)</td>
</tr>
<tr>
<td></td>
<td>8.4 Do you encourage employees with ASD to develop skills and long-term careers (e.g., training plan) Yes/No. If Yes, please elaborate.</td>
</tr>
<tr>
<td></td>
<td>8.5 Does your company offer training opportunities or internships (e.g., apprenticeships or work experience for the ASD groups)?</td>
</tr>
<tr>
<td></td>
<td>8.6 Does your company collaborate to provide any of the following: school-sponsored enterprise, technical preparation, internships and career majors?</td>
</tr>
<tr>
<td></td>
<td>Organisational Commitment – Employers not Employing Persons with ASD</td>
</tr>
<tr>
<td></td>
<td>3.1 Why do you not want to employ persons with ASD? What discourages you as an employer to employ a person with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.2 Would you consider providing training opportunity to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?</td>
</tr>
<tr>
<td></td>
<td>Workplace Accommodation</td>
</tr>
<tr>
<td></td>
<td>3.5 What auxiliary aids or services (workplace accommodation) has been requested for/ set up by you for your employees with ASD? (For example, worksite modification, work-schedule change, job restructuring)</td>
</tr>
<tr>
<td></td>
<td>3.6 How much has your company spent on setting up these auxiliary aids/services?</td>
</tr>
<tr>
<td>Research Questions</td>
<td>Interview Questions</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Research Question 2: What are the main concerns of employers that encourage or inhibit the employment of persons with ASD in organisations?</strong></td>
<td>services?</td>
</tr>
<tr>
<td><strong>3.7</strong> Give examples of how the organisation has gone out of the way to help an employee with ASD beyond their job.</td>
<td><strong>3.7</strong> Give examples of how the organisation has gone out of the way to help an employee with ASD beyond their job.</td>
</tr>
<tr>
<td><strong>3.8</strong> What resources does the company invest into making its employees with ASD feel like part of it?</td>
<td><strong>3.8</strong> What resources does the company invest into making its employees with ASD feel like part of it?</td>
</tr>
<tr>
<td><strong>3.9</strong> Do you provide supported employment opportunities (for example, individual/clustered placement, mobile work crew) for employees with ASD?</td>
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</tr>
<tr>
<td><strong>3.10</strong> Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
<td><strong>3.10</strong> Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
</tr>
<tr>
<td><strong>3.11</strong> Do you have a designated HR officer or staff to handle issues/concerns pertaining to employees with ASD? What does that staff do? What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
<td><strong>3.11</strong> Do you have a designated HR officer or staff to handle issues/concerns pertaining to employees with ASD? What does that staff do? What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
</tr>
<tr>
<td><strong>8.2</strong> What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
<td><strong>8.2</strong> What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
</tr>
<tr>
<td><strong>Organisational Rewards</strong></td>
<td><strong>Organisational Rewards</strong></td>
</tr>
<tr>
<td><strong>5.1</strong> What promotion opportunities do you provide your employees with ASD?</td>
<td><strong>5.1</strong> What promotion opportunities do you provide your employees with ASD?</td>
</tr>
<tr>
<td><strong>5.2</strong> How would you provide your employees with ASD financial incentives?</td>
<td><strong>5.2</strong> How would you provide your employees with ASD financial incentives?</td>
</tr>
<tr>
<td><strong>5.3</strong> How would you provide your employees with ASD independence and freedom to influence work content and methods?</td>
<td><strong>5.3</strong> How would you provide your employees with ASD independence and freedom to influence work content and methods?</td>
</tr>
<tr>
<td><strong>5.4</strong> Would you pay your employees with ASD the same as your other employees or pro-rate their salary?</td>
<td><strong>5.4</strong> Would you pay your employees with ASD the same as your other employees or pro-rate their salary?</td>
</tr>
<tr>
<td><strong>Skills and Abilities of Employees</strong></td>
<td><strong>Skills and Abilities of Employees</strong></td>
</tr>
<tr>
<td><strong>7.1</strong> Do skills and abilities mean the same thing for you as an employer? Please elaborate.</td>
<td><strong>7.1</strong> Do skills and abilities mean the same thing for you as an employer? Please elaborate.</td>
</tr>
<tr>
<td><strong>7.2</strong> What skills/abilities would you be looking for in a person with ASD?</td>
<td><strong>7.2</strong> What skills/abilities would you be looking for in a person with ASD?</td>
</tr>
<tr>
<td><strong>7.3</strong> Which educational experiences prepared your employee with ASD for work?</td>
<td><strong>7.3</strong> Which educational experiences prepared your employee with ASD for work?</td>
</tr>
<tr>
<td><strong>7.4</strong> Do your employees with ASD use/apply what they studied in school in their work? Give examples.</td>
<td><strong>7.4</strong> Do your employees with ASD use/apply what they studied in school in their work? Give examples.</td>
</tr>
<tr>
<td><strong>Career Development</strong></td>
<td><strong>Career Development</strong></td>
</tr>
<tr>
<td><strong>6.1</strong> How are the company’s expectations of the employee with ASD role and job scope made clear to them?</td>
<td><strong>6.1</strong> How are the company’s expectations of the employee with ASD role and job scope made clear to them?</td>
</tr>
<tr>
<td><strong>6.2</strong> Would you consider providing training opportunities to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?</td>
<td><strong>6.2</strong> Would you consider providing training opportunities to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?</td>
</tr>
<tr>
<td><strong>6.3</strong> Are your employees with ASD able to get similar positions/jobs outside the company?</td>
<td><strong>6.3</strong> Are your employees with ASD able to get similar positions/jobs outside the company?</td>
</tr>
<tr>
<td>Research Questions</td>
<td>Interview Questions</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>
| Research Question 2: What are the main concerns of employers that encourage or inhibit the employment of persons with ASD in organisations? | 6.4 What opportunities for career growth and professional development do you provide your employee with ASD (e.g., training)?  
6.5 Is there a mentorship scheme in place? If yes, please elaborate on it.  
6.6. Do you provide individualised career goals/paths (pursuing career goals of own choice) for your employees with ASD? If yes, please elaborate on it.  
Government subsidies, insurance and taxation  
3.1 Are you aware of any government incentives for employers who employ persons with ASD, e.g., tax relief? If yes, what are they?  
3.2 Are you aware of any subsidised insurance schemes available for employers who employ persons with ASD? If yes, what are they?  
3.3 Are you aware of any subsidy from any agency for employing persons with ASD?  
3.4 How much subsidy would be attractive enough for you to hire persons with ASD? How many more would you hire?  
3.5 Are there any other incentives that would motivate you to hire persons with ASD?  
3.6 Are you aware of who you can approach if you are interested to hire persons with ASD? |
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Interview Questions</th>
</tr>
</thead>
</table>
| Research Question 3: Are persons with ASD able to successfully navigate themselves on a path to independence and employment? | 3.2 Would you consider providing training opportunity to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?  
6.1 How are the company’s expectations of the employee with ASD role and job scope made clear to them?  
6.2 Would you consider providing training opportunities to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?  
6.3 Are your employees with ASD able to get similar positions/jobs outside the company?  
6.4 What opportunities for career growth and professional development do you provide your employee with ASD (e.g., training)?  
6.5 Is there a mentorship scheme in place? If yes, please elaborate on it.  
6.6. Do you provide individualised career goals/paths (pursuing career goals of own choice) for your employees with ASD? If yes, please elaborate on it.  
8.1 Typically how long do your employees with ASD work for your company?  
8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?  
8.3 What is the company staff turnover rates for employees with ASD (ASD employees stay in the job for 0-6 months, 6-12 months, etc.)  
8.4 Do you encourage employees with ASD to develop skills and long-term careers (e.g., training plan) Yes/No. If Yes, please elaborate.  
8.5 Does your company offer training opportunities or internships (e.g., apprenticeships or work experience for the ASD groups)?  
8.6 Does your company collaborate to provide any of the following: school-sponsored enterprise, technical preparation, internships and career majors?  
What are your concerns regarding this area? |

Source: Developed for this research

The interview questions for skills and abilities were derived from Flexer, Simmons and Tankersly (1997) and Saunders (2006). The information collected by means of the questions in Table 3.5 is essential for understanding the proposed theme of Skills and Abilities in the sample studied.
### Table 3.5 Interview Questions for Skills and Abilities of Employees

| 7. Skills and abilities of employees | 7.1 Do skills and abilities mean the same thing for you as an employer? Please elaborate.  
7.2 What skills/abilities would you be looking for in a person with ASD?  
7.3 Which educational experiences prepared your employee with ASD for work?  
7.4 Do your employees with ASD use/apply what they studied in school in their work? Give examples. |

Source: Adapted from Flexer, Simmons & Tankersly (1997); Saunders (2006)

The interview questions for organisational commitment were derived from Bruyère (2000) and Saunders (2006). They were targeted at employers of people with ASD in order to explore organisational responsiveness to the physical needs of these employees in the workplace, and awareness of their psychological commitment to the organisation. The information collected by means of the questions in Table 3.6 is essential for understanding the proposed theme of Employers’ Organisational Commitment in the sample studied.
Table 3.6 Interview Questions for Organisational Commitment – Employers of People with ASD

<table>
<thead>
<tr>
<th>Organisational Commitment</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.1 Why are you interested in employing persons with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.2 How long have you been employing persons with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.3 How many persons with ASD have you employed?</td>
</tr>
<tr>
<td></td>
<td>3.4 How many persons with ASD do you currently employ?</td>
</tr>
<tr>
<td></td>
<td>3.5 What auxiliary aids or services (workplace accommodation) has been requested for/ set up by you for your employees with ASD? (For example, worksite modification, work-schedule change, job restructuring)</td>
</tr>
<tr>
<td></td>
<td>3.6 How much has your company spent on setting up these auxiliary aids/ services?</td>
</tr>
<tr>
<td></td>
<td>3.7 Give examples of how the organisation has gone out of the way to help an employee with ASD beyond their job.</td>
</tr>
<tr>
<td></td>
<td>3.8 What resources does the company invest into making its employees with ASD feel like part of it?</td>
</tr>
<tr>
<td></td>
<td>3.9 Do you provide supported employment opportunities (for example, individual/ clustered placement, mobile work crew) for employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.10 Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.11 Do you have a designated HR officer or staff to handle issues/ concerns pertaining to employees with ASD? What does that staff do?</td>
</tr>
<tr>
<td></td>
<td>8.1 Typically how long do your employees with ASD work for your company?</td>
</tr>
<tr>
<td></td>
<td>8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
</tr>
<tr>
<td></td>
<td>8.3 What is the company staff turnover rates for employees with ASD (ASD employees stay in the job for 0-6 months, 6-12 months, etc.)</td>
</tr>
<tr>
<td></td>
<td>8.4 Do you encourage employees with ASD to develop skills and long-term careers (e.g., training plan) Yes/No. If Yes, please elaborate.</td>
</tr>
<tr>
<td></td>
<td>8.5 Does your company offer training opportunities or internships (e.g., apprenticeships or work experience for the ASD groups)?</td>
</tr>
<tr>
<td></td>
<td>8.6 Does your company collaborate to provide any of the following: school-sponsored enterprise, technical preparation, internships and career majors?</td>
</tr>
</tbody>
</table>

Source: Adapted from Bruyère (2000); Saunders (2006)
The questions listed in Table 3.7 were relevant to employers who did not have experience working with employees with ASD and were not interested to hire, even with incentives. Information collected by means of these questions is essential for understanding the proposed theme of Employers’ Organisation Commitment in the sample studied.

Table 3.7 Interview Questions for Organisational Commitment – Employers notEmploying People with ASD

| Organisational commitment | 3.1 Why do you not want to employ persons with ASD? What discourages you as an employer to employ a person with ASD?
|                          | 3.2 Would you consider providing training opportunity to people from the local community (e.g., apprenticeships or work experience for the ASD groups)? |

Source: Adapted from Gallie, Felstead & Green (2001)

The interview questions for return to work options were derived from Mitra and Stapleton (2006). Return to work is the opportunity given by a company for an individual to return to the workforce after a period of not being in employment. The information collected by means of the questions in Table 3.8 is essential for understanding the proposed theme of Return to Work in the sample studied.

Table 3.8 Interview Questions for Return to Work Options

| Return to work options | 8.1 Typically how long do your employees with ASD work for your company?
|                        | 8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?
|                        | 8.3 What is the company staff turnover rates for employees with ASD (ASD employees stay in the job for 0-6 months, 6-12 months, etc.) |

Source: Adapted from Mitra & Stapleton (2006); Saunders (2006)

The interview questions for workplace accommodation were derived from Schartz et al. (2006). Workplace accommodation is when employers make changes to ‘work routines, schedules and
assignments’, and offer ‘modified work environments within reason for valued employees who need assistance due to illness or advancing age, or for job applicants’ (Schartz et al. 2006, p. 345). The information collected by means of the questions in Table 3.9 is essential for understanding the proposed theme Workplace Accommodation in the sample studied.

<table>
<thead>
<tr>
<th>Workplace Accommodation</th>
<th>3.5 What auxiliary aids or services (workplace accommodation) has been requested for/ set up by you for your employees with ASD? (For example, worksite modification, work-schedule change, job restructuring)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.6 How much has your company spent on setting up these auxiliary aids/services?</td>
</tr>
<tr>
<td></td>
<td>3.7 Give examples of how the organisation has gone out of the way to help an employee with ASD beyond their job.</td>
</tr>
<tr>
<td></td>
<td>3.8 What resources does the company invest into making its employees with ASD feel like part of it?</td>
</tr>
<tr>
<td></td>
<td>3.9 Do you provide supported employment opportunities (for example, individual/clustered placement, mobile work crew) for employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.10 Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
</tr>
<tr>
<td></td>
<td>3.11 Do you have a designated HR officer or staff to handle issues/concerns pertaining to employees with ASD? What does that staff do?</td>
</tr>
<tr>
<td></td>
<td>8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that employees with ASD are experiencing?</td>
</tr>
</tbody>
</table>

Source: Adapted from Schartz et al. (2006)

The interview questions for organisational rewards were derived from Ren et al. (2008) and Saunders (2006). Organisational rewards are procedures, rules, and standards associated with allocation of benefits and compensation to employees. The information collected by means of the questions in Table 3.10 is essential for understanding the proposed theme of Organisational Rewards in the sample studied.
Table 3.10 Interview Questions for Organisational Rewards

| 5. Organisational rewards | 5.1 What promotion opportunities do you provide your employees with ASD?  
5.2 How would you provide your employees with ASD financial incentives?  
5.3 How would you provide your employees with ASD independence and freedom to influence work content and methods?  
5.4 Would you pay your employees with ASD the same as your other employees or pro-rate their salary? |

Source: Adapted from Ren et al. (2008); Saunders (2006)

The interview questions for career development were derived from the context of transition planning (Flexer, Simmons & Tankersly 1997) and partnership building activities (Koch 2000). Career development is an individual’s quest to develop or acquire skills and information. Planning for a career, gaining mastery in a job and attending related courses are part of career development. The information collected by means of the questions in Table 3.11 is essential for understanding the proposed theme of Career Development in the sample studied.

Table 3.11 Interview Questions for Career Development

| 6. Career development | 6.1 How are the company’s expectations of the employee with ASD role and job scope made clear to them?  
6.2 Would you consider providing training opportunities to people from the local community (e.g., apprenticeships or work experience for the ASD groups)?  
6.3 Are your employees with ASD able to get similar positions/jobs outside the company?  
6.4 What opportunities for career growth and professional development do you provide your employee with ASD (e.g., training)?  
6.5 Is there a mentorship scheme in place? If yes, please elaborate on it.  
6.6. Do you provide individualised career goals/paths (pursuing career goals of own choice) for your employees with ASD? If yes, please elaborate on it. |

Source: Adapted from Flexer, Simmons & Tankersly (1997); Koch (2000)

The final set of questions regarding Government Subsidies, Insurance and Taxation was relevant to employers who did not have experience working with employees with ASD and were interested to do so with incentives. The information collected by means of the questions
in Table 3.12 is essential for understanding the proposed theme of Government Subsidies, Insurance and Taxation in the sample studied.

Table 3.12 Interview Questions for Government Subsidies, Insurance and Taxation

| 3c. Incentives: Taxation, Government subsidies, Insurance, Others | 3.1 Are you aware of any government incentives for employers who employ persons with ASD, e.g., tax relief? If yes, what are they?  
3.2 Are you aware of any subsidised insurance schemes available for employers who employ persons with ASD? If yes, what are they?  
3.3 Are you aware of any subsidy from any agency for employing persons with ASD?  
3.4 How much subsidy would be attractive enough for you to hire persons with ASD? How many more would you hire?  
3.5 Are there any other incentives that would motivate you to hire persons with ASD?  
3.6 Are you aware of who you can approach if you are interested to hire persons with ASD? |
| Skills and abilities of potential employees | 3.7 What skills and abilities would you be looking out for in hiring persons with ASD should you decide to do so? |
| Others | 3.8 Are there any particular things that could make you employ persons with ASD?  
3.9 Would you consider providing supported employment for persons with ASD? |

Source: Adapted from Gallie, Felstead & Green (2001)

The interview questions listed above were completed with revisions after the pilot study. These questions were part of the interview, which proceeded in a fluid, semi-structured way permitting other areas or questions not included to be pursued (Bryman 2008; Kvale 1996). The benefit of the semi-structured format and the prepared questions allowed a variety of areas to be covered during the interview. The researcher’s flexible approach to topic order was beneficial as it allowed participants to reiterate or emphasise on topics or areas they felt were important concerns to them: ‘my major concerns already addressed: there must be a centre that has already started to train or prepare them for work.’ This may not have been possible if the interview did not have semi-structured options, as the participant would not have been able to address his or her views again.

After completing the interviews, responses were transcribed. This process is important as it must be applied consistently to every interview (Kvale 1996). Because the researcher had been present during the interviews, it was possible to ensure against misunderstanding what had
been said, and to insert non-audible occurrences to add clarity of nuance (Dunn 2010). Also, the process of transcription, although it took a long time, allowed the researcher to be immersed in the data again. Conversations were transcribed verbatim with discretion. When conversation lapsed into general chit-chat either at the beginning or end of the interview, the researcher did not capture every word but gave a brief summary of what the final conversation covered.

### 3.9 Qualitative Content and Thematic Analysis

The main sources of data available for analysis included: descriptive information from company Web pages regarding employment; transcripts of audio-recorded interviews; and memo notes from post-interview reflections. While Babbie (2010) states that there is no one right way of conducting qualitative data analysis, one key approach is to identify key themes (Attride-Stirling 2001; Braun & Clarke 2006; Patton 2015; Rubin & Rubin 2012). A number of analytical techniques can be used to identify patterns, categories or themes, such as qualitative content and thematic analysis and grounded theory, each with its own theoretical and technological approach. According to Cho and Lee (2014), grounded theory requires a high degree of transformation and interpretation of data. Braun & Clarke (2013) state that thematic analysis, on the other hand, is theoretically flexible and independent and can be applied across different theoretical frameworks. Thus, thematic analysis was selected for this study as the best method of analysis in order to identify patterns in the qualitative data to convert into meaningful themes (Patton 2015).

As in this study, themes are extracted from data relative to the research question. Thematic analysis can be carried out through different ways (Attride-Stirling 2001; Braun & Clarke 2006; Miles & Huberman, 1994; Patton 2015). According to Braun & Clarke (2006). First, the theoretical position of the thematic analysis should be stated. This research takes an interpretivist approach and takes pains to make transparent the assumptions about the data (Braun & Clarke 2006). Then, coding procedures are undertaken to arrange data into categories for analysis. This allows the researcher to see the overall picture with a focus on theoretical and inductively obtained coded themes. As in the case with the present study, themes are statements of meaning that ‘(1) run through all or most of the pertinent data, or (2) one in the minority that carries heavy emotional or factual impact’ (Ely et al. 1991, p.150).

To further elaborate on how analysis was conducted in this study, the researcher used the four phases of theme development proposed by Vaismoradi et al. (2016), known as qualitative
content and thematic analysis, as a guide for this study, as these researchers are widely cited in the areas of content analysis and thematic analysis. Directed content analysis was used for this study because current research about this phenomenon is incomplete and would benefit from further description (Hsieh & Shannon 2005). The technique was deductive because it provides predictions about themes and constructs of interest to determine the coding scheme and relationships between codes (Mayring 2000). The process was structured, and the researcher began by identifying key concepts for initial coding (Potter & Levine-Donnerstein 1999). Operational definitions were then determined using the theory (Hsieh & Shannon 2005). Data were primarily collected through interviews using specific questions about the predetermined themes and constructs. Coding was done by first reading the transcripts and identifying all text relating to the research questions, and then coding the data using the predetermined codes. Text that could not be categorised using the initial coding scheme received a new code (Hsieh & Shannon 2005).

The findings offered both supportive and non-supportive evidence for theory building (Hsieh & Shannon 2005). This was presented by showing descriptive examples. The study findings were described by reporting the incidence of codes and themes. Percentages of supportive and non-supportive codes were also provided as descriptive data. Theories and prior research guided the discussion of the findings, and new categories and themes further refined the theory and offered contrary perspectives (Hsieh & Shannon 2005). The strength of this approach is that current theories are supported and extended, and reality is made explicit (Hsieh & Shannon 2005). However, the limitation of this approach is that the results will support the bias rather than object to the existing theories.

Vaismoradi et al. (2016) suggest that there are four phases and twelve stages in theme development, described and applied as follows.

### 3.9.1 Phase One: Initialisation

In the initialisation phase, the researcher used interview transcripts and general company websites as main materials for data analysis. The information obtained about the companies from the websites included the vision and mission of the organisation and other generic features that were analysed as part of the descriptive data tables in Chapter 4. Information from the career sections of the websites was not included. The researcher had to gain an overall
perspective of the data and understand the main issues that surface through the process of transcription, reading transcripts and writing notes. This allowed the researcher to focus on the data constructs that showed the trends of interviewees’ perspectives. This phase consisted of three stages.

*Stage 1.1: Reading transcriptions and highlighting meaning units*

Dunn (2010) points out that the researcher is only able to get close and familiar with data through immersion. The researcher achieved this through personally transcribing, then reading and re-reading the transcripts (Braun & Clarke 2006). Being present during the interview as the interviewer also deepened the process of immersion for the researcher. The researcher was also immersed in the data when listing meaningful, recurrent ideas that emerge from the data when transcribing (Vaismoradi et al. 2016). The researcher recognised that the process of personally transcribing the interviews also helped in immersing in the data. Besides having recorded initial observations, the researcher may note significant events or comments that may be repeated or recur within the transcript. Besides the interviewees’ explicit inputs, implicit ideas and meanings may also surface, according to the researcher’s judgement. Piecing everything together then, is possible, and is an essential part of the process in theme development (Vaismoradi et al. 2016).

*Stage 1.2: Coding and looking for abstractions in participants’ accounts*

Braun and Clarke (2006) propose coding as a process of data reduction and analysis to capture a semantic and conceptual reading of the data. This is the first step towards transforming the raw data from a concrete level to a stage of abstraction to develop the themes in a qualitative study. (Graneheim & Lundman 2004). Coding refers to labelling and systematizing the data. Codes are words or short phrases that capture a ‘summative, salient, essence-capturing, and/or evocative attribute for … language-based or visual data’ (Saldana 2009, p. 3). Two types of coding were used for this study: open coding and axial coding. Open coding suggests that in the initial cycles of coding, the researcher is opening up meaning in the data. Axial coding (Charmaz 2006) is the process of reassembling data that were fractured during open coding (Strauss & Corbin 1998).

Open coding allowed the researcher to analyse the raw data (an observation, a phrase, a sentence, or a paragraph) into events or ideas with labels. These first-order concepts (Punch 1998) were then grouped into categories or themes, working toward building a picture or framework of the study. Open coding was completed using Nvivo software, going line-by-line
through each interview so that the researcher could be immersed in the data and gain new insights (Hsieh & Shannon 2005). Axial coding was then applied to the open categories, in order to search for relationships between the categories. The researcher looked for category relationships that could be created through cause and effect, comparison and contrast, steps in processes, perspective taking or other probable associations (refer to Table 3.13).

For this study, the following steps were followed (Hesse-Biber & Leavy 2011). First, coding the text allowed identification of key patterns in the interviews and coding them by means of Nvivo. Next, qualitative codes were transformed into attributes by the software programme. Finally, the attributes formed nodes in tree, demonstrating key relationships identified in the research questions. The researcher used two methods of code creation. First, a preconceived list of categories was used to fit emerging data from the transcripts. This method was used, as the literature review yielded some information about the area of research for this study.

Table 3.13 Examples of Themes and Emergent Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Examples of emergent themes from data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-employment training and education</td>
<td>Educational background</td>
</tr>
<tr>
<td></td>
<td>Schools attended</td>
</tr>
<tr>
<td>Insurance, Taxation and Government Subsidies</td>
<td>Government subsidy schemes</td>
</tr>
<tr>
<td>Organisational structure</td>
<td>Job scope and roles</td>
</tr>
<tr>
<td>Organisational rewards</td>
<td>Promotion and financial incentives (salary increase)</td>
</tr>
<tr>
<td>Organisational commitment</td>
<td>Company goes out of its way to help</td>
</tr>
<tr>
<td>Employee Commitment</td>
<td>Number of years worked</td>
</tr>
<tr>
<td></td>
<td>Individual goes out of way to help</td>
</tr>
<tr>
<td>Skills and Abilities of Individual</td>
<td>Educational level</td>
</tr>
<tr>
<td>Career Development</td>
<td>Promotion and training</td>
</tr>
<tr>
<td>Themes</td>
<td>Examples of emergent themes from data</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Workplace accommodation</td>
<td>Physical structure/environment modifications</td>
</tr>
</tbody>
</table>

Source: Compiled for this research

For the present study, NVivo for Mac Version 10.2.2 was used for coding. Welsh (2002, p.5) describes using computer-assisted analysis as the ‘loom that facilitates the knitting together of the tapestry’. It enhances the quality, rigour and trustworthiness of the research (Jones 2007; Patton 2015; Welsh 2002). According to Jones (2007), the natural emergent system of logical categories and nodes (or codes) assists with the structure and content of the data analysis. Although advantages of using NVivo as compared to manual coding are that it increases the rigour of the data analysis process, the researcher also used the more traditional process of coding with highlighter pens, post-it notes and paper. Some critics of computer-assisted coding claim that it mechanizes analysis similar to quantitative approaches and distances the researcher from the data collected. However, Basit (2003, p. 152) compared the two types of analysis and concluded that coding was an intellectual exercise in both analyses – ‘The package did not eliminate the need to think and deliberate, generate codes, and reject and replace them with others that were more illuminating and which seemed to explain each phenomenon better’.

The coding classification suggested by Vaismoradi et al. (2016) was used to organise the researcher’s codes by using the transcript data as descriptors (see Table 3.14):

- Conceptual code: identifies key elements, domains and dimension of the phenomenon
- Relationship code: identifies links between elements, domains and dimensions
- Participant perspective code: identifies the interviewee’s positive, negative, or indifferent comments about a particular experience
- Participant characteristic code: general characteristics of the interviewees for which the phenomenon happened
- Setting code: general characteristics of the place in which the phenomenon happened

From here, the researcher was able to select relevant sections of the coded transcription to answer the research questions for this study. Also, important codes could be highlighted for further inquiry at a later stage of data analysis.
Stage 1.3: Writing reflective notes

The researcher made research notes throughout the process of generating initial codes in order to identify the audit trail and thereby provide evidence for trustworthiness and validity in the study (Birks, Chapman & Francis 2008). Notes are reflexive and I found that they helped me ‘to remember, question and make meaning of data’ (Vaismoradi et al. 2016, p.105). Krathwohl (2009, p. 337) states that ‘memos capture inferences about the concepts and dimensions underlying the codes’. We took heed of notations such as pauses and repetitions during transcription as it allowed the researcher to explore ideas behind the transcribed conversation (Ryan & Bernard 2003). The transcripts and research notes or memos were recorded separately.

Table 3.14 Examples of Application of Codes

<table>
<thead>
<tr>
<th>Types of codes</th>
<th>Example</th>
<th>Extracted code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual code</td>
<td>Not sure.</td>
<td>Lack of knowledge on the educational background of employees with ASD</td>
</tr>
<tr>
<td>Relationship code</td>
<td>We work a lot with the schools: MINDS, Grace Orchard school. Whether it is autism, intellectual disability, Down’s syndrome.</td>
<td>Necessity of partnership with schools in training/preparing students for employment</td>
</tr>
<tr>
<td>Participant perspective code</td>
<td>They are faster and more meticulous but lacking in communication abilities.</td>
<td>Mixed attitude toward skills and abilities of employees with ASD</td>
</tr>
<tr>
<td>Participant characteristic code</td>
<td>We have a company vision and company goal...we support individuals in the community to give them a job and a sense of belonging in society and get them integrated in community.</td>
<td>Employer/Management’s positive commitment toward employment of employees with ASD</td>
</tr>
<tr>
<td>Setting code</td>
<td>Restructuring of work area because we are working to keep it free of obstruction and easy access.</td>
<td>Workplace accommodation to support employees with ASD</td>
</tr>
</tbody>
</table>

Source: Compiled for this research
3.9.2 Phase Two: Construction

The researcher systematically searched for similarities and differences in order to align each cluster of codes to the relevant research question. The codes were found to be comprehensive and mutual exclusive (Vaismoradi et al. 2016). The researcher then allocated a label with its own definition, translation and description to each cluster with similar codes. This phase had five stages.

Stage 2.1: Classifying

During classification or ‘typification’ (Vaismoradi et al. 2016, p. 105), the researcher grouped together an extensive range of codes as typically similar in meaning. It was recognised that these generalised groupings may have had subtle variance in some details. The principle of mutual exclusiveness applies in this stage, so if a code had attributes of more than one classification group, the researcher assigned it to the one that best fit (Vaismoradi et al. 2016). Thus, any given theme is an iterative main idea that denotes the interviewees’ experiences from an overview of the total data collected. After data with similar themes were identified and categorised, cross-categorical analysis (Yin 1993; Mason 1996) was conducted to examine themes across cases.

Stage 2.2: Comparing

The researcher compared transcripts by revising codes, identifying negative cases and linking codes together to map out themes (Vaismoradi et al. 2016). In general, comparison allows the researcher to create and propose possible themes when a group of codes are reiterated in a pattern and in different scenarios (Vaismoradi et al. 2016). The researcher could then find the link between codes and select themes. The researcher identified themes by ‘testing propositions and asking questions of similarities and differences between codes’ (Vaismoradi et al. 2016, p.105). Codes that were mentioned time and again in a text were identified as themes. The higher the frequency of mention in the data, the more important the theme was considered to be in relation to a particular research question (Ryan & Bernard 2003). This process allowed the researcher to move the analysis to the next level of abstraction.

Stage 2.3: Labelling

Following Vaismoradi et al. (2016), labels for the data were taken from the content of the transcript. The researcher placed the codes into groups with similar meaning and found labels (words, phrases or sentences) that represented the main idea, and captured as complete an idea of the narrative as possible (Sandelowski & Leeman 2012). The researcher extracted labels
from conversation topics, meanings, feelings, and proverbs during the process of re-reading the
transcripts and research notes several times.

**Stage 2.4: Translating and transliterating**

The next stage described by Vaismoradi et al. (2016) is the identification and description of
themes using language (Starks & Trinidad 2007). The fact that the interviews were conducted
and transcribed in the English language simplified this transliteration process. Being proficient
in the English language as well as Singaporean English (or the local colloquial form of English)
used by interviewees allowed the researcher to document the beliefs, verbal and non-verbal
expressions of interviewees and boost the fluency and presentation of labelling of themes (Wolf
2003).

**Stage 2.5: Defining and describing**

Themes that were identical and non-identical to those established from previous literature
(Vaismoradi et al. 2016) surfaced from the transcripts and notes. The researcher described the
themes and provided a comparative analysis of the differences of the non-identical theme from
the earlier established theme. In order to define a theme, the researcher described the processes
step by step and identified what aspect of data it captured. This included the goodness of fit of
the theme in the data set in its entirety relative to the research question (Cho & Trent 2006;
Sparkes & Smith 2014). The researcher also drew theme maps to better understand the
phenomenon, and, develop classifications and relationships between themes during the
analysis.

**3.9.3 Phase Three: Rectification**

Themes are almost fully developed during rectification or ‘verification’ (Vaismoradi et al.
2016, p.106). This is when the researcher reviews the process through ‘distance’ (Vaismoradi
et al. 2016, p.106). By checking and confirming, the researcher becomes more sensitive to the
data and can minimise early and unfinished data analysis. This process also brings to light the
hidden parts of the data analysis process. Rectification has three stages:

**Stage 3.1: Immersion and distancing**

The researcher needs to be immersed in the data, as well as developing distance from the data.
This process allows the revelation of the themes and an assessment of the accuracy of the
coding process. Closeness to the data is essential to provide a true depiction of the participants’
views. Yet, the researcher needs to be critical and rigorous as well, taking the role of an
‘outsider’ (Vaismoradi et al. 2016, p.106). Thus, the process of moving from methodology to findings and back also weaves alignment into the researcher’s study.

**Stage 3.2: Relating themes to established knowledge**

The researcher completed the literature review for this study prior to data collection. However, the continual process of immersion and distancing allowed the researcher to develop themes from the literature review after data collection and analysis. Thus, themes surfaced from both raw data inductively and theoretical frameworks deductively through a priori knowledge in this study. The researcher was then able to infer beyond the data provided, and, generate innovative themes (Snelgrove 2014). Emergent themes surfaced and evolved during the data. According to Patton (2002, p.40), an emergent design is ‘openness to adapting enquiry as understanding deepens and/or situations change; the researcher avoids getting locked into rigid designs that eliminate responsiveness and pursues new paths of discovery as they emerge’. At this stage, the researcher prepared theme statements and linked themes into theoretical models to develop this study’s story line.

**Stage 3.3: Stabilizing**

The next stage of data analysis is stabilizing (Vaismoradi et al. 2016) where the researcher described themes and subthemes. Subthemes include ‘summaries and examples’ from participants’ narratives related to elements that build themes. This includes thematic meanings and the extent of their saturation (Starks & Trinidad 2007). For the purpose of providing rigour, data saturation, description of the original context of data, and material for reflection on data analysis are demonstrated in this study (Koch 2006).

### 3.9.4 Phase Four: Finalisation

Following Vaismoradi et al. (2016, p.107), the researcher developed a narrative or ‘story line’ at this point by describing and linking the themes that relate to the research questions. The story line showed possible theoretical data saturation where the researcher reviewed the entire process of data analysis, adding ideas and including data, which enhanced theme saturation. This phase has one stage.

**Stage 4.1: Developing the story line**

The researcher developed a story to describe and link themes together at this stage. This process includes choice-making, depicting and sequencing findings to put together a story. The
researcher used simple descriptions and theme abstraction (Vaismoradi et al. 2016). Birks et al. (2009) proposed four guiding principles in the formation of stories:

- Theoretical precedence – write story in a manner to connect themes and subthemes with preceding relationships
- Variation – account for each case
- Limited gaps – identify and remove holes, gaps and inconsistencies
- Use of evidence and appropriate style – creative and faithful to data

During this stage, the researcher linked the story line to the literature reviewed to develop a better understanding of the phenomenon, and thereby to create meaning (Birks et al. 2009).

### 3.10 Trustworthiness and Rigour

Consistent with qualitative data analysis, which allows for multiple interpretations of the same data, this study does not allow for generalisation across a population (Bryman 2008; Ezzy 2002). Nevertheless, the researcher has conscientiously accounted for ‘multiple perspectives, interests and realities’ (Patton 2015, p. 575). In qualitative research, validity takes the form of subjecting one’s findings to competing claims and interpretations. It provides the reader with strong arguments for a particular knowledge claim (Kvale & Brinkmann 2009) and includes areas such as triangulation, causal modelling and reflexivity. Triangulation addresses the area of construct validity and the researcher used both an inductive and deductive approach to cross reference findings. The researcher also used manual coding and a computer assisted programme for coding to strengthen the integrity of presenting participants’ views (Silverman 2010). Reflexivity is used to examine the internal validity (rigour) of the research and deals with the subjective aspects of it when the researcher is present and provides perspective into this research. The researcher also used rich descriptions to uphold trustworthiness in this study (Merriam 2001). This included giving quotes to support and explain categories and themes to create meaning for an external reader (Merriam 2001).

#### 3.10.1 Triangulation

Triangulation is strategically applying various construct operationalisations to refine the construct from other influences in its operationalisation. Simply put, it means using various means to define a construct. Triangulation is collecting data through multiple methods and from different sources. It is beneficial because it allows multiple perspectives on issues, more
information on emerging concepts, corroboration, and stronger substantiation of constructs (Glaser 1992).

It is possible to triangulate through various paradigms (Greene & Caracelli 1997; Greene & McClintock 1985), various key players, various analyses, various theories and value structures, as well as various targets in a research study, a concept called ‘multiplism’ by Cook (1985). Triangulation approaches include addressing measurement level through causal modeling (Joreskog & Sorbom 1984) or via methodology through meta-analysis (Glass et al. 1981; Rosenthal 1991).

Triangulation types described by Denzin (1970) that are used in this research are data triangulation, theory triangulation, between methods triangulation by combining methodologies including observing participants, analysing content, and face-to-face interviews. Triangulation however, does not solve all questions on construct validity and does not produce perfect measures. The research study takes effort to focus on construct triangulation to reflect that construct’s key role in the research and the challenge in attaining or finding suitable measurements.

To illustrate the elements of triangulation, a convergence coding matrix is used to detail the process.

- Agreement and convergence
  Across the themes, instances of agreement occurred when there was agreement in meaning and/or prominence and provincial examples. One of these theme areas was the importance of training, as identified in the current research and the semi-structured interviews.

- Partial agreement
  Agreement in the theme meaning or prominence, but only partial agreement in provincial coverage or examples was in the theme of workplace partnerships with internal and external stakeholders.

- Silence (theme arises from one set of data rather than another) and dissonance
  Although there were instances in which there was silence in one set of results compared with another in terms of both the appearance of a theme and provincial examples, there were no instances in which there was full disagreement on both theme meaning or prominence and
provincial coverage or examples between two sets of results. This was in the theme of workplace bullying and was raised as a concern by one participant, but it was not reiterated by other participants.

Triangulation can be used to verify two sets of findings or to describe the process of studying a problem using different methods to obtain a more complete overview. Data triangulation in this study involved using different types of data sources (e.g., interviews and reflective notes) or respondent groups. The triangulation in this study consisted of conducting interviews with employers who have employed people with ASD and those who have not employed people with ASD.

Methodological triangulation involves the use of more than one research method or data collection technique. For Silverman and Seale (2005), this involves a variety of qualitative approaches (e.g., interviews and document analysis). Interviews with structured questions and open-ended questions were combined to yield semi-structured interview outcomes. NVivo was also used to generate word clouds to yield codes as outcomes.

3.10.2 Causal Modelling

On one hand, traditional causal modelling is a means for analysing variables through various measures (manifest variables) of a hidden construct (latent variable) (Miles & Hubermann 1994). Researchers need to state what are the variables relating to specific latent variables. The strategic analysis then extracts common variance from the manifest variable leading to a latent variable. Measurement includes a key construct and error variances.

On the other hand, qualitative causal modelling, as undertaken in this study, is done through mapping the structure of ideas, variables or codes. In qualitative data analysis, coding approaches (such as open coding, axial coding, or selective coding) are used and conclusions drawn from and theories built around coded data (Brightman 2003).

3.10.3 Reflexivity

Reflexivity shows the interdependence between the researcher and the research (Maxwell 1996). It is the awareness that ‘all knowledge is affected by the social conditions in which it is produced’ (Hesse-Biber & Leavy 2011, p. 38). Reflexivity embraces diversity and complexity, as well as the researcher’s values, attitudes and theoretical perspectives in the research process.
Reflexivity also acknowledges subjectivity in the construction of realities in research and is a key element in the interpretivist paradigm. The researcher made explicit the researcher’s philosophical position regarding ontology and epistemology. Reflective notes were also taken during the process of initial coding. According to Willig (2001), there are two types of reflexivity: personal and epistemological. The researcher used personal reflexivity through values, beliefs, experiences, interests, political commitment, and examining how the research affected her personally and professionally (see Section 3.10.3). Thus, the findings of this study are relative to the researcher’s standpoint as an observer. The researcher also used epistemological reflexivity by listing the limitations and delimitations of the study in Chapter 5.

Personal reflexivity in qualitative methodology refers to the researcher’s values, beliefs, experiences, interests and the influence on an enquiry (Charmaz 2006). In exercising self-reflexivity in this study, the researcher experienced peer debriefing through gruelling and difficult questions and reviews by her supervisors, as well as an external editor. As a requirement of the DBA degree, the researcher also attended a DBA symposium once every six months over the course of the DBA, where she had to present phases of the research to academic staff and fellow students from the Southern Cross University Business School both in Australia and Singapore. The researcher’s past experiences as a social worker, speech pathologist and entrepreneur also contributed to the viewpoints in this study. Reflexivity was at the centre of the interpretive process, and the emergent themes were part of that process (Josselson 2007).

### 3.10.4 Status of Interview data

Interview data are dependent on self-reported accounts by participants (Huber & Power 1985). For example, the meaning of skills and abilities of employees is subjected to the interviewees’ guess of what skills and abilities should or should not be. As an interpretivist, the researcher accepts that the interviewees’ views as true and valid. Some interviewees may have reported perspectives about employment that were unacceptable for disclosure or may have felt uncomfortable talking about their own worldview (Bryman & Cassell 2006). The researcher tried to minimise this by conducting the interviews onsite at the interviewees’ workspaces and offices, in a non-threatening and supportive environment where the interviewees could express their worldview more freely. All perspectives were seen as valid and were reported to reflect objectivity and to minimise bias (Jennings 2005).
3.11 Ethical Considerations

Any research study, including in business, must adhere to a strict ethical code (Kimmel 1996; Ticehurst & Veal 1999). In order to satisfy these conditions, as well as espousing personal integrity and honesty, the researcher also obtained informed consent for the interviews conducted. Before collecting the interview data, including the execution of the pilot study, ethics approval was sought from Southern Cross University’s Ethics Committee. Approval was obtained in November 2013. The ethics approval number for this research study is ECN-13-251 (see Appendix D). Ethical constraints did not apply to data collected from the public domain on the Internet.

3.12 Fieldwork Issues

A consent form and information sheet (see Appendices A & C) were provided to willing interviewees before the interviews. The information sheet introduced the researcher and summarised the nature of the research. The consent form enabled interviewees to agree to informed consent. It included statements of confidentiality, security and recording. Semi-structured interview questions were asked during the interview via the pre-prepared questionnaire form seen in the Appendix B. During the interview, interviewees were given an option of whether they want a summary report of the findings of the study when the research was completed. Throughout this process, they were de-identified on the transcripts and personal data was not to be released to external parties.

The researcher fully recognises the vulnerability of this group of people with autism and mild intellectual ability and thus the researcher did not seek any input from the individuals, their parents, or their schools at all. The researcher did not approach any of these people to solicit input for this research; only employers/ organisation representatives from HR or related fields were approached.

To address issues of anonymity and confidentiality, all the names of the interviewees were coded with alphanumeric code in the transcript as well as in all the written records. After the interviewees had confirmed the accuracy of the transcripts the researcher destroyed the codes so that the true names of the interviewees could not be identified. Local culture was respected and there was no interview question based on or related to culture, race, religion or any sensitive personal detail.
According to PM Lee, Singapore is ‘a society where each race is encouraged to preserve its unique culture and traditions, and, appreciate and respect those of others’ (Straits Times 2017). It is a collectivistic society with Confucian teaching on the value of the family as a unit (Thomas 2014). Singapore is also a multiracial society with multicultural ideals (Ortiga 2014). Many countries grapple with the challenge of supporting diversity or multiculturalism to create a unified identity (Ho 2009). Singapore uses the approach of four overlapping circles to represent the coexistence of four races: Chinese (77 per cent), Malays (13.9 per cent), Indians (7.9 per cent) and others (Ooi 2005).

3.13 Chapter Summary

This chapter begins by stating the philosophical concerns guiding this inquiry. The researcher’s justification for the choice of the interpretivist paradigm was explained. Selection of this approach meant that questions about employment through multiple points of view could be answered. Interviewing through semi-structured interviews was used as a qualitative research method to reflect the discourse regarding employment of people with ASD. Semi-structured interviews were used in data collection as the majority of question items need to be guided and yet allow the respondent flexibility to share more of their worldview if they wanted (refer to Figure 3.4). The chapter explains in detail how preliminary ideas and concepts could be developed during the interview process.

The chapter then describes the processes and steps taken for the pilot study and the qualitative interviews in data collection. It also elaborates on the steps to be taken in data analysis for the qualitative interviews. Issues of trustworthiness and rigour are also broached. The researcher concludes with a discussion of ethical concerns in this study, and the status of the data collected by means of interviews.

The next two chapters cover the analysis results and findings, as well as compare the findings with extant literature and include possible future research in this area. In the data analysis section of this study, the researchers’ arguments, observations, and suggestions are taken into consideration to triangulate with this study’s findings in the Singaporean context. Chapter 4 outlines the findings from the qualitative interviews by presenting the words of the potential and current employers in the form of quotations and word clouds generated by NVivo, the computer software programme used for analysing interview data.
CHAPTER 4 FINDINGS—EMERGING PATHWAYS

4.1 Introduction

This chapter has 15 sections. Section 4.1 introduces the chapter. Section 4.2 presents the descriptive analysis of employers that had and had not employed people with ASD. Section 4.3 presents the results for the identified themes. Section 4.4 presents the emergent themes relating to employers of people with ASD. Sections 4.5–4.10 discuss the following themes for companies that had employed people with ASD: training (Section 4.6), time (Section 4.7), skills and abilities (Section 4.8), ‘get’ (Section 4.9) and people (Section 4.10). Sections 4.11 and 4.12 discuss the ‘come’ theme and the government and incentives theme, respectively, for companies that had not employed people with ASD. Section 4.13 presents the emergent themes through the extracted codes. Section 4.14 presents the dimensions of the emergent conceptual model for this study. Section 4.15 summarises the chapter. Figure 4.1 illustrates the structure of this chapter.

A pilot study based on the interview questions was conducted after Southern Cross University provided ethics approval. After the interview questions were finalised (see Appendix B for a list of the guiding questions), the information sheet (see Appendix A) and consent form (see Appendix C) were emailed to the identified potential participants. Thematic analysis was then conducted on the collected data to answer the following research questions:

RQ 1: How would the proposed factors identified in the literature review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?

RQ 2: What are the main viewpoints of employers that encourage or inhibit the employment of people with ASD in organisations?

RQ 3: From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?
Figure 4.1 Structure of Chapter 4
Source: Developed for this research
4.2 Descriptive Analysis of Employers Relative to the Employment of People with ASD

The interviews were conducted for a period of six months from May 2016 to October 2014. A total of 31 information sheets were emailed to participants, with 24 agreeing to participate. Twelve interviewees had employed people with ASD and 12 interviewees had not. The response rate was around 80 per cent (12 of 15) for employers with experience employing individuals with ASD and 75 per cent (12 of 16) for employers who had not employed people with ASD. Table 4.1 profiles the final sample of interviewees.

Table 4.1 Company Profiles

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Classification</th>
<th>Had Employed (No.)</th>
<th>Had Employed (%)</th>
<th>Had Not Employed (No.)</th>
<th>Had Not Employed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Industry</td>
<td>Financial Services</td>
<td>9</td>
<td>75.0</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Food and Beverage</td>
<td>1</td>
<td>8.3</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Healthcare</td>
<td>1</td>
<td>8.3</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Hospitality</td>
<td>1</td>
<td>8.3</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Information Technology</td>
<td>1</td>
<td>8.3</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Lifestyle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Retail</td>
<td>1</td>
<td>8.3</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>Position of Company</td>
<td>Chief Executive Officer</td>
<td>5</td>
<td>41.7</td>
<td>12</td>
<td>100.0</td>
</tr>
<tr>
<td>Representative</td>
<td>Human Resources Manager/Head</td>
<td>1</td>
<td>8.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>50.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company Established Since</td>
<td>5 years or less</td>
<td>5</td>
<td>41.7</td>
<td>7</td>
<td>58.3</td>
</tr>
<tr>
<td></td>
<td>6–10 years</td>
<td>3</td>
<td>25.0</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>11–15 years</td>
<td>1</td>
<td>8.3</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>16–20 years</td>
<td></td>
<td></td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>21–30 years</td>
<td>2</td>
<td>16.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31–40 years</td>
<td>1</td>
<td>8.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.2.1 Nature of Business/Service Industry

Table 4.1 compares the types of service industries operated by the companies in the sample that had employed people with ASD with those that had not. In the case of the former, the clear majority among service industries was food and beverage, accounting for approximately 75 per cent. Other businesses involved in the employment of people with ASD, but at significantly lower rates, were retail (8 per cent), healthcare (8 per cent) and hospitality (8 per cent).

In the case of companies that had not employed people with ASD, the food and beverage service industry also represented the majority of industries operated (42 per cent), followed by lifestyle (17 per cent), healthcare (17 per cent), retail (8 per cent), information technology (8 per cent) and financial services (8 per cent).

### 4.2.2 Position of Company Representative

Table 4.1 compares the position of the company representative interviewed from companies that had employed people with ASD with those that had not. For the former, the majority was
the manager/head, accounting for approximately 75 per cent. The CEO position was relevant to the views highlighted in this study (around 17 per cent), as was human resources (8 per cent).

In the case of companies that had not employed people with ASD, all companies interviewed had representatives who held the position of CEO or business owner.

### 4.2.3 Period since Company Establishment

Table 4.1 examines the number of years that each company had been running since its establishment and compares those that had employed people with ASD and those that had not. For the former, approximately 33 per cent of companies had been operating for five years or less. Other companies in this study had been running for 11–15 years (33 per cent), 21–30 years (17 per cent), 6–10 years (8 per cent) and 31–40 years (8 per cent).

For companies that had not employed people with ASD, approximately 58 per cent had been operating for five years or less. Other companies in this study had been running for 6–10 years (approximately 17 per cent) and 11–15 years (17 per cent).

### 4.2.4 Company Location

Table 4.1 shows the location of most of the companies interviewed that had employed people with ASD. Around 75 per cent were located in Central Singapore, followed by North Singapore (17 per cent) and East Singapore (8 per cent). One hundred per cent of companies that had not employed people with ASD were located in Central Singapore (see Figure 4.5).

### 4.2.5 Total Number of Employees

Table 4.1 compares the total number of employees for most of the companies in the sample that had employed people with ASD with most companies that had not. For the former, those with 5–19 employees accounted for approximately 42 per cent of the sample. Companies with 20–199 employees accounted for approximately 25 per cent, and those with 1–4 employees or 200 or more employees accounted for 17 per cent each. For most of the companies in the sample that had not employed people with ASD, 83 per cent of companies had 1–4 employees and around 17 per cent had 20–199 employees.
4.2.6 Age of Employees

Table 4.1 compares the age of the employees for most of the companies in the sample that had employed people with ASD and those that had not. For the former, employees aged 25–34 years accounted for approximately 50 per cent. Other companies that were relevant in this study had employees aged 15–24 years (33 per cent) and 45 or more years (17 per cent). For most of the companies in the sample that had not employed people with ASD, employees were aged 25–34 years and 35–44 years, accounting for approximately 33 per cent each. At significantly lower percentages were employees aged 45 years or more (25 per cent) and 15–24 years (8 per cent). After examining the sample characteristics and basic demographics, the study explored the themes identified in Chapter 2: skills and abilities; pre-employment training and education; organisational structure; employee organisational commitment; employer organisational commitment; return to work; workplace accommodation; organisational rewards; career development or organisation development; and government incentives, insurance and taxation. These dimensions are discussed in depth below for employers who had employed people with ASD.

4.3 Findings for Research Question 1

RQ 1: How would the proposed factors identified in the literature review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?

4.3.1 Skill and Ability—Do They Mean the Same Thing?

One of the research objectives for this study was to identify and explore the employers’ or potential employers’ understanding of the skills and abilities that people with ASD would need for a job in the services industry in Singapore. To clarify the concept of skills and abilities, the researcher asked interviewees whether ‘skill’ is synonymous with ‘ability’. All the interviews were conducted in English and the comments from the interviewees were reported verbatim. Often, Singlish or Singaporean English (the local colloquial form of English) was used and meanings were derived from words used in this context. The transcripts’ excerpts and quotes were direct from the interview process and unmodified to Standard English. Forty per cent of the interviewees felt that skill and ability were synonymous, while 60 per cent felt that they did not mean the same thing.
The results were similar for companies that had employed people with ASD and those that had not, with both types giving descriptions of tasks and jobs that were already broken down into steps such as ‘folding clothes’ or ‘wash and blow’. Both groups also identified communication or the ability to communicate as an important ability. However, the group of companies that had employed people with ASD emphasised the importance of communication.

The group of companies that had employed people with ASD also listed personal characteristics or traits as a feature/definition of ability, such as ‘hardworking’, ‘lazy’ and ‘work hard’. The group of companies that had employed people with ASD also listed the concept of learning as an important part of skill and ability:

*Can be learnt over time. (Interviewee A12, Alistair)*

*A skill can be learnt...Ability is not something you can learn. (Interviewee A10, Abraham)*

*Most important thing is that they are willing to learn and prepared to work hard. (Interviewee B16, Bond)*

*Showing the ability to learn. (Interviewee A5, Athan)*

Table 4.2 summarises the responses to questions that addressed the theme of skills and abilities for companies that had employed people with ASD. Interviewees were asked the questions: What is ability? and What is skill? Table 4.3 summarises the responses for companies that had not employed people with ASD.

**Table 4.2 Summary of Skills and Abilities for Companies that had Employed People with ASD**

<table>
<thead>
<tr>
<th>Skill</th>
<th>Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic design, software, the skill is really the talent in this particular job.</td>
<td>You can do it, once you do it every day it is easy for you.</td>
</tr>
<tr>
<td>Skill to doing cappuccino or latte.</td>
<td>Some abilities are natural.</td>
</tr>
<tr>
<td>Can be learnt.</td>
<td>Not something you can learn.</td>
</tr>
<tr>
<td>Because what we do is skills involved.</td>
<td>Hardworking is an ability, not a skill, some people are just lazy.</td>
</tr>
<tr>
<td>Individual personal touch.</td>
<td>Most important thing is that they are willing to learn and prepared to work hard.</td>
</tr>
</tbody>
</table>
Everyone has the same skill. | Different people have different abilities, like communication.
---|---
Fold clothes, they are faster and more meticulous. | Communication abilities, communicating with people.
Something that not everyone can give you. | What you can perform in your daily role or task you do.
I can teach you or give you the knowledge but putting the knowledge into practice is a skill. | The ability to learn.
There is hard skill and soft skill and see what the individual can use to perform in the company. Hard skills would be like labour work. For example, simple filing and packing. Soft skill is language. Able to communicate with the rest.
Cooking/other skills can be learnt over time.
Cashier is a skill. How you make the ingredients is a skill.

Source: Developed for this research.

Table 4.3 Summary of Skills and Abilities for Companies that had not Employed People with ASD

<table>
<thead>
<tr>
<th>Skill</th>
<th>Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special training.</td>
<td>Intellectual and ability to communicate effectively with colleagues and clients.</td>
</tr>
<tr>
<td>A learned ability to carry out a task.</td>
<td>If the person is able to do the job without any significant risk.</td>
</tr>
<tr>
<td>Would depend on the job role.</td>
<td>Capable of handling the job. Get someone that cannot work at all and give you problem that is a headache.</td>
</tr>
<tr>
<td>The talent in this particular job.</td>
<td>Ability to cope with whatever the task you are given to do.</td>
</tr>
<tr>
<td>If they can produce something valuable for the company.</td>
<td></td>
</tr>
<tr>
<td>Simple jobs like photocopying.</td>
<td></td>
</tr>
<tr>
<td>Simple job. Wash and blow.</td>
<td></td>
</tr>
<tr>
<td>Skill</td>
<td>Ability</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Simple techniques for food preparation and baking.</td>
<td></td>
</tr>
<tr>
<td>Good in productivity.</td>
<td></td>
</tr>
<tr>
<td>Skill to be learnt. After a while, that skill can be learnt if you have been on the job for a while.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed for this research.

### 4.3.2 Organisation Structure involving the Employment of People with ASD

Table 4.4 presents the numbers distribution of the organisational structure in companies that employ people with ASD. As shown, the highest educational qualification of employees with ASD in the sampled companies was O Level (four, or 33 per cent). Further, employees with ASD were mostly service staff/crew (six) and received a monthly wage of S$1,000–$1,999 (six). For job flexibility, companies mostly had options for flexible hours (six) and job rotation (six). One of the companies in the sample allowed employees with ASD to have ‘birthdays off’ work, and they implemented:

‘Love hour’ where employees could go off work earlier every second week of the month (Interviewee A5, Athan).

The researcher also used Morphew and Hartley’s (2006) methodology to analyse each mission statement by identifying ‘core terms’ in ranked importance. The first term or grammatical syntagma was awarded 3 points, the next one 2 points and the third 1 point. Only the first three terms were awarded points, and the term with the most points was the most important element upon which the companies focused.

The analysis was conducted as in the example below:
Mission: To inspire and nurture the human spirit—one person, one cup and one neighbourhood at a time.

The order for the mission statement example is:
Inspire and nurture person—3 points
Inspire and nurture cup—2 points
Inspire and nurture neighbourhood—1 point

Another example is:
Mission: To build and return the dignity to the disadvantaged and disabled through vocation with passion.

The order for the mission statement example is:

Dignity to the disadvantaged and disabled—3 points
Through vocation—2 points
Passion—1 point

The researcher also interpreted the syntagmas to avoid the numerous terms that would be difficult to infer from. Further, not all companies interviewed had mission statements. Subsequently, the expressions were grouped into clusters, and the themes that emerged were:

• product and service
• customer and consumer
• environment and culture
• business processes.

The theme that scored the most points was product and service. The theme that scored the least points was business processes.

Table 4.4 shows that educational qualifications for employees with ASD for most of the companies in the sample was O Level, accounting for approximately 33 per cent. Other educational qualifications that were more relevant in the employment of people with ASD were Diploma and Degree (17 per cent). At a significantly lower percentage were qualifications such as Nitec, Workplace Literacy and Numeracy, Graduation Certificate and ITE (8 per cent each). The total number of job designations of employees with ASD is 24 because each job site provides approximately two sets of job scopes. This provides opportunities for job rotation, job flexibility and job incentives for employees.
### Table 4.4 Summary of Elements of Job Requirements

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Classification</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the highest educational qualifications of employees with ASD?</td>
<td>O Levels</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Nitec</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Workplace Literacy and Numeracy</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Graduation Certificate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ITE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>2</td>
</tr>
<tr>
<td>What are the job designations of employees with ASD?</td>
<td>Café Partner</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Barista</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Crew Member</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Service Staff/Crew</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Retail Associates</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Trainee</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Kitchen Crew</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Kitchen Commis</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Room Attendants</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Public Area Attendants</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>House Steward</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Waiter</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Team Leader</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Guest Services Executive</td>
<td>1</td>
</tr>
<tr>
<td>What are the monthly wages of employees with ASD?</td>
<td>$0–$999</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>$1000–$1999</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>$2000–$2999</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>More than $3000</td>
<td>0</td>
</tr>
<tr>
<td>Is there job flexibility in your company for employees with ASD?</td>
<td>Part-time work</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Work from home</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Flexible hours</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Job rotation</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Developed for this research.
4.3.3 Employees’ Organisational Commitment involving the Employment of People with ASD

Most of the companies indicated that the staff turnover rate for employees with ASD was around 3–4 years (42 per cent). Most companies also encouraged employees with ASD to develop real skills and long-term careers (75 per cent). Opportunities for training or internships were also provided by most organisations for people with ASD (67 per cent). Table 4.5 presents the elements of employees’ commitment.

Table 4.5 Summary of Elements of Employees’ Commitment

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the company staff turnover rates for staff with ASD?</td>
<td>1–2 years</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>3–4 years</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>5 years or more</td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Do you encourage your employees with ASD to develop real skills and long-term careers (performance appraisal, training plan)</td>
<td>Yes</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Does your company offer training opportunities or internships?</td>
<td>Yes</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Developed for this research.

4.3.4 Employers’ Organisational Commitment involving the Employment of People with ASD

Table 4.6 presents the frequencies and percentages for responses to questions about organisational commitment to employees with ASD. The table shows that most interviewees (75 per cent) provide supervision and support for employees with ASD. Twenty-five per cent of the interviewees work in companies that do not provide supervision or support. Fifty per cent work in companies that provide supported employment opportunities for employees with ASD, and 50 per cent work in companies that have a designated HR officer or staff member to handle issues pertaining to employees with ASD. In some cases, the responsibility was shared between the HR officer and the job coach.
Table 4.6 Summary of Elements for Employers’ Organisational Commitment

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Classification</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you provide supported employment opportunities for your employees with ASD?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Do you provide supervision and support by supervisors and mentors for your employees with ASD?</td>
<td>Yes</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Do you have a designated HR officer or staff to handle issues or concerns pertaining to employees with ASD?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Does your company collaborate with schools to provide any of the following: cooperative education, school-sponsored enterprise, technical preparation, internships and career majors?</td>
<td>Yes</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Developed for this research.

It also took time and patience for employees to adjust to the workplace modifications, as suggested by the following comments:

*Time. Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months. So we put a lot of time. (Interviewee A5, Athan)*

*Cooking and other skills can be learnt over time. (Interviewee A12, Alistair)*

### 4.3.5 Return-to-Work involving the Employment of People with ASD

As shown in Figure 4.8, most companies (75 per cent) in the sample provide return-to-work options for employees as part of job flexibility (see Figure 4.8).
4.3.6 Workplace Accommodation involving the Employment of People with ASD

The responses of the companies to organisational commitment to employees indicate that HR and supervisors provide supported employment opportunities, supervision, support (see Table 4.6) and other forms of workplace accommodation. In addition, one interviewee mentioned that these different elements of workplace accommodation had been integrated into the company’s operations. These elements include job restructuring, worksite modification and work-schedule changes. In terms of job restructuring, one interviewee said that, in the context of the food and beverage industry:

*They did not have any role as bussing, for example clearing tables at a restaurant, opening and closing tasks, setting up of station, and preparation of ingredients. This is a task of café partners. All employees are previously baristas. Employees with ASD can stop at bussing. Before that, it was not possible.* (Interviewee A7, Archer)

Other interviewees did not make any changes to the job specifications in their company, but they gave employees with ASD time to acclimatise themselves to the changes. Another worksite modification example that was mentioned involved converting a room into a rest area so that employees with ASD could have a place to rest if they had an anxiety attack. Work-schedule changes included shorter working hours of approximately four hours each time. The
employees were also involved in weekend and night shifts, but the specified hours were still flexible.

4.3.7 Organisational Rewards involving the Employment of People with ASD

One company in the sample gave employees with ASD promotion opportunities to enable them to be team leader. However, most companies in the sample did not provide opportunities for the promotion of employees with ASD (see Figure 4.9).

One interviewee provided outdoor activities as an organisational reward, as well as opportunities for community integration for employees with ASD:

*The company sometimes have outdoor activities for them by the special school and the company. (Interviewee A3, Arnold)*

Cash vouchers were also given as part of a financial bonus or incentive:

*For part-timers when they exceed 100 hours, they will get $15 voucher. (Interviewee A10, Abraham)*

Financial incentives were given by one company based on the work performed by each employee. They were not differentiated because they had ASD. Another company also gave financial incentives to employees with ASD, but not bonuses. Bonuses were also given to employees with ASD in some companies. One interviewee said:

*They are also entitled for AWS, thirteen month, pay increment, not treated differently. (Interviewee A5, Athan)*
As shown in Figure 4.10, most of the companies in the sample placed employees with ASD on the same salary scale as employees who did not have ASD (83 per cent).
4.3.8 Career/Organisation Development involving the Employment of People with ASD

As shown in Table 4.7, most companies (58 per cent) did not provide opportunities for career growth and development for employees with ASD. One interviewee said:

*Didn't have very much of this. (Interviewee A8, Allan)*

Four interviewees talked about providing such opportunities through training. One interviewee said:

*Promoted a few of them because they show potential and ability to do their task. (Interviewee A5, Athan)*

Another interviewee discussed training and the skills that were needed:

*We will do training one week twice. How to serve, how to carry trays, how to lift up, because they are new. They see that as easy, but it is not that easy. (Interviewee A9, Adolph)*

One interviewee said that they had to restructure the job to provide such opportunities:

*Job restructuring before that not possible to do the job of bussing. That is a task of café partners. (Interviewee A7, Archer)*

Table 4.7 shows that most organisations that were interviewed provided supportive work environments with opportunities for employees to obtain training and jobs in similar positions outside the company. Of the sample, 83 per cent of companies would consider providing on-the-job training opportunities to people in the community and to people with ASD so they can acquire the skills required for the job. Further, 67 per cent of the companies in the sample felt that their employees with ASD would be able to obtain similar positions outside the company, so that skills were transferable and could be used in another job or work environment. However, only 50 per cent of companies in the sample provided a mentorship scheme, and 58 per cent did not provide individualised career goals or career pathways for their employees with ASD. Companies in the sample were less supportive in terms of mentorship schemes and individualised career goals.
Table 4.7 Summary of Elements of Career or Organisation Development

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Classification</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you consider providing training opportunity to people from the local community?</td>
<td>Yes</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Are your employees with ASD able to get similar positions or jobs outside the company?</td>
<td>Yes</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Depends on interest/if allowed to</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Is there a mentorship scheme in place?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Do you provide individualised career goals or paths for your employees with ASD?</td>
<td>Yes</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>7</td>
<td>58</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Figure 4.5 Education Qualifications of Employees with ASD
Source: Developed for this research.

4.3.9 Incentives, Taxation, Government Subsidies and Insurance

Table 4.8 summarises the responses to the interview questions that address the theme of incentives, taxation, government subsidies and insurance for companies that had employed people with ASD. Of these organisations, 50 per cent were aware and 50 per cent were unaware
of government incentives. Further, 50 per cent were aware of subsidies from agencies or organisations they could approach if they were interested in employing people with ASD. No organisations interviewed were aware of any subsidised insurance schemes available for employers.

Table 4.8 Summary of Elements of Incentives, Taxation, Government Subsidies and Insurance Questions for Companies That Employed People with ASD

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Classification</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you aware of any government incentives for employers who employ persons with ASD, e.g., tax relief?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Are you aware of any subsidised insurance schemes available for employers who employ persons with ASD?</td>
<td>Yes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>Are you aware of any subsidy from any agency for employing persons with ASD?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Are you aware of who you can approach if you are interested to hire persons with ASD?</td>
<td>Yes</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: Developed for this research.

Table 4.9 summarises the interview questions and responses that address the theme of incentives, taxation, government subsidies and insurance for companies that had not employed people with ASD. These organisations were mostly unaware of government incentives (75 per cent), subsidies from agencies (75 per cent) or organisations they could approach (75 per cent) if they were interested in employing people with ASD.
Table 4.9 Summary of Elements of Incentives, Taxation, Government Subsidies, Insurance Questions for Companies That Had Not Employed People with ASD

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Classification</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you aware of any government incentives for employers who employ persons with ASD, e.g., tax relief?</td>
<td>Yes</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Are you aware of any subsidised insurance schemes available for employers who employ persons with ASD?</td>
<td>Yes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>Are you aware of any subsidy from any agency for employing persons with ASD?</td>
<td>Yes</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Are you aware of who you can approach if you are interested to hire persons with ASD?</td>
<td>Yes</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>9</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: Developed for this research.

### 4.4 Findings for Research Question 2

RQ 2: What are the main viewpoints of employers that encourage or inhibit the employment of people with ASD in organisations?

#### 4.4.1 Codes involving the Employment of People with ASD

The next stage of this study sought to explore the interviewees’ main concerns regarding employment. The word-frequency list generated by NVivo showed that the interviewees used words such as ‘work’, ‘training’, ‘people’, ‘time’ and ‘get’ most frequently, as shown in Table 4.10. The interviewees were also mostly in agreement with the areas discussed during the interviews, and the most frequently used word was ‘yes’, as shown in Table 4.10.
Table 4.10 Word-frequency List from NVivo

<table>
<thead>
<tr>
<th>Word</th>
<th>Length</th>
<th>Count</th>
<th>Weighted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>4</td>
<td>109</td>
<td>3.04%</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>52</td>
<td>1.45%</td>
</tr>
<tr>
<td>Training</td>
<td>8</td>
<td>50</td>
<td>1.40%</td>
</tr>
<tr>
<td>People</td>
<td>6</td>
<td>39</td>
<td>1.09%</td>
</tr>
<tr>
<td>Abilities</td>
<td>9</td>
<td>27</td>
<td>0.75%</td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>27</td>
<td>0.75%</td>
</tr>
<tr>
<td>Get</td>
<td>3</td>
<td>21</td>
<td>0.59%</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Figure 4.12 shows the word cloud generated by NVivo to illustrate the words that interviewees tended to use more repetitively (Survey Gizmo 2016). The use of word clouds is a popular method by which text data can be visually presented. The advantage of word clouds is that tabular versions of data cannot organise and summarise research data into a pictorial representation (Dickinson 2010). The larger and bolder the word presented, the higher the frequency of word use. From the word cloud, trends and patterns can be identified in semantically meaningful clusters (Cui et al. 2010). That is, the word cloud can be used to conduct a theme analysis of the sample (Ramlo 2011). The themes of ‘work’, ‘yes’, ‘training’, ‘people’, ‘abilities’, ‘time’ and ‘get’ emerge when the qualitative sample is viewed as a word cloud. In Figure 4.12, the word ‘work’ was removed to determine whether there was balance among the ideas and themes within the sample. The size of the font for the word ‘training’ was seen to be prominent in the word cloud, together with ‘people’ and ‘yes’. The size of the words ‘abilities’ and ‘time’ were less prominent in the sample. Other prominent words in the word cloud were ‘supervisors’, ‘community’, ‘qualifications’, ‘highest’ and ‘salary’. The words that prominently occurred in both the interview questions and the responses of the interviewees who had employed people with ASD were ‘work’, ‘yes’, ‘training’ and ‘abilities’. 
Figure 4.6 Word Cloud for Companies That Hired Employees with ASD
Source: Developed for this research.

Figure 4.13 shows the word cloud that was generated using NVivo to compare and contrast the words used most frequently in the interview questions. These words were part of the data-cleaning process for generating the word cloud in Figure 4.13. The codes of ‘work’, ‘yes’, ‘training’, ‘people’, ‘abilities’, ‘time’ and ‘get’ emerge from this word cloud. As shown, the font size of the word ‘training’ is prominent in the word cloud, along with ‘yes’, ‘people’, ‘time’ and ‘abilities’. The size of the words ‘internships’ and ‘apprenticeships’ was less prominent. Other prominent words that surfaced in the word cloud were ‘experience’, ‘abilities’, ‘young’ and ‘groups’.

Figure 4.7 Word Cloud for Interview Questions
Source: Developed for this research.
Figure 4.13 and Table 4.11 show the word frequency generated by NVivo from the interview questions. The list indicates that words such as ‘work’, ‘training’, ‘yes’ and ‘internships’ occurred most frequently in the interview questions themselves.

Table 4.11 Word-frequency List from NVivo from Interview Questions

<table>
<thead>
<tr>
<th>Word</th>
<th>Length</th>
<th>Count</th>
<th>Weighted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>4</td>
<td>15</td>
<td>3.94%</td>
</tr>
<tr>
<td>Singapore Dollar (Sgd)</td>
<td>3</td>
<td>8</td>
<td>2.10%</td>
</tr>
<tr>
<td>Training</td>
<td>8</td>
<td>6</td>
<td>1.57%</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>6</td>
<td>1.57%</td>
</tr>
<tr>
<td>Internships</td>
<td>11</td>
<td>4</td>
<td>1.05%</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

As Richards and Morse (2013, p. 146) said, ‘If it moves, code it’. Through the exploratory process of coding via word clouds and word-frequency lists, the researcher observed some emergent themes and was able to move the categorical codes into thematic phrases that describe more subtle and tacit processes. The word clouds and word frequencies were also used to triangulate the themes derived from the other coding methods that explored phenomena such as conceptual, relationship, participant perspective, participant characteristic and setting. The researcher thus discovered and presented a variety of responses revolving around work, training, people, time, abilities and the word ‘get’.

### 4.5 Work Code for Companies that had Employed People with ASD

In this section, interviewees who are quoted are identified with an initial letter followed by a number. The letter A denotes a company that has employed people with ASD, and the letter B denotes a company that has not employed people with ASD. The number following the letter (1–12) identifies one of the 12 companies that participated in the interview process. Companies that have employed people with ASD described ‘work’ as a significant word in this study. The main ideas that emerged relating to work are outlined below.
4.5.1 Types of Work

The types of work that were mentioned by interviewees were part-time work, labour work, measurement time-based work and routine, repetitive work:

*Part-time work, flexible hours and job rotation. (Interviewee A5, Athan)*

*Measurement time-based work once given step-by-step instructions they can do it quite well. Except only slower. (Interviewee A6, Austen)*

*Very capable of doing routine, repetitive work, which is quality skills set like graphic design or aerodynamics. (Interviewee A6, Austen)*

*Part-time work, flexible hours, job rotation. (Interviewee A7, Archer)*

*Hard skills would be like labour work. For example, simple filing and simple packing. (Interviewee A8, Allan)*

Four out of 12 of the interviewees who had hired people with ASD mentioned that they provided options for part-time work, flexible hours and job rotation. Two out of 12 of the interviewees described the type of work that would be suitable for people with ASD using words such as ‘routine, repetitive’, ‘step-by-step instructions’, ‘slower’ and ‘labour work’. They also gave examples of the nature of the work, such as ‘simple filing and simple packing’.

4.5.2 Number of People Needed to do the Work

One interviewee felt that two able-bodied employees could do the work of three or four employees with ASD:

*People with disability need three or four people, for able bodied two people to do the work. (Interviewee A5, Athan)*

4.5.3 Work Development and Promotion

The interviewees also discussed work development and promotions for employees with ASD:

*Groom them up to work on the frontline. Out of 45, seven to eight of them are in frontline now. (Interviewee A5, Athan)*
They came here as newbies. Not in the work. Not from school, but on-the-job training.  
(Interviewee A5, Athan)

If they show good, we can promote them as a waiter or waitress. Depends on how the work they are. (Interviewee A9, Adolph)

Job restructuring. For example, do not have any role as bussing. This is a task of cafe partners. All employees are previously baristas. Clients can stop at bussing (for example, cleaning tables, opening or closing tasks, set up of station, preparation of ingredients). Can stop before barista. Cafe partner role also includes food preparation. Before that not possible. (Interviewee A7, Archer)

4.5.4 Work Partnerships

The interviewees felt that work partnerships were significant. Three interviewees had significant partnerships with other organisations:

We work a lot with the schools. MINDS, Grace Orchard School. Whether it is autism, intellectual disability, Down syndrome. We are like a training centre. We train these students after which we send them to the society. Send them to other hotels where they like to work. (Interviewee A5, Athan)

Work with VWOs for worksite experience. (Interviewee A6, Austen)

Long term, work more closely with partners. Invite parents for session for continuing initiative. Brought up by Operations Director. (Interviewee A7, Archer)

Partnerships within the organisation were also recognised by five interviewees:

We let them work alone and trust them with their work. As and when we think it is appropriate, we will guide them again. (Interviewee A10, Abraham)

The individuals with Down’s syndrome will go to work together with their moms and dads and man the store together. (Interviewee A1, Alric)

In everything we do, we help them make it work. We drill them, we train them. (Interviewee A6, Austen)
Have gone the extra mile in selection of management team and partners (rest of staff) has been considered. They need to have a passion to work with people with special needs. (Interviewee A7, Archer)

See how they work. See individual. So, depends on the experience. The head chef will show them how to do the things. (Interviewee A11, Algene)

4.5.5 Workplace Modification

Two interviewees discussed modifying the physical work environment so it is safe:

For physically challenged, work on desks. For mobility they work in special areas with desks. For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person. (Interviewee A5, Athan)

Worksite modification also, for example, one of the storerooms has been designated as a rest area for anxiety or meltdowns it is a conducive space to take a rest. (Interviewee A7, Archer)

Another interviewee also mentioned work aids:

Different aids, spatulas for them to work. When we came, it was already wheelchair friendly. Visual aids (menus for ordering) and flooring with wheelchair friendly slopes. (Interviewee A1, Alric)

Four interviewees discussed work-schedule modifications:

There are some of them who cannot work long hours, so they work shorter hours. When we started programme, parents were very protective, so five to six hours rather than eight hours. (Interviewee A5, Athan)

Work-schedule changes also made for example, they work shorter hours, four hours. Vocational students only cannot do night shift. For them to gel into workforce they have to work weekends and night shifts as well. Specified hours are still flexible. (Interviewee A7, Archer)

Work-schedule change, depends on the nature of the work. (Interviewee A3, Arnold)
They can choose which shift they work. (Interviewee A2, Archie)

One participant spoke about providing monthly updates:

Bimonthly employees have Town Hall where we share the goals and vision of the hotel to staff and share with parents as well. (Interviewee A5, Athan)

4.5.6 Work Habits

Two interviewees discussed work habits:

Habits are already taught. Outside Pathlight, went through mainstream education. Not taught work habits like keeping quiet at work and being on time or relationships with peers and supervisors. (Interviewee A6, Austen)

Because they focus on doing their work. (Interviewee A3, Arnold)
4.5.7 Work Preparation

One interviewee mentioned that work preparation before starting work at an organisation can take place at a centre or at school:

*Pathlight school has prepared them for work. (Interviewee A6, Austen)*

*Major concerns already addressed: there must be a centre that has already started to train or prepare them for work. (Interviewee A6, Austen)*

4.5.8 Workplace Bullying

Workplace bullying was also mentioned by one of the interviewees:

*Sometimes our recruits get terminated halfway or get bullied at work. (Interviewee A1, Alric)*

4.6 Training Code for Companies that have Employed People with ASD

One interviewee focused on the role of the organisation as a training centre:

*We are like a training centre. We train these students after which we send them to the society. Send them to other hotels where they like to work. (Interviewee A5, Athan)*

The respondent also discussed being patient when training employees with ASD:

*Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months. (Interviewee A5, Athan)*

Four interviewees noted that different types of training include training courses that develop specialised skills needed for the job and training modalities such as individual or clustered training opportunities:

*Individual and clustered. Individual training is for those who just graduated from school, we put in hotel for training. Clustered they can go through six months training before evaluated and sent to society. July when they graduate, another batch. Every year two batches. (Interviewee A5, Athan)*

*Barista training and certification redesigned and streamlined to match their learning pace. (Interviewee A7, Archer)*
Training. Food hygiene certificate course. (Interviewee A11, Algene)

In-house training. (Interviewee A9, Adolph)

Four interviewees also mentioned that training opportunities were provided to employees with ASD in their organisation:

Training. Promoted a few of them because they show potential and ability to do their task. (Interviewee A5, Athan)

Training opportunities. No internships. After six months of training we will try to place them in hotels. (Interviewee A5, Athan)

In-house training. (Interviewee A9, Adolph)

Send them for training. (Interviewee A4, Arthur)

Five of the organisations that were interviewed provided on-the-job training:

They came here as newbies. Not in the work. Not from school, but on-the-job training. (Interviewee A5, Athan)

All of them started training as a steward. If person has potential to grow, put them in concierge if person can interact better than the rest. Groom them up to work on the frontline. Out of 45, seven to eight of them are in frontline now. (Interviewee A5, Athan)

Before kickstart training, can take pictures to develop visual instructions and run through the whole process and support. (Interviewee A7, Archer)

Training—we will do training one week twice. How to serve, how to carry trays, how to lift up, because they are new. They see it as easy, but it is not that easy. (Interviewee A9, Adolph)

In-house training. (Interviewee A9, Adolph)

Training lasts for six weeks. (Interviewee A1, Alric)

In-house training on the job. (Interviewee A4, Arthur)

One interviewee mentioned the importance of training in school:
Vocational training in school. (Interviewee A7, Archer)

4.7 Time Code for Companies That Have Employed People with ASD

Some interviewees mentioned time as a resource/investment by the company:

Time. Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months. So we put a lot of time. (Interviewee A5, Athan)

Some staff take longer time to train. Some require little supervision, some slightly more. Now current staff are all independent. (Interviewee A5, Athan)

Trained and paid at the same time. (Interviewee A1, Alric)

One interviewee said that employees need time to get used to workplace modifications:

Some staff take longer time to train. Some require little supervision, some slightly more. Now current staff are all independent. (Interviewee A5, Athan)

Time was also mentioned as a type of work by an interviewee:

Measurement time-based work once given step-by-step instructions they can do it quite well. Except only slower. (Interviewee A6, Austen)

Another interviewee talked about the work habit of being on time:

Not taught work habits like keeping quiet at work and being on time or relationships with peers and supervisors. (Interviewee A6, Austen)

4.8 Skills and Abilities Code for Companies That Have Employed People with ASD

Five interviewees described skills as something that can be acquired or learnt:

A skill can be learnt, but some abilities are natural. For example, leadership is born within a person. Ability is not something you can learn. (Interviewee A10, Abraham)

Yes, it is the same. Skill and ability can teach them. Lady was very shy. She doesn’t look at you and answer you, but now she can go up to old folks and perform a dance. (Interviewee A1, Alric)
Cooking and other skills can be learnt over time. (Interviewee A12, Alistair)

Skills is something everyone has the same, like fold clothes. Abilities...different people have different abilities. (Interviewee A3, Arnold)

Skills like folding clothes, communication abilities. (Interviewee A3, Arnold)

Depends on the job you are handling. Cashier is a skill. How you make the ingredients is a skill. (Interviewee A11, Algene)

Some interviewees described ability as a trait or a personal characteristic:

Hardworking ability. Not a skill, some people are just lazy. (Interviewee A10, Abraham)

Fast and quick responses. Nimble hands and feet. Good analysis. Do what first and what later. Cannot be slow, must be fast. When there are many people, you must be able to respond to them quickly. (Interviewee A12, Alistair)


It’s about passion and patience. We teach them a basic skill and we will see what they are good at. They are good at interacting so we will most likely put them out in the service section or computer, admin. (Interviewee A1, Alric)

One interviewee differentiated between different types of skills:

There is hard skill and soft skill. See what the individual can use to perform in the company. Hard skills would be like labour work. For example, simple filing and simple packing. Soft skill is language. Able to communicate with the rest. We do not have much things for them to do. (Interviewee A8, Allan)

Another interviewee described skills as putting knowledge into practice:

Skill is something that not everyone can give you. I can teach you or give you the knowledge but putting the knowledge into practice is a skill. (Interviewee A5, Athan)

One interviewee described ability as being able to perform a skill easily, or something that one does every day:
Have the skill to doing cappuccino or latte. Ability is you can do it. Once you do it every day, it is easy for you. (Interviewee A9, Adolph)

Ability is what you can perform in your daily role or task that you do. (Interviewee A5, Athan)

4.9 ‘Get’ Code for Companies That Have Employed People with ASD

‘Get’ was a frequently used word by the interviewees. There were several possibilities or ‘gets’ in the employability of employees with ASD.

One interviewee talked about getting a job placement:

*I think there is a trainee that graduated four years ago and we are still trying to get him a job placement. (Interviewee A1, Alric)*

This interviewee also mentioned getting terminated or getting bullied at work:

*Yes, they will place them to the appropriate company, which will fit their skills. Sometimes our recruits get terminated halfway or get bullied at work. (Interviewee A1, Alric)*

Another interviewee raised the difficulty in ‘getting’ or hiring Singaporeans to work:

*Singapore very difficult to get Singaporeans. Singaporeans say it is not suitable for them. Students join us. Singaporeans come work for training. (Interviewee A9, Adolph)*

This interviewee also discussed getting a senior to mentor or supervise employees with ASD:

*Yes, we get a senior to know what they are doing. (Interviewee A9, Adolph)*

One interviewee talked about ‘getting’ or gaining exposure through on-the-job training:

*Letting him get exposure. (Interviewee A8, Allan)*

Another interviewee mentioned getting vouchers as a financial bonus or incentive:

*For part-timers when they exceed 100 hours, they will get $15 voucher. (Interviewee A10, Abraham)*

One interviewee said that employees also get angry with customers:
Sometimes, they get angry with customers and throw everything around and scold customers. (Interviewee A2, Archie)

Another interviewee talked about the importance of getting employees with ASD integrated into the community:

We have a company vision. Company goal. One part of the goal is CSR [corporate social responsibility], where we support individuals in the community to give them a job, and a sense of belonging in society and get them integrated in community. (Interviewee A5, Athan)

Finally, one interviewee said that employees with ASD needed time to get used to changes:

Visuals, manuals, step by step, do not change job specifications. They need time to get used to it. (Interviewee A6, Austen)

4.10 People Code for Companies That Have Not Employed People with ASD

One interviewee talked about people training as part of a government programme to encourage employers to hire individuals with ASD:

The government now has a programme. SME talent fund scheme where we take people from ITE and pay a certain amount to the person and we also send the person to training. Total $10,000 spent on the person and contracted. Intention is to attract the graduates to work in an SME as these people who go to ITE/polytechnic are not as academically achieving from those from junior colleges or universities. People feel that it is harder. Sixty to seventy per cent of jobs come from SMEs. Only 30 per cent of people employed by MNCs. If you have a plan about who can do ABC and provide a standard framework to train people...maybe. (Interviewee B17, Braden)

This interviewee also said that people need time to fit into the work environment:

For the time for the person to immerse in the environment. For a person with ASD there is rigidity so there is the issue of fitting in, social deficits, social cognition, complex difficulties. (Interviewee B17, Braden)

One interviewee said that employment encourages people with ASD to meet people:
Yes, to help them. Employment will help them to meet people and change them. (Interviewee B18, Bobby)

4.11 ‘Come’ Code for Companies That Have Not Employed People with ASD

One interviewee who had not employed people with ASD said that they should be encouraged to ‘come’ out and integrate or be part of society:

If can, to encourage them to come out to society to work. For schools to train individuals with ASD and lessen the burden on the parents. (Interviewee B18, Bobby)

Another interviewee mentioned that SMEs were a major contributor to jobs, and that many jobs ‘come’ from SMEs:

Sixty to seventy per cent of jobs come from SMEs. (Interviewee B17, Braden)

4.12 Government and Incentives Code for Companies That Have Not Employed People with ASD

One interviewee who had not employed people with ASD said that hiring them was good for the organisation and that they did not need a government subsidy to do so:

If my organisation is big enough, I would put them there as it makes the organisation look good and because give back to society. We will not need government subsidy for all these less important work. (Interviewee B13, Beck)

Another interviewee said that the government has a programme to train people with ASD if they are able to get into ITE:

The government now has a programme—SME talent fund scheme where we take people from ITE and pay a certain amount to the person and we also send the person to training. Total $10,000 spent on the person and contracted. (Interviewee B17, Braden)

One interviewee also said that if government subsidies are provided, they will not need much to subsidise employment costs:

If the government can provide subsidy, no need a lot. $500 per person. (Interviewee B18, Bobby)
One interviewee who had not employed people with ASD said that if there was talent and productivity, they would not need government incentives. However, they would need government incentives to help with employment costs:

*As long as the person is talented, incentive does not matter. Cannot be disruptive. More about productivity, not incentives. If productivity is low, incentives will help in the salary and pay. (Interviewee B14, Bernard)*

### 4.13 Emergent Themes through Extracted Codes

To determine whether there were more discoveries to be made from the data, extracted codes were derived from conceptual, relationship, participant perspective, participant characteristic and setting codes. Some of the codes that were repeated emphasised the importance of the relationship code (workplace partnerships) and the setting code (workplace modification).

#### 4.13.1 Conceptual Codes and Themes

Table 4.12 presents quotations from the sample of interview transcripts that explored the extracted conceptual codes, such as the importance of the nature of work, the work independence of employees, work safety and a place or centre that prepares employees for work.

<table>
<thead>
<tr>
<th>Quote</th>
<th>Extracted Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of them started training as a steward. If person has potential to grow, put them in concierge if person can interact better than the rest. Groom them up to work on the frontline. Out of 45, seven to eight of them are in frontline now (Interviewee A5, Athan).</td>
<td>Nature of work or job scope for employees with ASD</td>
</tr>
<tr>
<td>Some staff take longer time to train. Some require little supervision, some slightly more. Now current staff are all independent (Interviewee A5, Athan).</td>
<td>Work independence of employees with ASD</td>
</tr>
<tr>
<td>For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person (Interviewee A5, Athan).</td>
<td>Work safety of employees with ASD</td>
</tr>
</tbody>
</table>
Major concerns already addressed: there must be a centre that has already started to train or prepare them for work. Employability centres have job coaches to help them. So employers can focus on the business and the parent company they come from. So the model is working quite well (Interviewee A6, Austen).

<table>
<thead>
<tr>
<th>Quote</th>
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<tbody>
<tr>
<td>Employability centres have job coaches to help them. So employers</td>
<td>Centre or place to prepare employees with ASD for</td>
</tr>
<tr>
<td>can focus on the business and the parent company they come from.</td>
<td>work</td>
</tr>
<tr>
<td>So the model is working quite well (Interviewee A6, Austen).</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Employers were interested in grooming employees with ASD if they saw potential in moving them into jobs that had more social interaction. The nature of the work or job scope for employees with ASD was service-oriented; often, the most difficult part of the job was working on the frontline. This required many social interactions with others, which was challenging for individuals with ASD:

All of them started training as a steward. If person has potential to grow, put them in concierge if person can interact better than the rest. Groom them up to work on the frontline. Out of 45, seven to eight of them are in frontline now. (Interviewee A5, Athan)

Another code that emerged was the work independence of employees with ASD, which was dependent on the training and supervision they received. Although some employees with ASD needed more training and supervision, they were eventually able to work and function independently in the workplace:

Some staff take longer time to train. Some require little supervision, some slightly more. Now current staff are all independent. (Interviewee A5, Athan)

Work safety was also an area of concern for employers, who often restructured the work areas to be free of obstructions and easily accessible to ensure work safety for employees with ASD. Work area restructuring and work safety concerns are also part of the construct of workplace accommodation:

For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person. (Interviewee A5, Athan)
Other issues that emerged were the need to have a centre or place to prepare employees with ASD for work. Employers who were interviewed felt that workplace preparation and training should occur before employees with ASD start work to ensure that employers could then focus on the business rather than meeting the needs of employees with ASD. Trainers and job coaches in employability centres were also able to fill the role of meeting the needs of employees with ASD:

*Major concerns already addressed: there must be a centre that has already started to train or prepare them for work. Employability centres have job coaches to help them. So employers can focus on the business and the parent company they come from. So the model is working quite well (Interviewee A6, Austen).*

### 4.13.2 Relationship Codes and Themes

Table 4.13 contains quotations from the sample of interview transcripts that explored extracted relationship codes such as the importance of partnerships with schools, hotels, VWOs, parents and those within the organisation.

<table>
<thead>
<tr>
<th>Quote</th>
<th>Extracted Code</th>
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</thead>
<tbody>
<tr>
<td>We work a lot with the schools: MINDS, Grace Orchard school. Whether it is autism, intellectual disability, Down syndrome (Interviewee A5, Athan).</td>
<td>Necessity of partnership with schools in training/preparing students for employment</td>
</tr>
<tr>
<td>We are like a training centre. We train these students after which we send them to the society. Send them to other hotels where they like to work (Interviewee A5, Athan).</td>
<td>Partnership with hotels for employment of employees with ASD</td>
</tr>
<tr>
<td>Work with VWOs for worksite experience (Interviewee A6, Austen).</td>
<td>Partnership with VWOs for training/preparing people with ASD for employment</td>
</tr>
<tr>
<td>Long term work more closely with partners. Invite parents for session for continuing initiative. Brought up by Operations Director. Have gone the extra mile in selection of management team and partners (rest of staff) has been considered. They need to have a passion to work with people with special needs. Few rounds of reshuffling of the team to be best suited (Interviewee A7, Archer).</td>
<td>Partnership with parents for training/preparing people with ASD for employment</td>
</tr>
</tbody>
</table>
In everything we do, we help them make it work. We drill them, we train them. We treat them as normal as possible. We want to make sure they live a life, as normal as possible. As they manifest behaviour issues we support them (Interviewee A6, Austen).

<table>
<thead>
<tr>
<th>Quote</th>
<th>Extracted Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership within the organisation for employment of employees with ASD</td>
<td></td>
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</tbody>
</table>

Source: Compiled for this research.

A theme that surfaced when exploring the relationship codes was the necessity for partnerships with schools to train and prepare students with disabilities for employment. Collaborative partnerships with external stakeholders frequently took place. Partnerships with schools were important for equipping and preparing people with ASD for workplace demands and tasks:

*We work a lot with the schools: MINDS, Grace Orchard School. Whether it is autism, intellectual disability, Down syndrome. (Interviewee A5, Athan)*

Partnerships with hotels were also a means for preparing students for work and employment. Hotels and other types of service-oriented businesses could potentially hire and employ people with ASD. Training for the workplace occurred not just in schools, but also in training centres and employability centres that develop and prepare people with ASD for the workplace:

*We are like a training centre. We train these students after which we send them to the society. Send them to other hotels where they like to work. (Interviewee A5, Athan)*

Other partnerships include those with VWOs, which enable people with ASD to develop work experience. Workplace preparation and training thus occurred in schools, training centres/employability centres and VWOs. Collaboration and work partnerships encourage and support the employment of people with ASD by employers:

*Work with VWOs for worksite experience. (Interviewee A6, Austen)*

The importance of partnerships is reiterated through the mention of another partnership: involving and informing parents of initiatives. Employers felt that other members of the organisation and employing company/agency should be supportive and encourage partnerships. Some companies ensure that there are supportive partnerships within the company to create a suitable workplace environment for people with ASD:
Long term, work more closely with partners. Invite parents for session for continuing initiative. Brought up by Operations Director. Have gone the extra mile in selection of management team and partners (rest of staff) has been considered. They need to have a passion to work with people with special needs. Few rounds of reshuffling of the team to be best suited. (Interviewee A7, Archer)

The relational component pivots on the attitude that employers have towards employees with ASD. The focus is not on the inability of the employee with ASD, but on how they can be supported and trained so they can function and work in the workplace. Although there may be behavioural issues and difficulties, the difference relates to whether the employer is supportive:

In everything we do, we help them make it work. We drill them, we train them. We treat them as normal as possible. We want to make sure they live a life, as normal as possible. As they manifest behaviour issues we support them. (Interviewee A6, Austen)

4.13.3 Participant Perspective Codes and Themes

Table 4.14 contains quotations from the sample of interview transcripts that explored extracted participant perspective codes such as mixed attitudes, uncertainty, patience, strong support, satisfaction and passion for and towards people with ASD.

<table>
<thead>
<tr>
<th>Quote</th>
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</tr>
</thead>
<tbody>
<tr>
<td>They are faster and more meticulous but lacking in communication abilities. Skills like fold clothes, communication abilities. They are more meticulous (Interviewee A3, Arnold).</td>
<td>Mixed attitude towards skills and abilities of employees with ASD</td>
</tr>
<tr>
<td>From the school they graduated from. Not sure if it is certificate or diploma (Interviewee A2, Archie).</td>
<td>Indifferent/uncertain comments about the educational background of employees with ASD</td>
</tr>
<tr>
<td>When you go out, you don’t really see outside, they say all sorts of mean things, but the person with ASD is capable of holding a job and is independent (Interviewee A1, Alric).</td>
<td>Positive attitude towards disability and employees with ASD</td>
</tr>
<tr>
<td>Time. Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months. So we put a lot of time (Interviewee A5, Athan).</td>
<td>Patience of the employer/management towards the employment of employees with ASD</td>
</tr>
<tr>
<td>Quote</td>
<td>Extracted Code</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Already part of the company culture and we do it every day (Interviewee A6, Austen).</td>
<td>Strong support of employees with ASD</td>
</tr>
<tr>
<td>So employers can focus on the business and the parent company they come from. So the model is working quite well (Interviewee A6, Austen).</td>
<td>Pleased/satisfied with the services provided for employees with ASD</td>
</tr>
<tr>
<td>Have gone the extra mile in selection of management team and partners (rest of staff) has been considered. They need to have a passion to work with people with special needs (Interviewee A7, Archer).</td>
<td>Passionate about helping employees with ASD</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Attitudes towards employees with ASD were mixed. Employers felt that employees with ASD could complete tasks faster and were more detailed. However, they were lacking in their ability to communicate with others. Communication in the workplace is a skill that is important to employers:

*They are faster and more meticulous but lacking in communication abilities. Skills like fold clothes, communication abilities. They are more meticulous. (Interviewee A3, Arnold)*

Some employers were also indifferent or uncertain about the educational background of employees with ASD. The ambiguity of the response and the uncertainty showed that the qualification required for employees with ASD may not be a priority for employers of employees with ASD. Further, the employers did not differentiate between attaining a certificate or a diploma:

*From the school they graduated from. Not sure if it is certificate or diploma. (Interviewee A2, Archie)*

Some employers felt that a person with ASD can be independent and work in employment. They acknowledge that the work environment or outside world may say mean things about people with ASD; however, they hold a positive attitude towards employees with ASD:

*When you go out, you don’t really see outside, they say all sorts of mean things, but the person with ASD is capable of holding a job and is independent. (Interviewee A1, Alric)*
Employers who employ people with ASD are also very patient with them. They acknowledge that employees with ASD need more time to learn how to perform on the job. The training period also stretches to a minimum of six months, whereas other employees may be trained in two weeks to a month:

*Time. Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months. So we put a lot of time.* (Interviewee A5, Athan)

Some employers also show strong support for employees with ASD by going out of the way to help them. Employers show support and commitment by making it part of the company culture. This attitude of helping is something that employers try to ensure is done daily in their workplaces:

*Already part of the company culture and we do it every day.* (Interviewee A6, Austen)

Employers are satisfied when partnerships with external training centres or employability centres allow them to focus on the business while the needs of employees with ASD are being met. Employers are also satisfied when there is a business model in place that works well. Employers are also concerned about the ability of employees with ASD to perform their job in the workplace:

*So employers can focus on the business and the parent company they come from. So the model is working quite well.* (Interviewee A6, Austen)

Employers are passionate about helping employees with ASD, and they seek out others who are passionate about working with people with special needs. The management team and rest of the staff within the company or organisation should also be passionate about their work. This translates into a workplace ethos and culture that is supportive of employees with ASD:

*Have gone the extra mile in selection of management team and partners (rest of staff) has been considered. They need to have a passion to work with people with special needs.* (Interviewee A7, Archer)

### 4.13.4 Participant Characteristic Codes and Themes

Table 4.15 contains quotations from the sample of interview transcripts that explored extracted participant characteristic codes such as the importance of employer commitment, the
employer’s need for financial support, flexible work arrangements, community integration, the employer’s sharing of their vision and goals, the employer’s development of employees, and the employer’s creativity and patience.

Table 4.15 Participant Characteristic Coded Items

<table>
<thead>
<tr>
<th>Quote</th>
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</tr>
</thead>
<tbody>
<tr>
<td>We have a company vision and company goal…we support individuals in the community to give them a job and a sense of belonging in society and get them integrated in community (Interviewee A5, Athan).</td>
<td>Employer/management’s positive commitment toward employment of employees with ASD</td>
</tr>
<tr>
<td>More grants (Interviewee A1, Alric).</td>
<td>Employer/management’s need for financial support from the government for employment of employees with ASD</td>
</tr>
<tr>
<td>Internship here before they go off and do other stuff. Over here it is pretty flexible (Interviewee A1, Alric).</td>
<td>Employer/management’s flexible work arrangements for employees with ASD</td>
</tr>
<tr>
<td>The company sometimes have outdoor activities for them by the special school and the company (Interviewee A3, Arnold).</td>
<td>Community integration</td>
</tr>
<tr>
<td>Bi-monthly employees have Town Hall where we share goals and vision of hotel to staff and share with parents as well. All the parents' contacts and the schools as well (Interviewee A5, Athan).</td>
<td>Employer/management communicating to share vision or goals of company to employees with ASD regularly</td>
</tr>
<tr>
<td>Try not to limit them. If they can do it we let them do it (Interviewee A6, Austen).</td>
<td>Employer/management’s development of employees with ASD</td>
</tr>
<tr>
<td>Created an autism wall to create awareness of ASD. Also created a tumbler with a drawing by ASD person and 5 dollars is contributed for every sale (Interviewee A7, Archer).</td>
<td>Employer/management’s creativity in supporting employees with ASD</td>
</tr>
<tr>
<td>Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months (Interviewee A5, Athan).</td>
<td>Employer/management’s patience in supporting employees with ASD.</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Employer commitment can be demonstrated by the company’s vision and goal. The employers who were interviewed were positive in their support of people with ASD through job creation
and community integration. The company vision and goal also contributes to the company culture because it defines the direction that the company is taking and the commitment of the employer as a visionary in enforcing a supportive work environment for employees with ASD:

We have a company vision and company goal... we support individuals in the community to give them a job and a sense of belonging in society and get them integrated in community. (Interviewee A5, Athan)

One employer also expressed their need to receive financial support from the government to employ people with ASD. Costs for employing people with ASD can be offset by partnering with the government for revenue. Given that employees with ASD need more time and training to perform their jobs, government grants can be used to minimise the costs incurred through the training of employees with ASD:

More grants. (Interviewee A1, Alric)

Employers are flexible in their work arrangements for employees with ASD. Employers provide flexibility and opportunities for work internships, and employees with ASD are also given opportunities to move on to other jobs:

Internship here before they go off and do other stuff. Over here it is pretty flexible. (Interviewee A1, Alric)

Employers are considerate about the welfare of employees with ASD. Opportunities for community integration by organising outdoor activities in collaboration with schools is an example of employers’ efforts. Employers also acknowledge the need for employees to participate in outdoor activities:

The company sometimes have outdoor activities for them by the special school and the company. (Interviewee A3, Arnold)

Employers also communicate their company vision and goals through different means. For example, one employer holds bimonthly meetings in the town hall to share their goals and vision with various stakeholders and partners:

Bimonthly employees have town hall where we share goals and vision of hotel to staff and share with parents as well. All the parents’ contacts and the schools as well. (Interviewee A5, Athan)
Employers believe in possibilities, as evidenced by an employer speaking about not limiting employees with ASD and giving them opportunities to develop and grow their abilities. Employees who were willing to attempt a task at work were given a chance to attempt it:

*Try not to limit them. If they can do it we let them do it.* (Interviewee A6, Austen)

Employers are also creative in supporting employees with ASD. One employer created an autism wall and a tumbler that featured the art of people with ASD. These items were then sold as company merchandise:

*Created an autism wall to create awareness of ASD. Also created a tumbler with a drawing by ASD person and $5 is contributed for every sale.* (Interviewee A7, Archer)

Employers are patient with employees with ASD. According to one employer interviewed, the training period for employees with ASD is at least six months. Although the duration for training is long, employers wait patiently until they are trained:

*Need to be very patient training them. Normally it takes two weeks to one month. People with special needs need at least six months.* (Interviewee A5, Athan)

### 4.13.5 Setting Codes and Themes

Table 4.16 contains quotations from the sample of interview transcripts that explored extracted setting codes such as the importance of physical restructuring of the work environment, in-house training, supportive company culture, work-schedule modifications and work aids.

<table>
<thead>
<tr>
<th>Quote</th>
<th>Extracted Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>For physically challenged, work on desks. For mobility they work in special areas with desks. For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person. There are some of them who cannot work long hours, so they work shorter hours (Interviewee A5, Athan).</td>
<td>Physical restructuring of the work environment to support employees with ASD</td>
</tr>
<tr>
<td>In-house training on the job (Interviewee A4, Arthur).</td>
<td>In-house training at the workplace for employees with ASD</td>
</tr>
</tbody>
</table>
Already part of the company culture and we do it every day (Interviewee A6, Austen).

Company culture goes out of the way to support employees with ASD

For physically challenged, work on desks. For mobility they work in special areas with desks. For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person. There are some of them who cannot work long hours, so they work shorter hours (Interviewee A5, Athan).

Work-schedule modifications to support employees with ASD

Different aids, spatulas for them to work. When we came, it was already wheelchair friendly. Visual aids (menus for ordering) and flooring with wheelchair friendly slopes (Interviewee A1, Alric).

Work aids to support employees with ASD

Source: Compiled for this research.

Employers sometimes had to physically restructure the work environment to support employees with ASD. Employers must consider workplace safety, such as obstruction-free areas with easy accessibility. Other concerns are the number of hours worked, because employees with ASD may not be able to work long hours:

_For physically challenged, work on desks. For mobility they work in special areas with desks. For others, safety is taken into consideration like handling equipment. Personal protection equipment. Restructuring of work area because we are working with people with special needs. Work area needs to be free of obstruction and easy access so it will not harm the person. There are some of them who cannot work long hours, so they work shorter hours. (Interviewee A5, Athan)_

Employers may also need to have on-the-job training for employees with ASD to prepare them for work tasks. This usually occurs when employees are in the workplace environment. This is often the most relevant and effective method of training because employees with ASD are sometimes not taught the required skills beforehand:

_In-house training on the job. (Interviewee A4, Arthur)_

Some company cultures enable employers to go out of their way to support and help employees with ASD. Some companies try to be helpful to employees with ASD every day. This element
is part of the non-physical aspect of the setting and environment to support employees with ASD:

*Already part of the company culture and we do it every day. (Interviewee A6, Austen)*

If long hours are a concern, employers may also implement work-schedule modifications to support employees with ASD. Employers shorten the working hours or allow employees with ASD to work shorter shifts. Work-schedule modifications and flexibility help employees with ASD to perform their jobs.

Work aids also contribute to the physical environment and setting for employees with ASD. Examples of work aids include visual aids such as menus for ordering in the food and beverage service industry. For other work settings, flooring that is wheelchair friendly is built into the environment:

*Different aids, spatulas for them to work. When we came, it was already wheelchair friendly. Visual aids (menus for ordering) and flooring with wheelchair friendly slopes. (Interviewee A1, Alric)*

### 4.14 Findings for Research Question 3

RQ 3: From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?

Table 4.17 presents the personal factors of employees with ASD that employers consider in this study. The factor of body function/structure in the ICF is fixed for this study as ASD. The table also uses the ICF framework to identify the activity/participation and environmental factors of employees with ASD that employers consider in this study.

<table>
<thead>
<tr>
<th>ICF Factor</th>
<th>Factors and Dimensions of the ICF in This Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Factors</td>
<td>Age</td>
</tr>
<tr>
<td>Activity/Participation Factors</td>
<td>Education Level</td>
</tr>
<tr>
<td>Environmental Factors</td>
<td>Workplace Accommodation</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Independence can be evaluated in terms of ICF factors. The codes in this study that were matched to the ICF factors were age, education level and workplace accommodation. Of the
people with ASD who were successful in independence and employment in this study, most of them (50 per cent) were aged 25–34 years (see Table 4.1). The education qualifications of most employees with ASD in this study was O-level (33 per cent), followed by ITE (17 per cent) and Diploma (17 per cent) (see Figure 4.11).

Workplace accommodations raised by employers include modifications to the physical structure, company culture, work-schedule modifications, work aids and on-the-job training (see Table 4.16). These accommodations help people with ASD to be independent and employed in the work environment.

Interviewees commented on the following elements as being important on the path to independence and employment:

- Having skills in language and communication: Communication abilities, communicating with people. (Interviewee A3, Arnold)
- Socialisation: Intellectual ability to communicate effectively with colleagues and clients. (Interviewee B13, Beck)
- Self-determination: Most important thing is that they are willing to learn and prepared to work hard. (Interviewee B16, Bond)
- Self-management I can teach you or give you the knowledge but putting the knowledge into practice (Interviewee A5, Athan)

### 4.15 Dimensions of Emergent Conceptual Models

The emergent codes triangulated through the word-frequency tables and word clouds from NVivo, as well as the emergent themes through the extracted codes discussed in Section 4.10, are compiled in Tables 4.17 and 4.18 as dimensions in an emergent model. This model expands on the proposed dimensions identified in the literature review in Chapter 2. It aims to answer the research question about employers’ viewpoints regarding the employment of people with ASD.

In Tables 4.17 and 4.18, the initial dimensions identified in Chapter 2 are listed as ‘themes’, while the themes from the sample data are listed as ‘emergent themes from data’.
Table 4.17 Themes of the Emergent Conceptual Model for Employers Who Have Employed People with ASD

<table>
<thead>
<tr>
<th>Themes</th>
<th>Emergent Themes from Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-employment Training and Education</td>
<td>Vocational training in school</td>
</tr>
<tr>
<td></td>
<td>Centre or place to prepare employees with ASD for work</td>
</tr>
<tr>
<td></td>
<td>Work preparation</td>
</tr>
<tr>
<td></td>
<td>On-the-job training</td>
</tr>
<tr>
<td></td>
<td>Job placement</td>
</tr>
<tr>
<td>Insurance, Taxation and Government Subsidies</td>
<td>Employer/management’s need for financial support from the government for employment of employees with ASD</td>
</tr>
<tr>
<td>Organisational Structure</td>
<td>Employer/management’s flexible work arrangements for employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Senior as a mentor/supervisor</td>
</tr>
<tr>
<td>Organisational Rewards</td>
<td>Community integration</td>
</tr>
<tr>
<td></td>
<td>Vouchers as financial bonus/incentive</td>
</tr>
<tr>
<td></td>
<td>Pleased/satisfied with the services provided for employees with ASD</td>
</tr>
<tr>
<td>Organisational Commitment</td>
<td>Employer/management’s positive commitment toward employment of employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Time as a resource/investment by employer/management</td>
</tr>
<tr>
<td></td>
<td>Time to get used to the workplace modifications/changes</td>
</tr>
<tr>
<td></td>
<td>Employer/management communicating to share vision or goals of company to employees with ASD regularly</td>
</tr>
<tr>
<td></td>
<td>Attitude towards disability and employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Strong support of employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Passionate about helping employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Employer/management’s development of employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Employer/management’s creativity in supporting employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Company culture goes out of the way to support employees with ASD</td>
</tr>
<tr>
<td></td>
<td>Workplace bullying</td>
</tr>
<tr>
<td></td>
<td>Job termination</td>
</tr>
<tr>
<td>Employee Commitment</td>
<td>Work habits</td>
</tr>
<tr>
<td></td>
<td>Difficulty in getting Singaporeans to work</td>
</tr>
</tbody>
</table>
Themes | Emergent Themes from Data
--- | ---
Mixed attitude towards skills and abilities of employees with ASD

Skills and Abilities of Individual | Skills and abilities of individuals
Types of work
Nature of work or job scope for employees with ASD
Number of people to do the work
Work independence of employees with ASD

Career Development | Work development and promotion
Training of employees with ASD
Patience in training

Workplace Accommodation | Workplace accommodation
In-house training at workplace for employees with ASD
Work aids to support employees with ASD
Work safety of employees with ASD
Work partnerships

Source: Compiled for this research.

Table 4.18 Themes of the Emergent Conceptual Model for Employers Who Have Not Employed People with ASD

Themes | Emergent themes from data
--- | ---
Insurance, Taxation and Government Subsidies | Employer/management’s need for financial support from the government for employment of employees with ASD

Organisational Commitment | Employer/management’s positive commitment toward employment of employees with ASD
Attitude towards disability and employees with ASD
Strong support of employees with ASD
Passionate about helping employees with ASD
Employer/management’s development of employees with ASD

Employee Commitment | Mixed attitude towards skills and abilities of employees with ASD
### Themes

<table>
<thead>
<tr>
<th>Skills and Abilities of Individual</th>
<th>Emergent themes from data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-work training provided by schools</td>
<td>Skills and abilities of individuals</td>
</tr>
<tr>
<td>Types of work</td>
<td>Nature of work or job scope for employees with ASD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Career Development</th>
<th>Training of employees with ASD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work partnerships</td>
<td>Work partnerships</td>
</tr>
</tbody>
</table>

Source: Compiled for this research.

Figure 4.14 shows the results of incorporating the emergent themes into the original conceptual model shown in Figure 1.2. Here, because emergent themes for employers that have employed people with ASD were not the same as for employers that had not, two conceptual models that incorporated the emergent themes were generated. Note that the original conceptual model for the research (see Figure 1.2) did not include the following dimensions: on-the-job training, types of work, workplace bullying, work safety and work partnerships. These dimensions are represented by the green boxes in the augmented conceptual models in Figure 4.14.
4.16 Chapter Summary

This chapter presented the results of the pilot study and a general profile of the companies in the sample. It also presented findings from the interviews based on the proposed themes identified in the proposed model framework for this research. It then presented the findings of the deeper analysis by means of coding extraction using NVivo software to identify emergent themes not proposed in the initial proposed conceptual model. These themes were incorporated into a set of more complete conceptual models—one for employers that have employed people with ASD and one for those that have not—because the themes that emerged for each group were different.

Chapter 5 presents a discussion and the conclusions of the research findings. The discussion links the findings to the literature reviewed in Chapter 2, and it outlines the challenges and
opportunities in the employment of people with ASD. Further, the chapter presents the overall implications for the employment of people with ASD, as well as the contributions this thesis makes to the field of research. Lastly, Chapter 5 presents the implications and limitations of this study, along with recommendations for future research.
CHAPTER 5 DISCUSSION AND CONCLUSIONS

5.1 Introduction

This chapter has eight sections. Section 5.1 introduces the chapter. Section 5.2 presents the research overview. Section 5.3 presents the findings for Research Question 1. Section 5.4 presents the findings for Research Question 2. Section 5.5 presents the findings for Research Question 3. Section 5.6 presents and discusses the emergent themes from the data analysis. Section 5.7 discusses the contributions of the research and recommendations to knowledge, literature and policy, as well as implications of the research for policy and practice. Section 5.8 discusses the strengths and limitations of the study. Section 5.9 provides suggestions for further research. Section 5.10 summarises the study and provides concluding remarks. The structure of the chapter is illustrated in Figure 5.1.

The first aim of this thesis was to identify key issues that relate to the employment of people with a disability, particularly focusing on employers’ viewpoints and requirements. The second aim was to gain insights from employers in Singapore regarding their views about the employment of people with ASD. Analysis of their responses may offer organisations a way forward to provide opportunities for the employment of people with ASD, both for organisations that have employed people with ASD and those that had not.

The next section presents the findings to address the three research questions for this study. Interviewees who are quoted are identified with an initial letter followed by a number. Interviewees with the letter A are companies that have employed people with ASD, and interviewees with the letter B are companies that have not employed people with ASD. The number following the letter (1–24) identifies one of the 12 companies that participated in the interview process.
5.2 Research Overview

This study seeks to better understand the viewpoints of employers that had employed people with ASD in the service industry in Singapore. Burke et al. (2013) called for continued research on employer attitudes towards disability, specifically regarding the influence of education that would improve employer attitudes. Taking a demand-side approach in this study, employers’ roles in terms of job placement, workplace environment and employment in general were also deemed important (Kang 2013).
The study is situated in the qualitative interpretive paradigm whereby interpretation is understood to refer to the meaning that is derived from the phenomenon (Denzin 2001). The researcher seeks to discover the meaning of employment and work from the perspective of employers. The **verstehen** tradition emphasises the ability of humans to create meaning, the necessity of social interactions in context, empathy for the relational experience and a focus on the link between thought and behaviour (Patton 2015). This worldview is a model that gives the researcher direction without the need for long existential or epistemological thought (Patton 2015).

This study is cross-sectional, not longitudinal, capturing data from a specific moment in time and giving the researcher insights into the perspective of employers during this period. In descriptive interpretive qualitative research, the focus is on specific research questions, and interviewees are empowered to lead and identify the qualities of the phenomenon from their perspective (Elliott & Timulak 2005). Triangulation is also an important strategy used in this research for cross-validation and to discover consistencies and inconsistencies (Elliott & Timulak 2005). Different data may yield the same or different results, such as those found using clouds and frequencies and those found through open and axial coding (Patton 2015).

Understanding consistencies and inconsistencies in qualitative data offers deeper insights into the relationship between the enquiry approach and the phenomenon being studied (Patton 2015). The emergent design and method in this study was flexible, open and responsive. This was necessary to obtain answers to the research questions because it allowed the researcher to tap into knowledge that had not been part of the dominant culture or discourse (Hesse-Biber & Leavy 2008). The process of creating a theme that cuts across the enquiry traditions and frameworks has both consistencies and inconsistencies. The exploration and discovery of themes is complex and its definitions vary. Patton (2015) concluded that qualitative themes generate criticism and quoted William Blake, who said that there is no progression without contraries. It is part of the essence of human existence to have contradictions amidst the development and change of ideas.

According to Patton (2015), there are no rules for sample size when conducting a qualitative enquiry. The parameters for deciding on the sample size are often implicit in qualitative research (van Rijnsoever 2017), explained through a spontaneous understanding of each unique subjective study. Qualitative researchers are people who have a high tolerance for ambiguity as qualitative-research is interpretivistic and requires flexibility, creative thinking, experience and tacit knowledge.
Sample saturation is a guiding principle during data collection. Charmaz (2006) states that a small study with ‘modest climbs’ (p. 114) achieves saturation more quickly than a study seeking to cover all ground. Jette, Grover and Keck (2003) suggest that expertise in a chosen topic can reduce the number of participants needed in a study. Bertaux (1981, p. 35) states that a minimum sample size of 15 should be used. Green and Thorogood (2009) state that saturation is attained after interviewing 20 or more people. Thomson (2004) reviews 50 studies and finds that just over one-third (34 per cent) had a sample size of 20–30, and only 11 studies (or 22 per cent) had a sample size of more than 30.

Independent research studies have found that as few as 10 participants can help to establish a consensus (Atran, Medin & Ross 2005, p. 753). Griffin and Hauser (1993) find that 20–30 interviews can uncover 90–95 per cent of all customer needs. Green and Thorogood’s (2009) study on the sample size of PhD studies using qualitative interviews showed that 80 per cent of the total proportion of qualitative studies met Bertaux’s (1981) guideline, and one-third of the studies (33 per cent or 186) used a sample size of 20 or less.

Qualitative analysis is sometimes first deductive or quasi-deductive and then inductive when the researcher examines the data with theory-derived sensitising concepts (Patton 2015). Convergence yields recurring regularities with patterns that can be sorted into categories (Patton 2015). Next, divergence must be examined through the process of extension (building on and going deeper into the patterns and themes identified), bridging (making connections among different patterns and themes) and surfacing (proposing new categories that fit and verify existence in data). Deviant cases that do not fit the dominant identified patterns are also important.

The interviews focused on three central issues to offer insights into an under-researched area: the employers’ perspective of people with ASD in employment, the skills and abilities needed for employment and achieved independence, and employment as a measure of success. The first research question seeks to expand on the factors identified in the literature review relating to skills and abilities from the employers’ perspective. The second research question identifies the main viewpoints of employers that encourage and inhibit employment. The third research question explores independence and employment from the employers’ perspective. Evidence that the research aims and objectives were met is presented through a discussion of each research question in the following sections.
5.3 Findings for Research Question 1

RQ1: How would the proposed factors identified in the literature review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?

The interviews revealed that six out of 12 interviewees who had employed people with ASD said that skills can be learnt but ability cannot be learnt because it is natural. Four out of 12 interviewees who had not employed people with ASD did not provide definitions of skill and ability or the differences between them, but, described the possible job scope and function of potential employees. Four out of 24 interviewees named both skills and abilities that were important for the job and work.

5.3.1 Skills and Abilities of People with ASD for Employment

Examples of abilities mentioned in the interviews were skills in language and communication, such as verbal skills and non-verbal cues, socialisation, self-determination and self-management. These findings are consistent with studies that have suggested that it is important for people with ASD to develop skills in personal independence and social responsibility (Kavale & Forness 1999). For people with ASD, Hendricks and Wehman (2009) proposed that this means acquiring skills in academics, socialisation, language and communication, self-management, self-determination, home living, employment and community. Individuals show proficiency in these skills by using the information in different life situations. Studies have concentrated on the distinctive requirements of people with ASD at work, as well as behavioural strategies to minimise unsuitable behaviour such as aggressiveness, self-harm, property destruction and pica (Berkman & Meyer 1988; Kemp & Carr 1995; Smith 1986, 1987; Smith & Coleman 1986).

In addition to policy involvement by government bodies, stakeholders such as service users and employers are interested in increasing investment in ‘human capital’ of people with disabilities (recognising their value in society) and minimising perceived barriers to their employment (perceived costs of workplace accommodations and litigation) (Burkhauser & Stapleton 2004). High-performance organisations show respect and gratitude for the worth of each person, are organised and flexible, have good ideas, and recognise that good people are a competitive advantage (People Process Culture Handbook 2001). The findings from this study are consistent with previous findings that communication is important in the workplace.
However, communication was perceived as an ability by one interviewee, while others viewed it as a skill.

Much of the literature highlights the need to address communication and social skills in the community by setting goals in various employment settings and setting goals to maximise functional independence (Cameto et al. 2004; Schall et al. 2006). Studies have also confirmed that factors that contribute to successful employment include mastery of communication and interpersonal skills and managing stereotypical patterns of behaviour (Burt et al. 1991; Hendricks & Wehman 2009). Specific treatments can ready individuals for employment by training them in critical skills required in the vocational environment (Hendricks & Wehman 2009). Jacob et al. (2015) proposed that the features of ASD—specifically social and communication deficits—are challenging to employees with ASD and might require management and colleagues to improve formerly untapped skills and abilities. The authors suggest that the skills include overcoming communication barriers between themselves and people with ASD, deliberating on the necessity of potential supervision and clarifying social rules at work to these individuals.

To answer the question concerning the skills and abilities that help people with ASD successfully transition into the workforce, a resource-based perspective of the organisation views individuals as the main experts of an organisation and pursues the improvement of organisation performance by elevating the ability levels and work experience of employees (Teague 2005). In summary, learnt skills and natural abilities such as those in the areas of personal independence and social responsibility help people with ASD to successfully transition into the workplace. Skills such as language and communication were identified as essential workplace abilities and a means of connecting with people. Socialisation, self-determination and self-management were also identified as important. These skills ensure success when used fluidly at work. It also took time and patience for employees to adjust to the workplace modifications.

5.4 Findings for Research Question 2

RQ2: What are the main viewpoints of employers that encourage or inhibit the employment of people with ASD in organisations?
Employers have viewpoints that may encourage or inhibit the employment of people with ASD in organisations. Some of these insights that have appeared in the literature were presented in Chapter 2, namely organisational structure, employees’ and employers’ organisational commitment, return-to-work options, workplace accommodation, organisational rewards, career development or organisation development, government subsidies, insurance and taxation. Emergent themes that add to the theoretical framework of this study are types of work, work partnerships, work safety and workplace bullying. These insights from the literature and emergent themes are discussed in detail below.

5.4.1 Organisational Structure

Organisational structure research focuses on the hierarchical configuration of institutions, centralisation of decisions, formal standardisation, horizontal integration and strategic orientation or corporate strategy (Doherty et al. 2010). Traditional organisations are defined as large, complicated administrative entities that are built on the standards of a power hierarchy, career specialisation and formalised regulations (Muchinsky 1990). Research suggests that an important connection occurs between the configurations of the organisation and general levels of trust and job gratification (Dammen 2001). Organisational structure can also be viewed in terms of delegation of choice-making, formalising processes and procedures, functional dependence and job level. These were discovered to be positively associated to organisational commitment; however, mass and width of control were not associated (Brooks 2002; Morris & Steers 1980; Worthy 1950).

The findings shown in Table 4.4 reveal that most of the organisations interviewed had specific job designations and specialisations, such as barista and café partner. Organisations with well-developed structures for the employment of people with ASD were traditional, hierarchical organisations with management that understood the strategic orientation or corporate strategy of the organisation. There were opportunities for promotion, career development and advancement through the hierarchy for people with ASD in some of the organisations in the sample. However, these were also traditional, hierarchical organisations that made the employment of people with disabilities part of their strategic orientation and corporate strategy. The findings also yield the importance and value of company mission statements as both an important part of strategic planning in differentiating the organisation, as well as part of the package of corporate identity (Morphew & Hartley 2006).
5.4.2 Employees' Organisational Commitment

Table 4.5 summarises the various elements of employees’ organisational commitment. The patterns that emerge regarding low turnover rates for employees with ASD (around 3–4 years) may imply a higher organisational commitment by employees with ASD compared with employees across the board. This may also suggest that employees with ASD have values and goals that are more aligned with the organisation compared with other employees (Mathieu & Zajac 1990; Meyer & Allen 1997; Mowday 1998; Randall 1987).

Another insight regarding organisational commitment is the importance of occupational identification (Mathieu & Zajac 1990; Witt 1993). By encouraging employees with ASD to develop real skills and long-term careers through job restructuring, such as in the case of Interviewee A7, the organisation could develop higher employee commitment to the organisation, because employees had the opportunity to identify themselves as café partners and baristas. Employees with ASD demonstrated higher levels of organisational commitment because they were more congruent with the values and goals of the employer organisation.

Difficult behaviours such as ‘meltdowns’ were mentioned in the findings. Different participant organisations showed different levels of organisational commitment to their employees with ASD, such as describing the behaviour of their employees towards customers negatively. Other interviewees demonstrated organisational commitment to their employees with ASD by providing workplace accommodations, such as allocating a rest area and job coaches to provide support. This response confirms the insight from the literature that organisational commitment by employees is dependent on employers’ demonstration of commitment (Pagon et al. 1998; Schappe & Doran 1997; Singh & Bilingsley 1998).

5.4.3 Employers’ Organisational Commitment

The findings displayed in Table 4.6 show that 75 per cent of the interviewees showed organisational commitment by providing supervision and support by supervisors and mentors for their employees with ASD. Further, employers and co-workers should be aware of potential restrained or amplified responses to sensory stimulation from people with ASD, and provide time to adjust to changes in the workplace (Jacob et al. 2015). The findings confirm that time is an important resource/investment by companies. It also took time and patience for employees to adjust to workplace modifications.
Thus, time needs to be set aside to develop these areas through pre-employment training—whether in school or on the job—to prepare and equip individuals with the skills needed for employment. Research into pre-employment training has shown improvements in skills developed in the areas of communication and technology (Wittich et al. 2013), but a high turnover of employees with disabilities (Wittich et al. 2013). Tsang (1999) found that pre-employment vocational training is more expensive than in-service training, and that vocational/technical education incurs a higher cost than academic programmes. Nevertheless, in the present study, Respondent A6 spoke about how pre-employment training by Pathlight school developed good work habits in their employees with ASD.

Analysis of the interview data shows that, in addition to pre-employment training and supervision and support by supervisors and mentors, there was often a designated HR officer or job coach to handle issues pertaining to employees with ASD. This was a feature of successful employment of individuals with autism described by Hagner and Cooney (2005), who found that supervisors or job coaches who provided support in the areas of job modification, supervision, co-worker relationships and support services for employees with ASD contributed to successful hiring practices. These patterns in the data suggest that most of the organisations interviewed provided an atmosphere of mutual support for employees with ASD and were committed to creating inclusive workplaces (Hagner & Cooney 2005). Downsizing or shedding employees was not mentioned by interviewees in the study.

The interviews revealed that many organisations provide on-the-job training or in-house training, which fine-tunes or prepares people with ASD with the skills needed for the job, and puts into place good work habits that help the transition into the workplace. One organisation’s role (Interviewee A5, Athan) was as a training centre. It also protects the organisation from the risk of poaching because proficiencies learnt by employees are not transferable. However, employees become more indispensable to the company as well (Teague 2005). The interviewees noted that different types of training include training courses that develop specialised skills needed for the job and training modalities such as individual or clustered training opportunities.

The findings also showed that 50 per cent of the interviewees (see Table 4.6) demonstrate organisational commitment by providing supported employment opportunities to suit the needs of employees with ASD. Job restructuring efforts by the employer organisations include providing supervision and supported employment opportunities for employees with ASD. Hashim and Wok (2013) suggested that organisational commitment is projected through
companies’ capability to customise their work scope to accommodate the requirements of employees with disabilities. For Interviewee A5 (Athan), job restructuring and workplace modifications were part of the changes made to suit the needs of employees with ASD.

Further, leadership in disability initiatives demonstrates organisational commitment by catering to the needs of graduates with disabilities (Houtenville & Kalargyrou 2012). 67 percent of the interviewees interviewed provided job placement for school graduates as seen in Table 4.6. This pattern of data suggests that most interviewees demonstrate organisational commitment through job placements and collaborations with schools. The literature asserts that pre-employment training for people with ASD should be functional and concentrate on the skills required in existing and potential situations (Iovannone et al. 2003; Wehmeyer 2002). Other research on training has focused on worksite training of supported workers with ASD and suggested that the best practice for teaching vocational skills is to combine worksite training with simulation training (Lattimore et al. 2006). However, no interviewees in the sample mentioned simulation training.

### 5.4.4 Return to Work

Table 4.5 summarises the low turnover rates for employees with ASD (around 3–4 years). Martin et al. (1994) reported that length of employment affects the return-to-work dimension. In this study, insights were gained in dimensions that affected return-to-work options such as the working hours of an employee and staff turnover. Longer job retention has been associated with better social inclusion and acceptance on the job (Belcher & Smith 1994). Figure 4.8 indicates that most of the companies sampled (75 per cent) provide job flexibility through return-to-work options for their employees. This pattern of job flexibility with return-to-work options is identified in this study as being beneficial to both employers and employees. Another insight was that the degree of work limitation also affected individuals’ choice and ability to return to work.

### 5.4.5 Workplace Accommodation

The dimension of workplace accommodation was only mentioned by the employers who had employed people with ASD. Studies have shown that, in addition to assisting employees, supported hiring programmes can be advantageous to employers (Rogan, Banks & Howard 2000). Almost 100 Iowan employers who were surveyed emphasised that management that employed people with disabilities through supported hiring practices viewed these practices as successful and beneficial (Nietupski et al. 1996). Likewise, Schartz et al. (2006) reviewed
workplace modifications and found that they enhanced output for employers at minimum expenditure. This is in contrast with the frequent view, as suggested by Hornberger and Milley (2005), that employers often have an adverse view of the necessity and expense linked to reasonable modifications.

The interviewed participants who had employed people with ASD did not mention cost as a constraining factor in implementing accommodations. Two interviewees who had employed people with ASD said that the costs involved in implementing accommodations were minimal. Training prepares individuals for future challenges at work and helps them to cope with change (Tsang 1999). In terms of career development, training also prepares individuals to take more responsibility at work, with improved job performance, salary growth and future promotions (Tsang 1999). Tsang (1999) likened training and education to a production process to teach new skills or upgrade existing skills to meet the required workforce needs of the economy. An employee can only develop workplace skills to meet those needs if suitable equipment and physical facilities are in place (Tsang 1999). The interviewees who had not employed people with ASD had mixed responses. Three interviewees said that the cost was not a concern to them if they could fulfil other areas of need in the job. Another three interviewees who had not employed people with ASD said they would be more interested in hiring them if there were cost subsidies or incentives. The findings reveal that workplace accommodation is integrated as part of the culture and physical structure in some companies. Studies by Copeland et al. (2010) listed modifications such as acquiring special software and including an elevator. The findings in this study show that elements of job restructuring, worksite modification and workschedule changes were provided by five interviewees who had employed people with ASD. Seven interviewees did not make changes to job specifications, but they gave employees with ASD time to adjust to the changes.

5.4.6 Organisational Rewards

Organisational rewards include dimensions such as security, self-esteem, opportunities, independence, the requirements of employment (caseload, pace), being in control of work (autonomy, learning, participation) and the generic circumstances of living external to the workplace (Benavides et al. 2002; Kuper et al. 2002). Day et al. (2013) suggested that organisational rewards should be related to employees’ needs and equality rather than equity or performance. The findings in this study show that organisational rewards were provided to employees with ASD through promotion opportunities or financial incentives. Fifty-eight per cent of interviewees who had employed people with ASD did not provide opportunities for
promotion. However, 83 per cent of interviewees provided the same salary scale for individuals with and without disabilities. Salaries of people with ASD were only prorated for two interviewees’ companies. Outdoor activities were provided by one interviewee as an organisational reward, while other organisations provided cash vouchers as part of a financial bonus or incentive.

The provision of such rewards is important if one considers that people with disabilities are more risk-averse and place a higher value on job security (Ali, Schur & Blanck 2011). They are unlikely to choose a job in which their income may decrease because they may then be unable to meet their basic needs (Ali et al. 2011). Organisational rewards are evaluated within the framework of two job stress models: effort–reward imbalance and organisational justice (Milner et al. 2015). The effort–reward imbalance model views fairness and reciprocity at work as part of a social contract to reward an individual with money, esteem or career opportunities (Siegrist et al. 2004). The organisational justice model postulates that justice includes organisational- and individual-level views of fairness (Milner et al. 2015). Contrary to this study, Milner et al. (2015) found that people with disabilities were targets of discrimination and inequity in job searching and in the workplace. They also found that people with disabilities were paid less than those without disabilities in Australia (Milner et al. 2015). Milner et al. (2015) advocated for improvements in the quality, pay and sustainability of employment for people with disabilities.

5.4.7 Career Development or Organisation Development

Research presents career development from the perspective of the employee or potential employee, while from the employer or organisation’s perspective, it is also known as organisation development. Examples of organisation development include coaching, training, performance appraisal systems, job analysis and descriptions, and process improvement (Luecking 2003; Rothwell, Sullivan & McLean 1995). Factors such as physical and attitudinal barriers, health insurance issues and work disincentives often function as deterrents to career maintenance and advancement (Roessler & Bolton 1985).

The findings revealed that 58 per cent of interviewees did not provide individualised career goals or paths for employees with ASD. This is not surprising because employees with ASD require individual attention and additional support in the workplace. Eighty-three per cent of interviewees supplemented this need through training. Perhaps more partnerships are needed to provide the support needed for career development. Most interviewees (67 per cent) felt that
their employees with ASD could obtain similar jobs or positions outside the company. This could be a means for career development for employees as well. One of the companies in the sample restructured the job to provide opportunities for the career development of employees. Alternatively, job restructuring can be created within the company so that other job positions can give employees more career development opportunities. Job restructuring empowers individuals with the ability to perform specific job tasks to have control in the workplace (Parmenter 2011). It also allows expectations and perceptions to veer towards a more positive orientation, and it advances empowerment (Parmenter 2011).

5.4.8 Government Subsidies, Insurance and Taxation

In the interview findings, organisations that had employed people with ASD were partly aware of government incentives (50 per cent), subsidies from agencies (50 per cent) and organisations they could approach (50 per cent) if they were interested in employing people with ASD. All organisations participating in the study were not aware of any subsidised insurance schemes or tax benefits available for employers.

The interviewees mentioned the Open Door Fund as an example of a government incentive or subsidy that could be used to tap into resources and financial support. There is also Special Employment Credit (SEC) for employed people who are more than 50 years old and earn less than $4,000. For people with disabilities, there is a higher rate of SEC paid out to employers. Examples of agencies to approach if organisations are interested in hiring people with ASD include SG Enable and Voluntary Welfare Organisations (VWOs) for placements. In the interview findings for this study, most organisations were not aware of government incentives, subsidies or organisations they could approach if they were interested in employing people with ASD.

The cost of ASD to governments was explored using interviewees with ASD who were part of a supported employment programme in the UK (Howlin, Alcock & Burkin 2005). As mentioned in Sections 1.2.10 and 2.4.1, the research evaluated the results of supportive hiring for eight years, with total savings to the Exchequer of £179,095 for 114 employment positions in the programme. This was relative to a decrease in benefits and nationwide financial coverage and added tax contributions. A significant reduction in the number of benefits received was also observed when the interviewees gained employment. The results of the study by Howlin, Alcock and Burkin (2005) show that hiring people with ASD can cut government expenditure by decreasing the benefits required by people with ASD during unemployment.
In summary, the employers identified in this study mostly encouraged the employment of people with ASD in organisations. For organisational structure, employers from traditional, hierarchical organisations that have specific job designations were more likely to employ people with ASD. In terms of employee organisational commitment, high commitment to the organisation by employees was deemed the result of aligned values and goals. Specific job designations were also regarded as creating occupational identification, which led to higher employee organisational commitment. It was recognised that organisational commitment between employers and employees needs to be mutual. Organisational commitment from employers encourages employment when there is supervision and support, HR or job coaches, restructured jobs, job placement from schools and time provided to adjust to changes. Employment is usually discouraged when organisations are downsizing. Return to work encourages the employment of people with ASD because there is job flexibility and thus a lower turnover of staff.

The interviewees mentioned that workplace accommodation encourages the employment of people with ASD because it boosts productivity at a low cost. It is usually integrated into the company culture through job restructuring, worksite modifications and work-schedule changes. Organisational rewards encourage the employment of people with ASD through promotion opportunities and financial incentives. For career development or organisation development, when individual career goals are not provided, it discourages the employment of people with ASD. However, for restructured jobs, the likelihood of obtaining similar jobs outside the organisation, as well as the training opportunities that are provided, encourages the employment of people with ASD. Finally, employers were mostly neutral or unaware of government subsidies, insurance and taxation concerning the employment of people with ASD.

5.5 Findings for Research Question 3

RQ3: From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?

The ICF model revolves around three main components: impairment, activity limitation and participation restriction (WHO 2002). Singapore has also defined disability using the ICF model through two main components: medical diagnosis and the socio-functional aspect or functionality of the person in the environment (Enabling Masterplan 2012–2016). Employment and work activities contribute to the socio-functional aspect or functionality of the person in the environment. For companies with 5–19 employees and 20–199 employees in this study, the
percentage of employees with ASD was approximately 25 per cent each. Companies with 1–4 employees or 200 or more employees had a lower percentage of 17 per cent each. These results suggest that people with ASD are not integrated into the workforce. This finding is consistent with the results of previous studies (Ballaban-Gil et al. 1996; Jennes-Coussens, Magill-Evans & Koning 2006; Magill-Evans et al. 2008).

Through inferential statistics, Wang and Lin (2013) used the ICF model to categorise factors to determine employment outcomes for people with disabilities in Taiwan. They evaluated factors such as body function/structure, activity and participation factors, and environmental factors used in the ICF framework. The factors identified in this study—namely education level and the need for the use of auxiliary equipment (also part of workplace accommodation)—were also included in Wang and Lin’s (2013) study. Education level was identified as an activity and participation factor, and the need for the use of auxiliary equipment was categorised as an environmental factor. According to Wang and Lin (2013), education level is one of the strongest predictors in explaining or predicting employment outcomes for people with disabilities.

One of the interviewees raised the theme of flexibility as the ‘ability to cope with whatever the task you are given to do’ (Interviewee A5, Athan). This concept of flexibility was also discussed by Zanoni (2011), who highlighted that individuals with disabilities lack flexibility and capability. Flexibility is deemed to include physical, mental and relational skills. Unlike Stone and Colella (1996), who suggested that the type of disability is the most critical factor, Zanoni (2011) included physical skills as part of the employment requirement to work independently.

People with ASD can be independent at work when they have the skills needed for functional independence and those necessary for job completion. They require a supportive work environment with the necessary workplace accommodations to perform their job. The path to independence in employment is facilitated in the workplace with worksite assistive technology and other forms of workplace accommodations (Solovieva, Dowler & Walls 2011). These insights from the literature are confirmed in the present study. Interviewees listed having skills in language and communication, socialisation, self-determination and self-management as important elements for independence and employment.

Employers can also encourage the independence and employment of people with ASD by taking steps to restructure jobs, modify workplaces, commit to the employment of people with
ASD and address the various viewpoints raised in Research Question 2. In addition, addressing the emergent issues raised in the next section, such as types of work, work partnerships, work safety and workplace bullying, will allow people with ASD to be successful in the workplace.

In summary, people with ASD can navigate themselves towards independence and employment when they have the skills and abilities needed for the workplace, as discussed when addressing Research Question 1. The viewpoints of employers discussed when addressing Research Question 2 also contribute to the successful employment of people with ASD. Finally, the discussion addressing Research Question 3 suggests that the successful integration of people with ASD into the workplace is achieved through a collaborative approach between employers and employees.

5.6 Emergent Codes and Themes from Data Analysis

As shown in Figure 4.14, the emergent themes from the findings were on-the-job training, types of work, workplace bullying, work safety and work partnerships.

5.6.1 Types of Work

People with disabilities prefer flexible work arrangements because of health or mobility concerns (Ali et al. 2011). Interviewees from companies that had employed people with ASD were able to provide flexible work arrangements. Beyond flexible work arrangements, the incidence of routine, repetitive work that could be completed slowly also emerged as a pattern in this study. This finding is consistent with previous findings that people with ASD need routine and structure to function successfully in various environments (Mesibov, Shea & Schopler 2005).

5.6.2 Work Partnerships

A key insight that emerged from the interviews was the importance of work partnerships between companies and schools, within the organisation and with other stakeholders. This is consistent with research that indicates that school–employer relationships are important because there are distinct advantages when schools connect with existing networks of local employers as partners (Carter et al. 2009). Respondents spoke about close collaborations with schools and partnering VWOs. Effective transition services for people with disabilities are characterised by innovative and effective partnerships with community employers (Carter et al. 2009). The involvement of employer networks also supports the career development and work experiences of people with ASD (Carter et al. 2009).
Within the organisation itself, five interviewees who had employed people with ASD spoke about new deal partnerships, which is a category of enterprise partnership (Guest & Peccei 2001). New deal partnerships ground management–employee interactions on the principle of mutuality and seek to balance their interests (Guest & Peccei 2001). In general, enterprise partnerships allow for the incorporation of external stakeholders, show organisational commitment by employers and are a formula for winning mutual gains for both employers and employees (Teague 2005). Implementing more job flexibility for employees would then be offset by higher organisational commitment. Kochan (1999) suggested six guidelines for enterprise partnerships: transparency, scope and depth, credibility, organisational commitment, incorporation of ‘outside’ stakeholders and internal evaluation that ensures sustainability in the work partnership.

5.6.3 Work Safety

Another insight into employers’ viewpoints addresses the work safety of employees. This perspective was raised by an employer who has employed people with ASD. The interviewee spoke about safety at work and workplace modifications such as restructured work areas. The interviewees who had not employed people with ASD did not mention work safety as a concern. The importance of work safety is consistent with previous research by Sabata, Williams & Zolna (2006). However, the area is not compatible with previous research because there is a lack of research that focuses on work safety for people with ASD in the workplace. Recent research identifies that work safety is an important theme and foundational to work culture in general workplace environments (Fogarty & Shaw 2010; Sabata et al. 2006; Wong & Lee 2016). It also focuses on workplace accommodation to achieve work safety. Thus, conventional research is replete with studies on workplace accommodation.

Sabata et al. (2006) discussed work safety as a culture that can be tackled through management support for safety, employee support for safety, personal responsibility for safety and safety management systems. The importance of work safety as the foundation of an organisation’s work culture was reiterated by Wong and Lee (2016). Studies have also concentrated on plans intended to improve safety proficiencies (Taylor et al. 2004) and rest and relaxation participation (Jones & Block 2006; Ormond et al. 2004; Scheitner & Devine 2001). Regulating the physical work environment and task procedures to avert errors and accidents is part of typical workplace safety interventions (Fogarty & Shaw 2010).
Other means of enforcing work safety include having a buddy system (US Department of Energy 2009), providing monthly updates (Mosey 2014) and conducting hazard analysis or risk assessments for every job (Leveson 2011). Four interviewees spoke about having a buddy system, whereby they help and guide employees with ASD. Table 4.6 shows that 75 per cent of the interviewees showed organisational commitment by providing supervision and support by supervisors and mentors for their employees with ASD. One interviewee discussed providing monthly updates as a means of enforcing work safety.

### 5.6.4 Workplace Bullying

Another insight into employers’ viewpoints addresses workplace bullying. This was raised by an employer who has employed people with ASD. This finding is consistent with previous research on ASD that discusses the importance and negative effects of bullying for all parties in the workplace (Cappadocia, Weiss & Pepler 2012; Scott et al. 2015). The interviewees who had not employed people with ASD did not mention workplace bullying as a concern. A key insight into workplace bullying of people with ASD is that the respondent also spoke about suitable job placements. This suggests that if a person with ASD is not well placed or there is no suitable job fit, it is likely that the person with ASD will experience workplace bullying. A workplace bullying infraction or violation could be categorised as a risk. A risk is an unsure occurrence or circumstance that, if it occurs, has an affirmative or adverse effect on an initiative (‘CDC Unified Process Practices Guide’ 2006). Thus, hazards connected to bullying violations are adverse and involve physical, mental, social and economic harm (‘Workplace bullying defined by the Workplace Bullying Institute’ 2010).

Scott et al. (2015) highlighted the need to address workplace bullying with statement packs that contain condensed information relating to ASD and employment. Cappadocia, Weiss and Pepler (2012) found that people with ASD are at greater risk of being bullied than typically developing peers. This has negative effects for both the person with ASD and the employer. Thus, it is suggested that mentoring and other necessary workplace accommodations be implemented to minimise the likelihood of such occurrences. People with ASD have difficulties with communication and social skills that are essential for peer relations (Gray 2004). Supportive peers are the protective factor that reduce the risk of bullying and marginalisation (Cappadocia, Weiss & Pepler 2012). Assertiveness and healthy communication in the face of peer victimisation are additional important protective factors (Sharp & Cowie 1994).
In summary, the employers discussed organisations that employed people with ASD as part of their corporate strategy through organisational structure. Another key insight showed that employees’ organisational commitment depends on that of employers, which is usually good, resulting in low turnover rates for people with ASD. Organisations that had employed people with ASD showed their commitment in many ways, such as through a buddy system, job restructuring and workplace modifications, and work placements from schools. People with ASD who need return-to-work options could access job flexibility in companies that had employed people with ASD, and turnover rates were low for employees with ASD. For workplace accommodation, cost was not a concern for employers who had employed people with ASD because minimal costs were incurred; however, responses were mixed for employers who had not employed people with ASD. Most interviewees provided the same salary scale in financial organisational rewards to both employees with ASD and those without disabilities, but most did not provide promotion incentives. Further, most interviewees who had employed people with ASD did not provide career development through individualised career paths; rather, most only provided training. There were mixed responses with regard to government subsidies, insurance and taxation, with most interviewees from both groups only discussing government subsidies. Emergent themes have been added to the conceptual model for this study—for example, the types of work that people with ASD need, such as flexible work arrangements and routine, repetitive and slow work. Work partnerships also emerged as a key insight with both external and internal partnerships showing organisational commitment. Work safety could be enforced as a work culture for employers who employ people with ASD, and through restructured work areas, buddy systems, monthly updates and risk assessments of jobs. Finally, workplace bullying may occur when it is not a suitable job placement for the person with ASD.

5.6.5 People Factor—The Need for Social Interaction at Work

A key insight that emerged from the interviews was the importance of the people factor or the need for social interaction at work. People as employees need training to be employable, and they need time to fit into the work environment with other people. There is often many clients to be served in the service industry, so clients need fast responses. Interacting with people is important in the work environment, and it encourages people with ASD to meet people and integrate into society. These findings are unexpected because recent disability literature has focused more on adapting the work environment through workplace accommodations rather than the importance of social interaction at work. This theme may also have arisen because the
sample is from the service industry, in which jobs are service-oriented and often on the frontline.

5.6.6 Employers’ Attitudes

Employers who have hired employees with ASD held both positive and negative attitudes towards them. Some employers were indifferent and uncertain about the educational background of employees with ASD, and they felt that these employees lacked communication skills. Other employers acknowledged that the employees worked in a negative environment, but they were positive, patient and passionate about employees with ASD. They showed strong support and commitment towards employees with ASD and were pleased with external partnerships with other organisations. This finding is consistent with recent research that discusses the importance of hiring people with disabilities as a matter of social responsibility (Gustafsson, Prieto Peralta & Danemark 2014). Positive employer attitudes also support integration and inclusion rather than segregated learning and play for people with disabilities (Gustafsson et al. 2014). Previous research has found that better-quality contact with people with intellectual disabilities generates more positive attitudes (McManus, Feyes & Saucier 2011). These positive attitudes are generated through the acceptance and experiences of working with people with disabilities (Copeland et al. 2010).

However, employers in this study did not describe people with ASD as having done anything extraordinary in the workplace. In contrast, Gustafsson et al. (2014) expressed a view of extraordinary capability or adjusted expectations for work productivity and work capacity for people with disabilities in the workplace. Further, in contrast with previous research (Domzal, Houtenville & Sharma 2008; Fraser et al. 2010; Louvet, Rohmer & Dubois 2009; Unger 2002), employers did not reveal lower expectations of productivity of people with disabilities. One employer mentioned that employees with ASD were faster and more meticulous. However, employers in this study mentioned that more time was needed to prepare them for the job. One employer in this study mentioned that a minimum of six months was necessary for pre-employment training.

5.7 Contributions of the Research and Recommendations

This section summarises the theoretical contributions of this research and the implications for policy and practice in the employment of people with ASD in the Singapore service industry (mainly food and beverage). Recommendations for policies and practices are also discussed here.
5.7.1 Contributions to Knowledge

This study sought to interpret the accounts provided by a group of employers in the service industry (mostly the food and beverage sector) in Singapore. The knowledge generated may not be generalised to other populations, but it has produced new insights into employers and their perspectives of people with ASD. This study bridges the ‘knowledge gap’ between disability—specifically ASD—and employment. Literature in this area is scarce and under-represented.

This study makes several contributions to knowledge. First, it suggests that employers should explore the possibility of hiring people with ASD. It also provides support and extends what is currently known in other research from the employers’ perspective regarding the hiring of people with disabilities (Burke et al. 2013; Gustafsson et al. 2014), and it identifies emerging themes regarding the hiring of people with ASD in the service industry in Singapore. While Gustafsson (2014) suggested that employers perceive people with disabilities as having extraordinary capability in the workplace, this study finds that employers did not have that view of employees with ASD. Second, this study makes contributions regarding the job demands and viewpoints of employers in the service industry in Singapore, thus clarifying and adding to previous knowledge of these areas. Third, this study fills the knowledge gap between the viewpoints of employers who had not employed people with ASD and employers who had employed people with ASD in the Singapore service industry. It also shows that there is a shortage of literature on this subject in the Singapore service industry. Finally, this study presents findings about the skills and abilities of concern to employers in the Singapore service industry.

The contributions to knowledge include the emergent model of the themes influencing employers to employ people with ASD in the service industry in Singapore. This contribution is unique and is an initial mapping of the perspective of the organisation and employer (see Figure 4.14). It presents a possible platform for future research, discussion and understanding of the patterns and themes for employers of people with ASD, and possibly disability in general. For instance, the model could be replicated with other samples to analyse differences between disability types. Finally, this study adds to the body of knowledge in this area and encourages future research in the Singapore service industry, which is a major engine of growth in the Singapore economy (Economy Watch 2010).
5.7.2 Contribution to Disability in Employment/Business Administration Literature

The findings in the present study do not align with the traditional disability literature, which focuses on purely developmental, social sciences and allied health approaches. Rather, this study takes a business administration approach from the perspective of employers to bridge the gap between disability and employment literature, thereby filling a unique position. This study contributes to and extends the human capital theory and the ICF model, as discussed below.

5.7.2.1 Human Capital Theory

The respondents presented as a group of employers who mostly differentiated between the skills and abilities of employees. These findings fit with the human capital theory that differentiates and identifies sources of human capital differences such as innate ability, schooling, training and pre-labour market influences (otherwise known as pre-employment training in this study) (Acemoglu 1999). An outcome of the findings in this study is a deeper understanding of the meaning of skills and abilities for employers, as well as their differentiation of innate ability versus skill (or the result of learning through school, training and pre-labour market influences), which is useful in understanding human capital theory. After all, human capital is essentially the knowledge base and characteristics an employee has that contributes to their work productivity and output (Acemoglu 1999). Thus, this study contributes to human capital theory by providing contextual experiences from the employers’ perspective about the skills of employees in the workplace. However, contrary to human capital theory, the findings show that employers have mixed attitudes. Employers with negative attitudes were ambivalent about the educational qualifications of employees with ASD.

5.7.2.2 ICF Model

The findings in this study correspond to some ICF factors identified by Wang and Lin (2013), such as educational level and the need for the use of auxiliary equipment (workplace accommodation). The findings in this study concur with Wang and Lin (2013) that education level is a predictor of employment outcomes for people with disabilities. Employers with positive attitudes were more likely to hire people with ASD and were not ambivalent about their educational qualifications. Flexibility was also a concern for individuals with disabilities because it allows independence at work (Zanoni 2011). In summary, this study supports the use of the ICF model to categorise and evaluate employment outcomes for people with ASD.
5.7.3 Recommendations for Policy and Practice

These recommendations are suggested to the management of organisations and business operators in the service industry in Singapore. First, an induction and mentoring programme for employees with ASD in the organisation would develop work safety culture and work partnerships within the organisation. It would also be a gesture of organisational commitment from the company. Second, implementing a reward system in the organisation that includes financial and other intangible rewards would benefit employers and employees alike. Although most companies provide the same salary scale to both people with ASD and those without disabilities, rewards such as promotions and non-financial rewards are lacking. Third, companies should provide good organisational commitment to employees and, in turn, employees will show organisational commitment to the organisation. Fourth, employers should implement flexible work arrangements that balance job security for employees with ASD, and they should encourage work safety as a culture and foundational ethics in the organisation. Finally, they should discourage workplace bullying as a culture in the organisation and arrange for suitable job placements for people with ASD to minimise the likelihood of it occurring.

Another recommendation is to develop work partnerships between schools and employers, as well as other types of enterprise partnerships. These partnerships could include those between employers and VWOs, clients and within the organisation. Next, encouraging the development of organisations would add value to their employees. Further, the development of structures within the organisation to address issues of workplace accommodation and safety is recommended. These structures should support people with ASD to be as independent as possible in the workplace. Next, it would be advisable to create awareness of government support and funding through available policies and subsidies in the employment of people with ASD. This would be possible through the development of open, supported and customised conceptual models to provide more pathways for the employment for people with ASD in Singapore.

Finally, opportunities for career development should be provided for all employees, including those with ASD. These opportunities should include providing lifelong learning for people with ASD. Government resources could also be channelled towards building employers’ capabilities in hiring and managing people with ASD. Examples of building capabilities through training to create a supportive workplace environment for people with ASD include providing training for employees without disabilities by mentoring and educating them on ASD, conducting on-the-job training, explaining workplace culture and encouraging effective communication skills.
5.8 Strengths and Limitations

5.8.1 Limitations of the Study

The main limitation of this study is that the sample comprises Singaporean companies in the service industry. While the results may not be applicable to the practices carried out in other countries or other industries, the contextual boundary of Singapore is ideal for this study because Singapore is home to many major businesses (Economic Development Board Singapore 2015).

The main limitation of this study was the lack of relevant literature in this area. Thus, it was difficult to find the most applicable published journal articles for this study. However, although the literature was limited, the researcher used the few available studies to determine the factors and viewpoints of employers and employees in various contexts, and to generate concepts as the basis for this specific study. This study incorporates the views of only positively biased employers. The data include only those who explicitly said, when interviewed, that they were interested in employing individuals with ASD. It is uncertain whether there was any social desirability effect whereby the employers felt obliged to report only ‘politically correct’ views.

Time was also a limitation of this study. The researcher acknowledges that interviewees’ perceptions may be influenced by the employees who were employed at the time of the interviews. A longitudinal study would have been useful for this study, and, should be considered for future research.

Finally, observations and interpretations are subjective and cannot be perfectly replicated in various contexts. Research methods and techniques do not always lead to truth and certainty (Kemmis & McTaggart 2005). Truth is shaped by the context and views of different individuals who are interviewed, and it is also interpreted through the reader’s own perspective. Thus, authenticity, accuracy and appropriateness are subjected to each reader’s point of view.

5.8.2 Strengths of the Study

Although there are limitations of the study, there are also strengths. This study has provided insights into employers’ perspectives of employees with ASD in Singapore, thereby informing practice and contributing to the disability knowledge base in Singapore. Reflexivity was part
of the interpretive process, and the researcher sought to ensure that the emergent themes reflected the respondents’ meanings and perspectives.

5.9 Suggestions for Further Research

There are several opportunities for further research. First, this research has explored the emerging themes regarding employers’ viewpoints in the service industry in Singapore. Given that there is a lack of research in the service industry in Singapore, this exploratory study paves the way for future research to include employees’ perspectives. Further, industrial, commercial/retail, education, health and lodging industries could be considered (Unger 1999). The Enabling Masterplan 2012–2016 in the Value Chain Framework also incorporates the sectors of financial services, food manufacturing, IT and logistics. This would triangulate the findings and perspectives and provide a holistic picture of employment practices in the service industry in Singapore.

Second, there may be other themes that have not yet been explored. For example, future research could highlight other themes or factors that influence employers in the employment of people with ASD, such as exploring the functional independence and social functioning of people with ASD using a supply-side approach. The researcher recognised functional independence and social functioning as contributing factors to the framework. Thus, the researcher suggests that this area should be covered in future research.

Third, this research is exploratory in nature. It allowed emergent themes to surface regarding the influence of business operators and management in the employment of people with ASD. Further research could identify the types of relationships between the themes using other forms of data analysis, such as conducting longitudinal or quantitative studies.

Fourth, a quantitative study could be conducted to infer cause-and-effect relationships between variables that have been identified, and to allow for a predictive aspect. This would allow researchers to identify the independent and dependent variables involved in the theme of employment of people with ASD. Researchers would also be able to identify whether there is a main effect, as well as the strength of the association between variables, through such testing.

Fifth, longitudinal research could examine the views of employers and employees in the service industry in Singapore as the sector develops and evolves. The Enabling Masterplan 2012–2016 in Singapore has been updated to the 3rd Enabling Masterplan 2017–2021. This is an example
of viewing the disability sector in the long term and mapping its progress. Longitudinal studies across years would allow researchers to evaluate and observe the progress made in this sector in Singapore.

Sixth, future research could examine employees’ views and the skills and abilities required in different roles. This study focused on employers’ views, and it would be useful to explore the perspectives and needs of employees as well. Job scope and work roles are also important dimensions when considering employees’ needs and wants in a job. Ethical implications need to be acknowledged when designing such a study.

Finally, future research could investigate leadership styles and their effect on the decision-making of employers in the employment practices of people with ASD in the service industry in Singapore. More insights could be obtained if a comparative study was conducted that included perspectives from employers, employees and other stakeholders such as service users and government bodies. Further research could also be conducted in other industries, such as manufacturing or administrative jobs that require vocational training.

5.10 Summary and Concluding Remarks

The objective of this study was to explore the viewpoints of employers regarding the employment of people with ASD, and to explore the skills and abilities needed for a person with ASD in the workforce. Chapter 1 provided the background of the research and articulated the problem as a lack of research in the area that would give employers knowledge about creating more robust job opportunities for people with disabilities who are exploring employment options. There is scant information on the employment of people with disabilities in the service industry in Singapore, although it is a growing concern and workforce issue for a country with a strong economy and low unemployment rate. This led to the development of the research questions: ‘How would the proposed factors identified in the Literature Review of this study encourage and support the development of skills and abilities that help people with ASD to be successful in employment from the perspective of employers?’; ‘What are the main viewpoints of employers that encourage or inhibit the employment of people with ASD in organisations?’ and ‘From an employer’s perspective, are people with ASD able to successfully navigate themselves on a path to independence and employment?’ These questions were addressed using an exploratory research paradigm and an interpretivist approach to the analysis of the data collected by interviewing representatives from participating companies. Main
themes identified in the literature review were proposed, along with a conceptual model for the research that was composed of the themes. The chapter also included a discussion of the limitations and delimitations of the study.

Chapter 2 presented a review of the literature relating to employment in the disability sector. From this, key themes were identified and explained in detail. Most of the extant literature on the employment of people with ASD has been developed in the US. For example, a meta-analysis was conducted that combined the viewpoints of employers from various studies (Unger 2002). In Singapore, the government published the Enabling Masterplan 2012–2016 as a roadmap for the disability sector. However, while various theoretical models have addressed different aspects of the phenomenon in the literature, no specific conceptual model has been proposed for people with ASD.

As stated in Chapter 3, the process of identifying themes to answer the research questions involved finding the themes in the literature. Interview questions could then be devised to explore employers’ viewpoints relative to the themes. Semi-structured interviews were conducted with representatives from participating organisations, half of whom had employed people with ASD, and half of whom had not. The researcher sought to understand the employers’ views regarding the recruitment of people with ASD, recognising that their concerns were subjective and related to their experiences with their employees.

As explained in Chapter 4, the data collected from the interviewees were subjected to computer-assisted analysis to allow emergent themes to surface that had not been identified in the literature review. These themes were then incorporated into a double set of conceptual models—one for organisations that had employed people with ASD, and one for those that had not. Additional areas, such as types of work, workplace partnerships, workplace safety and workplace bullying, were proposed in the findings and included in the emergent model. This model makes a significant contribution to the field of study and to policy and practice in the area of employment of people with ASD in the food and beverage, as well as other service industries, in Singapore.

This study evolved from a preliminary interest in imputing value and advocating for the employment of people with disabilities, particularly for people with ASD. Through the exploratory research journey, the research focused on taking an interpretative qualitative approach through interviews from the perspective of business owners and management. Moving through the landscape of entrepreneurial endeavours, the researcher found stories and
experiences with which she could identify. As the study reached its end, the researcher reflected upon whether we can impute value for people with ASD and other disabilities so they are on a level playing field, whether in employment or in other settings.

The researcher believes that this study raises areas of interest and concern for both employers and employees. It gives readers 24 interview stories to consider that are related to the area of employment. The researcher has been inspired and encouraged by the interviews that have shaped this study. They show that there are employers in Singapore who believe in the value of disability, the value of people with ASD and their contributions in employment, and that there are people who will work together to develop people with disabilities for positive change.
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APPENDIX A
RESEARCH INFORMATION PACKAGE

Date: ............ 2013

[Participant’s Name] [Address]

INTERVIEW FOR RESEARCH THESIS TITLED “RECRUITMENT AND RETENTION OF STAFF WITH AUTISM IN A DIVERSE WORKFORCE IN SMALL AND MEDIUM ENTERPRISES (SMEs) IN THE SINGAPORE SERVICE INDUSTRY”

Dear Sir/Madam

My name is Eva and I am currently a Doctoral candidate of The Southern Cross University (SCU) of Australia. I am pursuing my Doctor of Business Administration (DBA) degree at the SCU partner institution in MDIS Singapore.

[give a very brief description of your research and what you hope to achieve from it]

I am writing to invite you to participate in the interview process as part of my research project. The interview will be conducted face-to-face at your organization. The interview will be recorded digitally and you will be provided with hard copy of the final transcript for your final approval on the accuracy of the content. The interview should take between 2-3 hours to complete. A copy of the questionnaire that I will be posing to you is attached for your prior reading.

The Researcher will be coding the name of the participant in a separate record which the Researcher will be keeping the code record confidentially in a place known to her only. During the interview recording the Researcher will at all times refers to the participant by the code name only. To further ensure the confidentiality and anonymity of the participant the researcher will not be recording down the name of the participant together with his responses at all times and will refer to the participant by the allocated code name instead. The researcher further assure the participant that their name will not recorded down in any written form at all in the research report. In case of any one at all getting access to the data, however remote the situation can be, they will still not be able to identify the true identity of the respondent. Thus, this will both keep the participant’s name confidential and the research data anonymous and you will not be exposed to any risk in participating in this research.

I sincerely hope that you will consider participating in this important effort to increase the employability opportunities for individuals with autism. I will be
contacting you via telephone and email in the following weeks to confirm your interest in being interviewed.

No individual feedback on the results of the research will be given to participants. However if you are interested in the summary results of the research please send an email to the Researcher (evalsl@gmail.com) to obtain a copy of the summary findings.

The Southern Cross Ethics Committee has approved the ethical aspect of this study. The approval number is ECN-13-251. If you have any complaints or reservations about the ethical aspect of your participation in this research, you may contact the following personnel:

1) The Ethic Complaints Officer  
Southern Cross University  
PO Box 157, Lismore NSW 2480  
Australia  
Email: ethics.lismore@scu.edu.au

2) Dr. Tay Kin Bee  
Professional Doctorate Supervisor  
Southern Cross University  
Tel: (65) 91779331  
Email: kinbee.tay@scu.edu.au

All complaints received will be treated in strict confidence and investigated fairly.

Please contact me if you have any questions on this research.

Sincerely,

Eva Lim, Research Candidate, Southern Cross University  
E: evalsl@gmail.com  
M: (65)9115 6931
APPENDIX B
SAMPLE OF INTERVIEW QUESTIONS

Research Objectives

Seeks to understand whether individuals with Autism Spectrum Disorder (ASD) and Mild Intellectual Disability (MID) are able to successfully navigate themselves into the workforce;

Seeks to discover employers’ concerns regarding the employment of individuals with ASD/MID disability; and

Seeks to discover the key characteristics of employed people with ASD/MID disability from the employers’ perspectives.

Research Questions

1. What skills and abilities would help school-leavers with ASD/MID with concurrent limitations in social skills successfully transition into the workforce? (Variable 7)

2. What are the main concerns of employers and potential employers that encourage or inhibit the employment of individuals with ASD/MID with concurrent limitations in social skills in the service industry in Singapore? (Variables 5, 6 and 8)

3. What type of organizational commitment does the employer need to demonstrate when employing individuals with ASD/MID with concurrent limitations? (Variable 3)

4. What type of organizational structure needs to be in place for the employer when employing individuals with ASD/MID with concurrent limitations? (Variable 4)

5. What type of organization structure is already in place for potential employers to employ individuals with ASD/MID with concurrent limitations in social skills? (Variable 4)

6. What are the organization rewards for the employer when employing individuals with ASD/MID with concurrent limitations? (Variable 5)

7. How has the employer provided career development opportunities when employing individuals with ASD/MID with concurrent limitations? (Variable 6)

8. What type of employee commitment is necessary for employers when employing individuals with ASD/MID with concurrent limitations? (Variable 8)
### Part 1:

#### Demographics
1. What type of business are you/your organisation in?
2. How long has your organization/business been running for?
3. What is the total number of staff employed by your company/business?
4. Which age group does most of your employees fall under? a) 15 – 24 years b) 25 – 34 years c) 35 – 44 years d) 45 or more years
5. What is the company’s mission statement and/or statement of values?
6. Where is your organization located (Central, East, West, North, South) in Singapore?

#### Organisation structure
1. What are the highest educational qualifications of your employees?
2. What are the job designations of your employees?
3. What are the monthly wages of most of your employees? a. SGD $0 – $999 b. SGD $1000 – $1999 c. SGD $2000 – $2999 d. More than SGD $3000
4. Is there job flexibility in your company for employees? Please elaborate. (e.g., part time work, work from home, flexible hours, job rotation)

### Have you ever employed staff with ASD/MID before? If Yes, please complete Part 2.

### Part 2:

#### Organisational Commitment
1. Why are you interested in employing young ASD/MID adults? (Part 1 and 2)
2. How long have you been employing young ASD/MID adults? (Part 2)
3. How many ASD/MID employees have you employed? (Part 2)
4. How many ASD/MID employees do you currently employ? (Part 2)
5. What auxiliary aids or services (workplace accommodation) has been requested for set up by you for your ASD/MID employees? (For example, workplace modification, work-schedule change, job re-structuring). (Part 2)
6. How much has your company spent on setting up these auxiliary aids/services? (Part 2)
7. Give examples of how the organization has gone out of the way to help ASD/MID employee beyond their job. (Part 2)
8. What resources does the company invest into making its ASD/MID employees feel like part of it? (Part 2)
9. Do you provide supported employment opportunities (individual/clustered placement, mobile work crew, or entrepreneurial endeavours) for ASD/MID staff? (Part 2)
10. Do you provide supervision and support by supervisors and mentors for your ASD/MID staff? (Part 2)
11. Do you have a designated HR officer or staff to handle issues/concerns pertaining to employees with ASD/MID? What does that staff do? (Part 2)

#### Organisation structure involving ASD/MID staff employment
1. What are the highest educational qualifications of your ASD/MID employees?
2. What are the job designations of your ASD/MID employees?
3. What are the monthly wages of most of your ASD/MID employees? a. SGD $0 – $999 b. SGD $1000 – $1999 c. SGD $2000 – $2999 d. More than SGD $3000
4. Is there job flexibility in your company for ASD/MID employees? Please elaborate. (e.g., part time work, work from home, flexible hours, job rotation)

#### Organisation Rewards
1. What promotion opportunities do you provide your ASD/MID staff?
2. How would you provide your ASD/MID staff with financial incentives/bonuses?
3. How would you provide your ASD/MID staff independence and freedom to influence work content and methods?
4. Would you pay your staff with ASD/MID the same salary as your other employees or pro-rate their salary?

#### Career Development
1. How are the company’s expectations of the ASD/MID employees’ role and job scope made clear to them?
6.2 Would you consider providing training opportunity to people from the local community (e.g., apprenticeships or work experience for the ASD/MID groups)?
6.3 Are your ASD/MID employees able to get similar positions/jobs outside the company?
6.4 What opportunities for career growth and professional development do you provide your ASD/MID staff (e.g., training)?
6.5 Is there a mentorship scheme in place? If yes, please elaborate on it.
6.6 Do you provide individualized career goals/paths (pursuing career goals of own choice) for your ASD/MID employees? If yes, please elaborate on it.

7. Skills and Abilities of Employees
7.1 Do skills and abilities mean the same thing for you as an employer? Please elaborate.
7.2 What skills/abilities would you be looking for in ASD/MID individuals?
7.3 Which educational experiences prepared your ASD/MID staff for work?
7.4 Do your ASD/MID employees use/apply what they studied in school in their work? Give examples.

8. Employee’s Commitment
8.1 Typically how long do your ASD/MID employees work for you?
8.2 What do you think is the degree of work limitation (or the functional ability to work with/without accommodation) that ASD/MID employees are experiencing?
8.3 What is the company staff turnover rates for ASD/MID staff i.e. ASD/MID employees stay in the job: 1-2 years, 3-4 years, more than 5 years.
8.4 Do you encourage your ASD/MID employees to develop real skills and long-term careers (e.g., via performance appraisal, or a training plan)? Yes/No If yes, please elaborate.
8.5 Does your company offer training opportunities or internships (e.g., apprenticeships or work experience for the ASD/MID groups)?
8.6 Does your company provide any of the following: cooperative education, school-sponsored enterprise, technical preparation, internships and career majors?
8.7 Do you encourage your employees to develop real skills and long-term careers (e.g., via performance appraisal, or a training plan)? Yes/No
8.8 Does your company offer training opportunities or internships (e.g., apprenticeships or work experience for the young or for disadvantaged groups)?
8.9 Does your company collaborate with schools to provide any of the following: cooperative education, school-sponsored enterprise, technical preparation, internships and career majors?

9. Others
9.1 What are your main concerns regarding this topic area?
APPENDIX C
INFORMED CONSENT FORM

Appendix C: CONSENT FORM

Title of research project: Recruitment and retention of staff with Autism Spectrum Disorder or Mild Intellectual Disability in the service industry in Singapore

Name of researcher: Eva Lim

Tick the box that applies, sign and date and give to the researcher

I agree to take part in the Southern Cross University research project specified above. Yes □ No □

I understand the information about my participation in the research project, which has been provided to me by the researcher. Yes □ No □

I agree to be interviewed by the researcher. Yes □ No □

I agree to allow the interview to be *audio-taped and/or *video-taped. Yes □ No □

I agree to make myself available for further interview if required. Yes □ No □

I agree to complete questionnaires asking me about recruitment and retention of individuals with autism/mild ID. Yes □ No □

I understand that my participation is voluntary and I understand that I can cease my participation at any time. Yes □ No □

I understand that my participation in this research will be treated with confidentiality. Yes □ No □

I understand that any information that may identify me will be de-identified at the time of analysis of any data. Yes □ No □

I understand that no identifying information will be disclosed or published. Yes □ No □

I understand that all information gathered in this research will be kept confidentially for 7 years at the University. Yes □ No □

I am aware that I can contact the researchers at any time with any queries. Their contact details are provided to me. Yes □ No □

I understand that this research project has been approved by the SCU Human Research Ethics Committee. Yes □ No □
Participants name: ___________________________________________

Participants signature: ________________________________________

Date: ________________

☐ Please tick this box and provide your email or mail address below if you wish to receive feedback about the research.

Email: ____________________________________________________

Appendix D

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APPENDIX D
SOUTHERN CROSS UNIVERSITY ETHICAL GUIDELINES

HUMAN RESEARCH ETHICS COMMITTEE (HREC)
HUMAN RESEARCH ETHICS SUB-COMMITTEE (HRESC)

NOTIFICATION

To: Dr Tay Kin Bee/Eva Siew Lian Lim
    Southern Cross Business School
    s.lin.27@student.scu.edu.au/kntayev@scu.edu.au

From: Secretary, Human Research Ethics Committee
      DIVISION OF RESEARCH, R. BLOCK

Date: 25 September 2013

Project name: Recruitment and retention of staff with Autism Spectrum Disorder or Mild Intellectual Disability in the Service Industry in Singapore

Approval Number ECN-13-251

The Southern Cross University Human Research Ethics Committee has established, in accordance with the National Statement on Ethical Conduct in Human Research – Section 5/Processes of Research Governance and Ethical Review, a procedure for expedited review and ratification by a delegated authority of the HREC.

Thank you for your expedited ethics application dated 18 September 2013. This has been considered and approved by the Gold Coast HREC.

Please note: Please do not use the SCU Division of Research letterhead for your participant documentation. You must use either the generic SCU or the Southern Cross Business School letterhead.

All ethics approvals are subject to standard conditions of approval. These should be noted by researchers as there is compliance and monitoring advice included in these conditions.

Ms Sue Kelly
HREC Administration
T: (02) 6626 9139
E: ethics.lismore@scu.edu.au

Professor Bill Boyd
Chair, HREC
E: william.boyd@scu.edu.au

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