Employers' Hiring Decisions in Oman: An Examination of What Employers Look for When Hiring Graduates and Why

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Declaration

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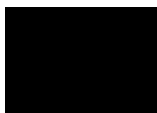
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Dedication

This thesis is dedicated to the memory of my father, Salim.

Acknowledgements

Abstract

Whilst the relationship between education and labour market outcomes has been researched across a wide range of fields such as sociology, economics and psychology, relatively little research has been carried out in developing countries. This thesis expands the understanding of the relationship between education and work to a rentier state context, Oman, by examining employers' hiring decisions. More specifically, this research explores what factors employers rely on when hiring graduates in three occupations - accountants, software developers and mechanical engineers - and why.

A mixed-methods design consisting of a factorial survey and semi-structured interviews was adopted to investigate the extent to which employers attach value to various educational and social capital attributes and in what ways employers' assessment of applicants varies across occupational and organisational contexts. Contrary to much research in this area, which is de-contextualised, the thesis makes context a central part of the analysis by looking at the influence of the occupational and organisational context in the determination of the value of different attributes at the time of recruitment. In addition, this study incorporates public policies in the analysis, to explore their relevancy in employers' decisions and their interplay with candidates' education and social capital attributes. This is done with reference to Omanisation policies (that aim to ensure high quality job opportunities for Omanis) in the factorial survey but also with reference to wage setting regulations, which were discussed by interview participants.

This thesis found that employers rely on a combination of educational attributes (i.e. relevant field of study, bachelor's degree, high GPA, leading university), as well as other social and demographic characteristics (referrals from higher education institutions, nationality, gender) alongside levels of work experience including internships to hire job candidates with some differences noted between the three occupations researched. The findings indicated that a combination of theories explains employers' hiring decisions in the Omani labour market better than any single individual theory, but also that some recruitment preferences cannot be easily accommodated within the main tenets of extant theories.

In discussing its findings, this thesis contributes methodologically, theoretically, and empirically to understanding, in a critical way, employers' hiring decisions and their preferences and perceptions of the role of educational attributes, social capital and public policy (Omanisation, but also wage regulations) in a rentier state context and opens windows for further research in similar contexts.

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List of Abbreviations

ACCA	Association of Chartered Certified Accountants
GDP	Gross Domestic Product
GNI	Gross National Income
GPA	Grade Point Average
HCT	Human Capital Theory
HE	Higher Education
HEIs	Higher Education Institutions
HRMS	Human Resource Managers
ICT	Information and Communications Technology
IEA	International Association for the Evaluation of Educational Achievement
NCSI	National Centre for Statistics and Information
OAAA	Oman Academic Accreditation Authority
OECD	The Organisation for Economic Co-operation and Development
OMAGE	Oman Model of Applied General Equilibrium
OQF	Oman Qualifications Framework
SCP	Supreme Council for Planning
SMEs	Small- to Medium-Sized Enterprises
STEM	Science, Technology, Engineering, and Maths
TIMSS	Trends in International Mathematics and Science Study

Chapter 1 Introduction

1.1 Introduction

This thesis aims to contribute to understanding employers' hiring preferences in a rentier-state context, Oman. The research conducted a factorial survey to investigate employers' hiring decisions during the screening of hypothetical résumés of job applicants in three occupations (accountants, software developers and mechanical engineers) and used 29 semi-structured interviews to explore employers' preferences and perceptions and their rationale for hiring decisions.

This introductory chapter begins by laying out the background of the thesis (section 1.2) and outlines the implications of the rentier state context, Oman, and high unemployment on labour market structure (section 1.3). Then, it presents the main aims and the research questions instrumental in understanding employers' hiring decisions (Section 1.4) and closes with the structure and organisation of the thesis (Section 1.5).

1.2 Background and Significance of the Study

This study aims to explore the role in employers' hiring decisions of a wide range of educational attributes—namely, field of study, education level, Grade Point Average (GPA), university place and rank—as well as experience and internships[1], referrals, gender and nationality, in the context of a developing rentier state, i.e. Oman. This thesis addresses a gap in the literature on the transition from higher education to the labour market; the literature often restricts its scope to education level and labour market outcomes. Much extant research neglects the broader characteristics of education, which can result in a misinterpretation of its significance (more broadly understood) for labour-market outcomes (Van der Velden and Wolbers 2007).

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[1] As this study focuses only on fresh graduates (i.e. graduates who enter the labour market for the first time), combining experience and internship factors may constitute a realistic characteristic of fresh graduates.

Conventionally, the greater part of the literature on employers' hiring behaviour seems to emanate from supply-side data and studies the perceptions of employees on the role of educational credentials in hiring decisions (Bills et al. 2017; Rivera 2020). Studying the demand side has garnered little attention (Bills et al. 2017). More recently, exploration of actual employers' hiring behaviour in screening job applicant résumés has attracted the interest of sociologists and economists.

Yet, the demand side and employers' hiring practices are crucial in shaping and understanding labour-market outcomes. These practices facilitate job opportunities for some candidates and block opportunities for others (Bills 2003; Brown and Hesketh 2004; Jackson 2007; Bills et al. 2017). Elliott and Smith (2004) argue that hiring practices can lead to reproducing social stratification; thus, understanding these practices is a persistent focus of sociology discipline.

Some studies tend to use indirect evidence and supply-side data to infer the role of education in employers' hiring preferences, rather than direct evidence from actual recruitment processes or employers' direct perceptions (Müller and Gangl 2003). The indirect evidence includes retrospective data on graduates and job incumbents and enables basing interpretations on the quality of their achievements after employment (Breen et al. 1995; Bernardi 2003; Van der Velden and Wolbers 2007; McCoy and Smyth 2011; Di Stasio 2014). Studying the supply-side data can be problematic because targeting samples of job incumbents excludes rejected applicants, which can bias the data. That is, it only considers the hiring-process survivors (Fernandez and Weinberg 1997) and applicant pools of diverse applicants for dissimilar jobs whom different employers screened (Petersen et al. 2000). Arguably, the recruitment and selection decisions that employers make on the demand side are more important "determinant(s) of inequality, opportunity and organizational attainments than the supply side" (Bills et al. 2017, p.292).

Arguably, a better understanding of employers' recruitment and selection practices is necessary to understand job allocation criteria (Brown and Hesketh 2004; Jackson 2007; Di Stasio 2014; Protsch and Solga 2015). The literature has also suggested that education has a greater impact in the early stages of a career when employers have limited

knowledge about a candidate's ability and tend to use education to make a hiring decision (Bills 1988b). However, not yet well understood is the relative importance of education's various attributes (i.e. field of study, education level, GPA, university place and rank), on which employers tend to rely during résumés screening. Moreover, Wolf (2004) questioned the notion that education is the only factor for which skilled workers are rewarded in labour-market outcomes, and this thesis incorporates a range of other factors in the analysis (e.g. social capital, occupational and organisational context).

The reasons why and how employers reward education in the labour market is highly debated. Four overarching perspectives provide explanations for why educational credentials pay off in the labour market. One perspective held by human capital theory is that it views education as an indicator of skills and productivity. A second perspective sees education as a sorting mechanism, as proposed by sorting theories. A third perspective sees education as an indicator of future trainability, as proposed by queuing theory. The fourth perspective proposes that education creates and reproduces social stratification and social inequality as held by social closure theorists. While linking these theories to the relationship between education and the labour market, it is important to critically review these perspectives to examine how the employers' recruitment activities are explained to lesser or greater degrees by these theories and review the main limitations of them and how they inform this thesis.

The role of context is important to understand the relationship between education and labour market outcomes. Lauder and Mayhew (2020, p.1) state that "(t)he forces that affect the links between HE and the labour market can be considered global but their impact on particular countries and regions will vary according to the structure of their particular tertiary education and labour market systems". Oman's status as a rentier state and its approach to the education-work relationship are the context for this study. Oman's education system is considered highly standardised and regulated by the government. It is important to explore employers' perspectives of Omani graduates' educational preparation and their view of those graduates and their education credentials.

In addition, it is important to consider Oman's labour market policies when investigating employers' hiring decisions. For example, there are areas of employment regulations (e.g. Omanisation, wage) that affect employers' hiring decisions. The Omani government derives its policies from HCT and views investment in education as an important asset for economic growth, enhancing individual skills and enhancing graduate's employability. However, such a view is problematic and cannot explain the high rate of unemployment among Omani graduates. Lauder (2022, p.92) argues that "while educational qualifications are necessary to enter the jobs competition, the fundamental problem lies in the labor market". Thus, it is important to consider labour market structure and its characteristics and policies when investigating employers' hiring decisions. The percentage of the Omanis working in the private sector is 27.6 per cent compared to 89.4 per cent in the public sector till 2021 (NCSI 2021d). Omani graduates tend to prefer to work in public sector because of high wages and greater job security (Forstenlechner 2010; Ministry of Higher Education Research and Innovation 2015; 2017). However, the lack of jobs in the public sector forces the government to encourage Omanis to work in the private sector through the implementation of Omanisation and wage policies. The investigation of employers' hiring behaviours offers a guide to public policy. Understanding them may inform the government on the value of different strategies for linking educational institutions and the labour market, with the intention of improving graduates' job opportunities.

This study focuses on employers' hiring behaviour in the Omani labour market for three occupations—mechanical engineers, accountants and software developers—for three reasons. First, these occupational sectors are the fastest growing in Oman due to the ongoing expansion of the oil and gas industry and evolving global technology services as well as a related increase in technological services in Oman specifically. The second reason is the substantial demand for high-level graduate technical skills in these sectors, as exemplified by the occupations chosen. The third justification is that the majority of jobs for graduates are offered in these sectors and offer most of the relevant job positions (Ministry of Higher Education Research and Innovation 2015). The top three fields of study that employers in Oman were looking for to hire job applicants

are engineering, business, and information technology (Ministry of Higher Education Research and Innovation 2016).

This study focuses on employers' hiring decisions in the private sector rather than the public sector for three reasons. The first reason for this decision is related to government's decision to expand employment in the private sector in order to diversify the sources of graduate employment in the country, away from excessive reliance on the public sector. The decline in oil prices in global markets between 2014 and 2020 had negative effects on employment in the public sector, which has reached saturation in terms of employment and cannot accommodate the increasing number of graduates. Therefore, the private sector as the expected source of further opportunities for graduates, and who competes for jobs within it, requires renewed attention.

The second reason is that little is known about the importance of government policies on employers' hiring decisions in the private sector. Omanis prefer to work in the public sector, given the benefits that this brings, such as high wages, pensions and job security. According to NCSI, 87 per cent of Omanis prefer to work in the public sector (Times of Oman 2019). However, the Ministry of Labour projected that employment in the public sector would form about 30 per cent of employment, whilst employment is 70 per cent in the private sector by the end of 2024 (Al Arabiya English 2021). This tendency of Omanis to prefer working in the public sector creates challenges for the government and private sector to create more job opportunities and for the private sector to be attractive to Omani graduates. As noted, youth unemployment continues to be a major issue in Oman. The introduction of Omanisation and minimum wage policies aimed to create good jobs for Omanis mainly in the private sector and it is important to explore the impact of such policies on recruitment practices.

The third reason is that the hiring criteria in the public sector tend to be the same among all government entities and are controlled by the Ministry of Labour who screens graduates' resumes and then conducts centralised tests and interviews. In contrast, the private sector organisations, in addition to the governments' hiring criteria, have their own independent and diverse recruitment and selection criteria, which are less well

known and are therefore worth investigating – what is the hiring criteria for different sectors and organisations working under such circumstances as discussed above?

1.3 Implications of the Rentier State Context and High Unemployment on Labour Market Structure

This section describes the rentier state context of Oman and outlines its implications for the structure of the labour market, employment outcomes and employers' hiring decisions. The rentier state is characterised by its reliance on natural resources to derive its revenues and GDP. In the case of Oman, the country's economy is heavily reliant on its oil and gas exports. This reliance on natural resource rents has had a number of implications for the structure of the labour market. One of the main implications is that the Omani government, which owns the companies that exploit these natural resources, has historically played a major role in the economy, providing employment and social services to citizens. This has led to a very high level of public sector employment in Oman (89.4% is the percentage of Omanis working in the public sector (National Centre for Statistics and Information 2021), as well as a system of generous social benefits for citizens. Figure 1.1 shows that the number of Omanis employed in the public sector increased sharply by nearly 90,000, from 103.662 to 193,639 Omanis from 2004 to 2020. In comparison, the number of expatriates employed in the public sector rose by nearly 8000 from 22,898 to 30,329 for the same period (National Centre for Statistics and Information 2020). However, the reliance on resourced derived rents also means that the Omani labour market has been vulnerable to fluctuations in the price of oil and gas. When prices are high, the government is able to invest in the economy and provide more employment opportunities for citizens. However, when prices are low, the government may be forced to cut back on spending, and this can lead to reduced employment opportunities in the public sector and puts more pressure on the private sector to absorb graduates.

Figure 1.1 The number of employees in the public sector in Oman

The Number of Employees in the Public Sector
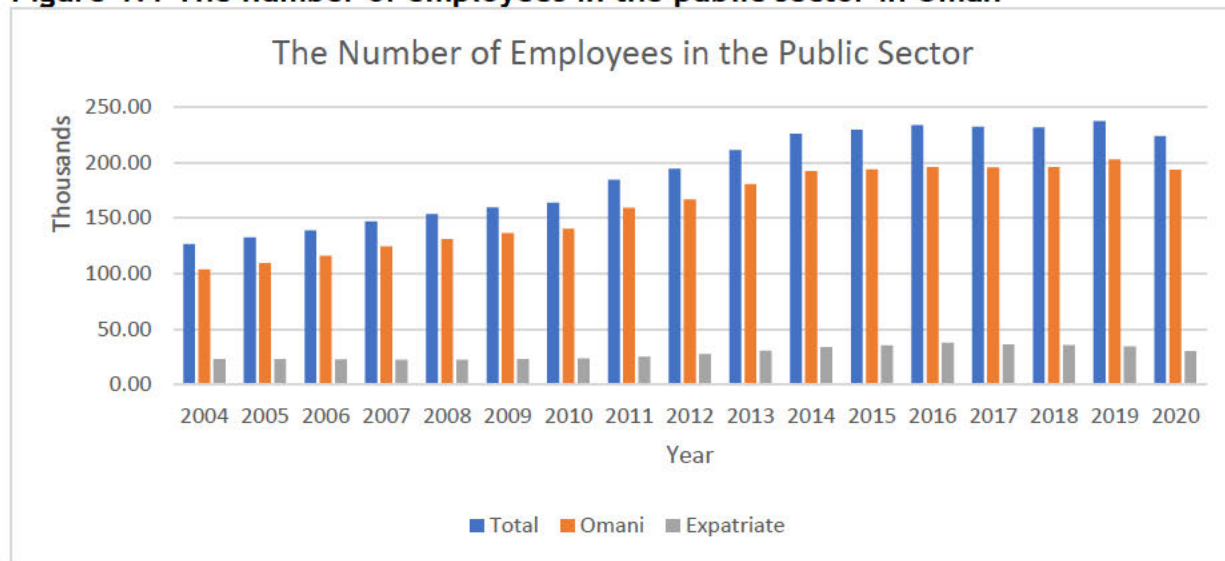
Source: (National Centre for Statistics and Information 2020)

Citizens of a rentier state rely on the rentier government to distribute the country's wealth among citizens through free healthcare, free education and employment in the public sector (Beblawi and Luciani 1987). This mutual agreement is described as a social contract between governments and citizens (Beblawi and Luciani 1987). However, the Arab Spring-related protests in 2011 and a series of unemployment related protests in 2017, 2018, 2019 and 2021 showed the fragility of this contract in recent times. The protests were driven mainly by very high levels of unemployment among youth and graduates. The unemployment rate was almost 49 per cent among the 15-25 years old in 2018 (World Bank 2019). The protesters demanded more public sector jobs and better wages and job security in private sector jobs.

Following the protests, to avoid escalation, the government's response was to promise protesters more jobs. The response following the 2011 protests entailed massive economic and political reforms including massive recruitment in the public and military sectors. The government announced that they would recruit 50,000 Omanis in these sectors. However, the government response to the 2017, 2018, 2019 and 2021 protests can be described as weaker than the 2011 response as a result of the drop in oil prices and the COVID pandemic, which led to a squeezing of budgets. Instead, the Omani government put in place plans to tackle the issue of (un)employment amongst Omanis

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through various interventions, which reformed private sector employment regulations. For example, the government intervened by restricting hiring in certain occupations to Omani citizens only and increased visa fees for expatriates. The government also promised to create 25,000 jobs in 2017 and 32,000 jobs in 2021 in the public and private sectors. However, the availability of data on how many graduates were employed following these announcements is limited.

These challenges have implications for the labour market structure. First, the labour market in Oman is characterised by an imbalance between supply and demand where there is a scarcity of jobs for Omanis and an oversupply of foreign labour in the private sector. This has led to increased competition for jobs. Second, governments' requirement to hire Omanis in certain occupations forces employers to ignore some of their 'normal' hiring criteria to hire the candidates that comply with government's requirements. In addition, the country's minimum wage policy poses challenges for Omani graduates to work in the private sector. This policy is only applicable to Omanis but not expatriates, and the private sector tends to prefer to hire expatriates because they can pay them lower wages than Omanis. Overall, the structure of the labour market in Oman is strongly influenced by the country's status as a rentier state, with the government playing a significant role in the labour market and employment.

Oman's rentier state context and ongoing high unemployment challenges directly influence the recruitment and selection process in the country by Government policy, which intervenes in the way the labour market functions and creates a particular set of circumstances for hiring in the private sector. In particular, the structure and characteristics of the labour market in the private sector in Oman are worthy of investigation i.e. it is important to understand the relationship between education and labour market outcomes in such a context as an area that remains unexplored (for example, in the face of such labour market interventions in Oman, how does the hiring process function for graduates?)

1.4 Research Design and Research Questions

This study adopted a mixed-method approach through the use of a factorial survey experiment to examine judgements and decision-making processes and semi-structured

interviews to examine employers' hiring decisions. The factorial survey experiment consists of a set of fictitious vignettes presented to participants for judgment and evaluation followed by a questionnaire. Despite sociological researchers on education rarely using it (but see De Wolf and Van Der Velden 2001; Di Stasio 2014; Di Stasio and Van De Werfhorst 2016), they have recently given it more attention, due to their interest in studying employers' behaviour (e.g. Petzold 2017; Petzold and Moog 2018; Protsch 2021; Shi and Di Stasio 2021). The factorial survey experiment proved to be a useful method for studying employers' hiring decisions. It allows the researcher to optimally control the stimuli and focus on theoretically relevant characteristics (De Wolf 2001; Hainmueller et al. 2015). In addition, the semi-structured interviews provided a general understanding of the rationale for employers' hiring decisions, giving them space to explain their perspectives and interpret their decisions.

The overarching goal of this thesis is to understand employers' hiring decisions in a developing rentier state when recruiting mechanical engineers, accountants and software developers.

Within this specific context, the thesis sought to address the following research questions:

> **Question 1:** To what extent do employers attach value to particular educational attributes when screening job-applicant résumés, and why?

> **Question 2:** To what extent, if at all, is an applicant's social capital a factor in employers' screening of résumés, and why?

> **Question 3:** In what ways do employers' assessments of applicants vary across occupational and organisational contexts, and why?

1.5 Structure of the Thesis

This thesis has eight chapters. The present chapter provides an introduction to the thesis as a whole. Chapter Two presents the context of the research and provides a general discussion of education in Oman and the structure and characterisation of the labour market in the Omani rentier-state context. Chapter Three provides a review of

the literature, setting out the key issues the research addressed and elaborating its underlying questions. The chapter offers a critical discussion of the theories that explain the relationship between education and labour-market outcomes, an overview of research on employers' hiring decisions and the methods for studying them. Chapter Four details the epistemological and theoretical perspectives that underpin a mixed-methods approach and discusses the research design and methods for collecting and analysing the study's empirical evidence. Chapters Five and Six present the study's findings, focusing on the results of the factorial survey data and the empirical findings from the interview data. Chapter Seven discusses the findings. Chapter Eight presents the main conclusions of this research and ends by revisiting the research questions and articulating the overall contribution of the thesis.

Chapter 2 The Research Context: Oman—A Rentier State

2.1 Introduction

This chapter aims to offer a general understanding of the context of the study. First, it describes the demographic and geographical characteristics of Oman, its education system and its history and development. It then explores the characteristics of a rentier state and its implications for recruitment and selection processes. Finally, it outlines the main characteristics of Oman's economy and the demand and supply sides of the Omani labour market.

2.2 Geographical and Demographic Features

The Sultanate of Oman is an Arab and Asian country in a strategic location at the mouth of the Arab Gulf on the south-eastern edge of the Arabian Peninsula in southwest Asia. The total land area of Oman is reported to be 309,500 square kilometres (World Bank 2016). It shares borders with the United Arab Emirates to the northwest, the Kingdom of Saudi Arabia to the west and the Republic of Yemen to the southwest (see Figure 2.1), as well as marine borders with Iran and Pakistan. Administratively, it comprises 11 governorates, each having several towns and cities.

Its strategic location has given Oman a historical role in Asia. Oman links the Gulf to the Indian Ocean and controls the Strait of Hormuz, the gateway to trade between Gulf countries and the world (Benz 2013). In the late 17th century, Oman competed with the United Kingdom and Portugal for control of the Arabian Gulf and the Indian Ocean (Peterson 2004). It reached its powerful peak in the 19th century and expanded its borders to East Africa; however, its power started to decrease due to internal conflicts between the government and tribes (Speece 1989), and by the end of the 19th century, it had lost its territory in East Africa. Nonetheless, its vital strategic location shapes and determines its friendly relationships with its neighbours and the world. Oman plays a major role in tackling regional conflicts and assists in campaigns to promote peace in the world's troubled regions. Oman recently brokered the historic nuclear deal between the United States and Iran (Schmierer 2015).

According to the National Centre for Statistics and Information (NCSI), Oman's population was 4,641,846, of which 2,542,320 were Omanis, as of Wednesday, 10th December 2017 and increased to 2,804,000 in 2021 (NCSI 2017; NCSI 2022b). The total number of expatriates was 2,099,526 (45.2 per cent of the total population) in 2016 and decreased to 1,723,000 in 2021 as a result of a drop in oil prices and the coronavirus pandemic (NCSI 2017; NCSI 2022).

Figure 2.1 Map of Oman

Source: (Google Maps 2022)

2.3 Education in Oman

Education gained attention from His Majesty Sultan Qaboos on his first day as the ruler of Oman, 23rd July 1970. Prior to this date, there were only three government boys' primary schools across the country, targeting just 900 pupils (NCSI 2012). By the 2020/2021 academic year, 1,182 government schools were serving 678,359 students (Ministry of Education 2021). The government provides education free of charge to all children from grades 1 to 12. Oman ranked 60th among 188 countries on the 2019 Human Development Index in indicators that included access to education (United Nations Development Programme 2020).

The Oman Ministry of Education is in charge of managing and supervising preschool, public and private school education. Pre-school is a one-year programme, with limited availability of study spaces in some schools, and aims to bring children aged 5 years into the school system. Public schools comprise two phases: basic education from grades 1 to 10 and post-basic education from grades 11 to 12. Students start school for grade 1 at age 6. Male and female students attend grades 1 to 4 with only female teachers, while in cycle 2 (i.e. grades 5–10), boys and girls separate into different schools and can learn from male or female teachers. Students at post-primary-education schools (i.e. grades 11–12) go to separate schools for male and female students, with only teachers of the same gender.

The medium of instruction in public schools is the Arabic language for the majority of subjects. In addition, English is a compulsory subject taught from grades 1 to 12, while German is an elective subject for grades 10 to 12 only. Some private schools are bilingual and have their own curricula that differ from those of government schools. International schools have their own programmes and internationally accredited curricula.

Al-Issa (2020, p. 364) explained the reasons for the widespread use of English in Oman:

> Because of the global power of English, it is an economically viable force. It is widely used in business, particularly in the private sector . . . This widespread use of English in these places is due to the fact that the private sector is largely dominated by a non-Omani and non-Arab labor force. English is thus highly valued by the Omani government and considered a tool for modernization and nationalization, also known as Omanization.

The education system in Oman has undergone several developmental projects. The first ambitious change was to gradually replace general education (primary, preparatory or lower secondary and upper secondary) with a basic education system in 1998/1999 (Education Council 2017b). The main aims of the new education system were to develop curricula and assessments, enhance critical-thinking skills and introduce English in

grade one. Then, a new two-year post-basic-education programme (grades 11 and 12) was implemented (2007/2008), aimed at preparing students for either higher education or entry into the labour market. The second key enhancement was the establishment in 2008 of a National Career Guidance Centre to help students decide on their future careers on the basis of their aptitudes and capabilities. Despite several projects having been implemented and some still in place to enhance the quality of education in Oman, it still suffers from weaknesses, as the results of international measures show. According to Trends in International Mathematics and Science Study (TIMSS) from the International Association for the Evaluation of Educational Achievement (IEA) (2015), grade 4 Omani students were ranked 39th in mathematics and 37th in science among the 49 participating countries. For grade 8, Oman placed 27th and 28th in science and maths, respectively.

During the final year in school, students get access to the higher education admission system, which the Ministry of Higher Education Research and Innovation administers after publishing the results of grade 12, to identify students' primary choices for higher education. Based on their results, students are expected to amend their choices in light of higher education institutions' (HEIs) entry requirements, with options to study in Oman or abroad. Some students prefer to work immediately by joining the military forces, government departments or private-sector companies or running their own businesses. However, the majority prefer to continue their learning journeys. In the 2016/2017 academic year, 35,464 students graduated from secondary education with a general education diploma, and 29,807 competitive study seats were available for students. Almost 20,512 students were offered a place to pursue their higher studies in Oman or abroad in 2016/2017 (Ministry of Higher Education Research and Innovation 2018), and 25,316 students enrolled in 2020/2021, out of 41,452 registered applicants (Ministry of Higher Education Research and Innovation 2021a).

Having started in the late 1970s, higher education in Oman might be considered relatively new. The year 1986 was a historic moment for higher education in Oman, with the inauguration of the first state university, Sultan Qaboos University. Previously, to close the gap in the demand for higher education, some students were sent to pursue

their studies in Arab countries such as Egypt and Jordan, as well as to the United Kingdom and the United States. The Omani supply of higher education subsequently increased to meet demographic development, and currently, there are 63 state HEIs, including public, military, health and vocational institutions offering tuition-free education for Omanis in public universities and colleges (Education Council 2017a).

Private higher education has a short history in Oman, starting in 1995 with Sultan Qaboos issuing a decree establishing its legal basis. In the academic year 2019/2020, there were 28 private HEIs in Oman, serving more than 55,827 students(Ministry of Higher Education Research and Innovation 2020).The main purpose of allowing private higher education was to expand admission capacities to supplement the limited number of places that public HEIs offered (25 per cent) and satisfy the increasing demand for higher education by young people and skilled graduates by the public and private sectors (Al-Lamki 2002).

The tendency is that 'elite students' who obtained higher grades in class/grade 12 get admission to state universities, while private HEIs absorb the remaining graduates. However, the low quality of education in some institutions has its own negative side effects on the ability of Omanis to compete for jobs in their own country (Al-Lamki 2005; Al-Barwani et al. 2009). Moreover, the link between education and the labour market in Oman has proved relatively weak (Wilkins 2002). As such, the government has initiated several plans to reform and develop higher education, with the main one establishing the Oman Academic Accreditation Authority (OAAA) in 2010. The OAAA regulates the quality of school education and higher education to maintain international standards and to develop the quality of schools and HEIs in Oman (Oman Authority for Academic Accreditation and Quality Assurance of Education 2022).

The total expenditure for education in Oman is 17 per cent of the country's budget, its highest level of sector funding (its nearest rival, the health sector, receives 11 per cent) (Ministry of Finance 2022a).

2.4 Oman as a Rentier State

This section outlines the main features of a rentier state and its potential implications of this context on the recruitment and selection processes. Mahdavy (1970) first introduced the notion of a 'rentier state' to describe nations that derive all or a substantial amount of their income from trading natural resources, such as oil and gas. Oman is a rentier state with almost 73 per cent of its revenues coming from oil and gas (Ministry of Finance 2018). Beblawi and Luciani (1987) then developed the term to consider the potential effects of being a rentier state on a country's social, cultural and political aspects. A rentier state is responsible for redistributing revenues by providing (for example) free education, healthcare and employment opportunities.

Being a rentier state has economic and societal implications. During periods of low oil prices, deficit spending is a more common response than economic diversification. Oman implemented a series of measures to cope with the reduction in its oil revenues due to low prices from 2014 to 2021. It introduced one such measure, the value-added tax, in 2021. Such measures create challenges for economies in creating jobs and dealing with unemployment. Citizens of a rentier state demonstrate a 'rentier mentality', considering employment a way of distributing revenues. However, during a rise in oil prices, the Omani government's plan is to post a budget deficit and continue to pursue its economic diversification plans.

Rentier citizens tend to have a high degree of reliance on the government for employment opportunities. Most Omani citizens work in the public sector rather than the private sector, where foreign workers, mostly from Pakistan, India, Bangladesh and the Philippines, dominate. The total number of expatriates working in the private sector was 1,229,270, compared with 280,832 Omanis, until May 2022 (NCSI 2022). Citizens tend to prefer to work in the public sector, where the government mostly distributes oil revenues. One measure to tackle unemployment and encourage Omanis to work in the private sector was to introduce a policy of Omanisation to address the government's concerns about the rise of unemployment among Omanis. Omanisation introduced strict protection against the dismissal of Omanis working in the private sector and set a minimum wage limit for Omanis.

However, the government's plans faced challenges from both employers in the private sector and job seekers. The uprisings of the Arab Spring in Oman in 2011 changed perceptions of the government and led to mass hiring in the public, private and defence sectors, with increases in the number of places for internal and external scholarships.

Regarding the social effects of being a rentier state, Hertog (2010, p. 282) argues that rentier states 'tend to be characterized by an imbalance of resources between state and society'. With such imbalances in distributing revenues and the nature of rentier state bureaucracies, from which it is difficult to seek access to such resources (i.e. employment opportunities) through formal channels, societal actors look for alternatives (i.e. *Wasta/nepotism*) to get access to such resources), including intermediaries who have powers either through their position in the government or tribal connections.

The characteristics of being a rentier state have implications for the recruitment and selection processes in Oman. A key impact on private-sector employers is that they are effectively forced to recruit citizens under government policies, such as Omanisation.

2.5 Omanisation and National Minimum Wage Policies

Omanisation is a national employment policy that the Omani government enacted in 1988, aiming to gradually replace skilled foreign labour with skilled Omani labour. Sometimes, compulsory replacement and mandatory and enforceable government decisions force private-sector employers to hire Omanis.

The government sets quotas for the private sector that vary by subsector, occupation and region. The quota system has increased the percentage of Omanis in certain sectors, such as banking and finance or oil and gas, but not in others, such as construction and manufacturing. For example, the oil and gas sector must meet an Omanisation level of 90 per cent. However, firms working on developing projects in cities far from Muscat, the capital city, such as Duqum, must meet an Omanisation level of just 10 per cent. The government rewards firms that meet the Omanisation target with a green card that grants them preferential treatment in their dealings with the government and wider media coverage. The Ministry of

Labour requires firms applying for new permits for expatriates to prepare an Omanisation plan describing how they intend to achieve the relevant industry targets.

The minimum wage policy for Omanis working in the private sector was set by the Ministry of Labour in 2013 to encourage Omani nationals to join the private sector that was hitherto dominated by foreign workers. Linked to educational qualifications, the monthly minimum wage for high school graduates was, in Omani Rials (RO), 325 per month, college diploma[2] holders RO 425 and degree holders RO 600. However, in 2020, the Ministry of Labour announced a new wage policy that no longer linked the minimum wage requirement to academic qualifications but set a monthly minimum wage of RO 325 (Oman Daily Observer 2020).

This indicates that the old wage policy, deriving its labour policies from human capital assumptions, no longer fits the purpose of the Omani government[3]. A substantial body of evidence suggests that the human capital assumption that drove government policies is no longer functional (Brown et al. 2008; Brown et al. 2020).

2.6 Economy of Oman

Oman is categorised as a high-income country, deriving most of its wealth from natural resources, mainly oil and gas. In 2020, its Gross Domestic Product (GDP) stood at US$73.79 billion, and the Gross National Income (GNI) per capita was US$28,850. Since July 23, 1970, Oman has undergone significant socioeconomic development in all sectors, especially education, healthcare and basic infrastructure, pushed by the exploration of oil and the emergence of a new vision for the Sultanate. Oman is an oil-dependent country, a rentier state whose economy is largely derived from the proceeds of exporting oil and gas. According to the annual financial report from the Oman Ministry of Finance (2018), 73 per cent of revenues came from oil and gas exports.

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[2] Diploma is a post-school qualification considered an academic pathway in the Omani educational system by the Oman Qualifications Framework (OQF). Students must spend 2 years of full-time study in a Higher Education institution, with an opportunity to progress to the third year of a bachelor's degree.
[3] Chapter 3 discusses human capital theory in detail.

However, the sudden decrease in oil prices at the beginning of the 1980s directed the attention of the Omani government towards diversification. Therefore, in 1980, His Majesty (the late Sultan Qaboos[4]) announced that diversifying the economy should reduce reliance on oil, but in 2017, oil remained the main source of the national income (73 per cent) and has continued as such.

Economic planning started with a series of five-year development plans, the first of which was launched in 1976. Each Five-Year Plan has a long-term development strategy to contribute to diversifying the economy of Oman. The plan comprised two main stages, the first running from 1976 to 1995 and the second from 1996 to 2020. The main aims of the first stage were to look for other resources besides oil to boost the economy, attract investments, develop human resources and distribute the investment across the country. The second stage aimed at achieving transformation in the national economy through diversification of production, strengthening the private sector's role in the economy and developing human resources. It also aimed to provide healthcare and education, train Omanis, develop their skills and design new policies that would guarantee them a prosperous life. The latest development plan was the ninth Five-Year Plan from 2016 to 2020, which aimed to enhance the process of diversifying the economy through manufacturing industries, mining , fisheries, tourism and logistics services (The Supreme Council for Planning 2017). The current development plan is the tenth five-year development plan from 2021 to 2025, which aims to continue focusing on diversification of the economy and mitigate the effects of the COVID-19 pandemic.

The Future Vision (Oman 2020) was a long-term plan started in 1995 to achieve a sustainable and diverse economy. According to The Supreme Council for Planning (2017), the government aimed to create the conditions for economic growth and planned to use its revenues from oil and gas to achieve economic diversification.

The drop in oil prices in the mid-2010s forced the government to modify and revisit the plan for diversifying the economy. Although this was not the first such financial crisis or the first time the government was looking for alternatives, those proposals failed to

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[4] The Sultan Qaboos passed away on the 10th of January 2020. He is succeeded by his cousin, the Sultan Haitham bin Tarik.

achieve their objectives. The series of failures led protesters in 2011 to call for change. The Supreme Council for Planning (SCP) was established in 2012 to replace the Ministry of National Economy, which was dissolved in 2011[5]. It was chaired by the late Sultan Qaboos and aimed to prepare development plans and develop the policies and strategies required to achieve the vision of economic diversity and sustainable development (SCP 2017). The recent surge in oil prices had a positive impact on the government's plans to revive stalled projects and boost spending on government policies. According to The Oman Ministry of Finance (2022, p. 2), "As of the end of February 2022, public revenue amounted to Rial Omani 1,918 million, up by 75.6 % as compared to the same period in 2021".

2.7 Labour Market Characteristics

One of the key drivers of the 2011 Oman uprising was high unemployment levels (Sawant 2019). By 2017, the number of foreign workers in Oman was estimated at around 1,858,040 in both the public and private sectors, representing 40 per cent of the total population (NCSI 2017), and it had decreased to 1,530,160 by May 2022 due to the pandemic and decrease in oil prices from 2014 to 2021[6] (NCSI 2022). According to official statistics, 238,400 Omanis worked in the private sector in November 2017, along with 1,798,794 expatriates. The number of Omani job seekers was 43,968 in October 2017 (NCSI 2017) and 65,438 in 2020(Electronic Census of Population Housing and Establishments 2021). Omanisation in the private sector was 12 per cent[7], and in the public sector, it was 84 per cent (NCSI 2017). The Omanisation rate in the private sector increased to 27.6 per cent and in the public sector to 89.4 per cent until 2021 (NCSI 2021b; NCSI 2021c). Table 2.1 shows the top foreign nationalities working in Oman.

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[5] The Sultan Haitham issued a Royal Decree in August 2020 to establish the Ministry of Economy and to abolish The Supreme Council for Planning.
[6] The private sector in Oman mainly depends on government projects, and due to the drop in oil prices, the government cut its public expenditures and delayed some projects, which, in turn, affected private-sector businesses.
[7] The target for Omanisation in the private sector is 40 per cent, according to Oman's Vision 2040.

Table 2.1 Distribution of expatriate workers in the Sultanate of Oman by nationality by May 2022

Nationality	By May 2022
Bangladeshis	577,374
Indians	501,104
Pakistanis	222,718
Egyptians	33,039
Sir Lankans	22,006
Philippines	47,519
Others	126,400
Total	1,530,160

Source: (NCSI 2022a)

The issue of unemployment in Oman cannot be attributed solely to the lack of skilled Omani graduates. Recent studies have shown that Omani culture may play a role. Young Omanis tend to reject certain jobs in the private sector and prefer to join the public sector, where it is more difficult to fire Omanis, for job security (Ministry of Higher Education Research and Innovation 2015). Forstenlechner and Rutledge (2010, p. 38) claim that "For it is the way in which oil wealth has been historically distributed that has led to a situation in which nationals choose to remain unemployed until they obtain a government job. It is the primary transmission mechanism of the social contract — the provision of well-remunerated public-sector jobs — that, albeit unwittingly, has caused GCC labor markets to become so highly segmented".

Some studies have underlined that employers view Omani graduates to lack English communication skills (Belwal et al. 2017; Al Riyami 2021). Another reason that job seekers often give is that Human Resource Managers (HRMs) are mainly expats[8] who

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[8] To tackle this issue, the government, through the Ministry of Labour, imposed restrictions on certain occupations (e.g. HR manager) for Omanis only.

prefer to recruit other expats, including those from their social networks. Foreign-worker numbers started to increase in Oman after 1970 to meet labour market demands resulting from the large-scale socioeconomic development plans, with little in the way of local talent because there was no developed system of education or vocational training for Omanis, as noted above (Winckler 2000). Also,

2.8 Job Scarcity in Oman

The total number of Omani graduates from 2016 to 2020 from HEIs in Oman and abroad was 106,167. The number of graduates from 2016 to 2020 was 67,620 in the three different fields of study for this thesis: 30,572 graduates were from business and management, 24,415 graduates were from engineering and 12,633 graduates were from information and communication technology[9] (Ministry of Higher Education Research and Innovation 2020; 2021). The government of Oman initiated several projects to tackle the problem of unemployed graduates[10]. The unemployment rate was 3.1 per cent in 2021, and 47,007 out of 65,438 job seekers were between 18 and 29 years old (Electronic Census of Population Housing and Establishments 2021). Projects included linking HEIs in the Sultanate with the public and private sectors to explore new ways to promote cooperation among these various stakeholders.

One government initiative was to establish the Oman Model of Applied General Equilibrium (OMAGE) to focus on the demand side of employers for employees and the supply side in terms of demographics (e.g. job, credentials and nationality). Tran et al. (2014) used OMAGE to forecast future labour market requirements for Oman from 2013 to 2030. Table 2.2 summarises the top 10 major areas of demand for the Omani labour market between 2013 and 2030.

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[9] The number of graduates in HEIs in Oman in the academic year 2019/2020 was 21,870 (13,487 females and 8,383 males) and 1,946 (1,211 females and 735 males) from abroad.

[10] The total number of job seekers was 65,438 until 2020; 47,007 of them were young job seekers aged 18–29 years, 43.4 per cent of them males and 56.6 per cent females (2020 Census).

Table 2.2 Top 10 majors needed for the Omani labour market from 2013 to 2030

Indicator	Degree level	Majors
Top 10 Specialisations Needed for the Labour Market (2013-2030)	Bachelor	Business management, nursing, economy, civil engineering, administration, general medicine, architecture, accounting, medical sciences, law
	Diploma	civil engineering, information systems, mechanical engineering, electrical engineering, electronical engineering, tourism and hospitality, manufacturing, engineering, journalism and media, petroleum engineering, mining engineering, architecture

Source: Tran et al. (2014)

However, despite numerous initiatives, the unemployment issue persists. Brown et al. (2020) argue that unemployment issues around the globe are about job scarcity, not labour scarcity. The unemployment issue has been a major concern for the Omani government since the 1980s and continues to be so as the number of graduates increases and jobs in the Omani labour market are scarce. Table 2.3 shows the prospects for employment opportunities available in some development sectors in the Ninth Five-Year Development Plan. This represents the vision of the government to diversify the economy and encourage young Omanis to work in the private sector. However, the number of workers decreased from 2,255,499 in 2016 to 1,859,657 in 2020 in both the private and public sectors because of the lower oil prices (NCSI 2021).

Table 2.3 Prospects for employment opportunities available in some development sectors in the ninth five-year development plan

Sector	Number of jobs expected until 2020
Tourism	100,000
Mining	8,000
Logistics	68,253
Manufacturing Industries	13,200
Fisheries	230,000
Oil and Gas	23,545
Agriculture	1,268
Transportation	94
Education	21,879
Health	7,100
Total	473,339

Source: (NCSI 2017)

2.9 Conclusion

This chapter briefly introduces Oman, where the study took place. It starts with geographical information, followed by a general description of the education system and the rentier economy. It then outlines the country's labour market characteristics, including its persistent issues with unemployment and the government's reactions to them. The chapter concludes with an overview of supply and demand issues in the Omani labour market.

This chapter provides the context for this thesis because the characteristics of the labour market and the education system play a role in employers' hiring decisions. These may vary across national contexts, with different labour market characteristics and institutional contexts (Bills 2003; Van De Werfhorst 2011; Di Stasio and Van De Werfhorst 2016; Shi and Di Stasio 2021). Other factors that influence employers' hiring

practices include labour supply and levels of unemployment (Modestino et al. 2016; 2020).

The education system in Oman is highly standardised; schools and HEIs follow common national standards set by the government, such as examinations and budgets. According to Allmendinger (1989, p. 233), 'Standardization is the degree to which the quality of education meets the same standards nationwide. Variables such as teachers' training, school budgets, curricula, and the uniformity of school-leaving examinations are relevant in measuring the standing of an educational system on this dimension.' Educational characteristics, such as grades, level of education and field of study, can be evaluated and interpreted differently during the hiring process, based on the source of these qualifications and the setting of educational institutions.

Government policies, such as Omanisation and minimum wage, may impact recruitment and selection processes in the private sector. As discussed in section 2.5, the government regulates the Omani labour market by imposing strict policies that force private-sector firms to hire Omanis. The public-sector jobs tend to be more attractive to Omanis who prefer those jobs for their higher wages, job security and fewer working hours (Ministry of Higher Education Research and Innovation 2015). All such aspects have a bearing on employers' recruitment activities and processes.

Chapter 3 Literature Review: Theories of the Relationship between Education and Labour-Market Outcomes

3.1 Introduction

This chapter reviews theoretical approaches to the relationship between education and labour-market outcomes, which guides this study's exploration of employers' recruitment and selection practices in the rentier state of Oman. The chapter aims to unpack theories of the relationship between education and work, to understand their implications for the analysis of employers' hiring decisions in a rentier state. It then provides a critical reflection on these theories and discusses the need to consider a wider set of factors when examining employers' hiring decisions. Indeed, such thinking shifts the discussion to the role of social capital in employers' hiring decisions. The chapter concludes with a discussion of the existing empirical evidence in studies of employers' hiring decisions, followed by a review of research results, using 'conventional methods' as well as newer approaches, in particular, factorial surveys. The chapter concludes by discussing the gap that the thesis aims to fill.

The relationship between education and labour-market outcomes is complex, linking three primary but different parties: higher education institutions, graduates and employers (Marginson 2019). A wide range of factors, such as national and international policies, organisation size and job types, affects the relationship between these actors. As Marginson (2019) comments: "Relations between higher education and work are . . . [. . .] context-bound. They vary by country, field of study, type of institution, financing of education, occupation, industry, employment site and over time" (pp. 297–298). Furthermore, variations in labour-market characteristics can influence the role of education in the hiring process.

Sociologists and economists have offered different perspectives on understanding the relationship between education and the labour market (See Bills 2003; Bills et al. 2017). This study relies on four principal theories—human capital theory, sorting theories, queue theory and social capital theory, as well as references to other theories for

completeness. *Human capital theory* (HCT) views education as enhancing productivity while *sorting theories* view education as signalling unobserved characteristics, such as motivation, hard work and perseverance. *Queue theory* considers education an indicator of trainability while *social capital theory* considers education a mechanism for reproducing social stratification (Van De Werfhorst 2011).

3.2 Explanatory Theories of Higher Education and Labour-Market Relations

This section outlines and discusses in detail the theories (e.g. human capital theory, sorting theories, queue theory and social capital theory) that relate to the study research questions. These theories are useful in understanding the relationship between education and the labour market, and they all agree that education plays a role. However, they differ in the reasons why education matters (Van De Werfhorst 2011; Brown and Souto-Otero 2020).

3.2.1 Human Capital Theory

In its broader conceptualisation, the basis of human capital theory is investments that improve skills, knowledge and health develop and enhance individuals' productivity and—in turn—increase earnings (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974). Education and training are the most common and classical examples among human capital activities (Becker 1964). For HCT, education is an investment in a future job and a way to provide marketable skills, teaching students the skills that they will need at the workplace (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974). Hence, the labour market rewards education because it directly indicates job applicants' productivity. As such, HCT claims that having educational qualifications makes job seekers more acceptable and increases their chances of securing a job (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974). In short, HCT attempts to explain how education enhances individuals' skills, productivity, employment chances and earnings. Thus, individuals will invest in education (e.g. in such forms as fees or foregone earnings during their schooling) because they expect that the future 'rate of return' on their investment will result in a 'net gain' over time (Schultz 1961).

HCT faces difficulties explaining the complex relationship between education and labour-market outcomes, and several scholars argue that HCT has serious shortcomings (e.g. Wolf 2004; Marginson 2019; Brown et al. 2020). For example, Wolf (2004) criticised the simplistic view of policymakers regarding the positive link between education and economic growth. Further, Brown et al. (2020) stress that economists tend and continue to use simple indicators, such as years of education, to measure this association, despite other factors to consider, such as labour-market characteristics, social class, gender and ethnicity. Each of these factors plays a role in explaining inequality in employment opportunities, earnings and economic growth (Lauder et al. 2018).

Regarding the role of education in employers' hiring decisions, human capital theory asserts the positive association between years of education and productivity. For example, it assumes that expecting the productivity of master's graduates to be higher than that of bachelor's-degree holders is a valid assumption, leading to the expectation that employers prefer more highly educated job applicants. Yet, how employers measure the productivity of job applicants is not clear. Rosenbaum (1986) also argues that managers face problems in their abilities to measure human capital in their hiring decision-making. The variable they often use to measure human capital (i.e. years of education) cannot produce a persuasive account in the era of congested qualifications among job candidates (Brown 2013; Bills 2016), particularly since the expansion of higher education and the number of degree holders (globally).

3.2.2 Sorting Theories (signalling, screening and filtering)

As a response to criticism of human capital theory, signalling (Spence 1973; Spence 1974) and screening (Stiglitz 1975) theories—which Weiss (1995) collectively termed *sorting theories*[11]—emerged as alternative theories to explain the relationship between education and the labour market. For these, education serves as a proxy for the job

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[11] To avoid confusion and the different interpretation of a filter theory (Arrow 1973a), this thesis extends the term *sorting theories* to include the theory of Higher Education as Filter that was proposed by Arrow (1973a).

applicant's potential productivity. *Sorting theories* can function as an extension of human capital theory, as Weiss (1995, p. 134) asserts:

> Sorting models of education can best be viewed as extensions of human capital models. However, while human capital theory is concerned with the role of learning in determining the return to schooling, sorting models, while allowing for learning, focus on the ways in which schooling serves as either a signal or filter for productivity differences that firms cannot reward directly.

Bills et al. (2017, p. 294) noted that education "serves as a sorting machine, the rationale being that schooling is a signal of unobservable abilities (e.g. willingness to learn, perseverance, motivation) supposedly correlated with job performance".

Spence (1973; 1974) proposes a signalling theory that considers hiring to be an investment under uncertainty, due to the lack of information about the job candidates' productivity and abilities. According to Spence (1973), employers tend to rely on readily available signals, such as education, work experience, race or gender. Spence (1974) states that education is not a single quantity but a multidimensional one that includes years of education, type of institution, grades and overall academic reports. Employers' evaluations, interpretations, and expectations of these signals result in their rewarding job applicants' investments in education.

Spence (1973) states that job applicants have two different types of characteristics. The first is observable, alterable attributes that the individual can change and manipulate, such as education and job experience. The other includes such attributes as race, which the individual cannot change or manipulate. Spence describes the first type as 'signals' and the second as 'indices'. Sorting theories are different from human capital theory; education and qualifications are indicators of attributes that are independent of the skills and content that education encompasses. Sorting theories hypothesise that job seekers use education as a signal to distinguish themselves from others. As employers have little information about job seekers, they use different

measures, such as grades and general academic performance, to select between candidates with the same number of years of schooling.

Psacharopoulos (1979) distinguishes between the strong and the weak versions of *sorting theories* on the basis of the payment scheme that employers use at the start of hiring. The strongest version claims that no causal relationship between education and productivity exists, but schooling acts as a signal. In this case, employers continue to pay higher wages even after they realise their mistake in estimating the actual productivity of an employee (Barron et al. 1987). On the other hand, the weakest version proposes that education is a signal of productivity, but employers use other characteristics, such as gender and race, with which employers predict the potential productivity of job applicants. Yet, employers still pay higher wages to highly educated job candidates at the beginning of hiring, which they can amend after evaluating and observing the employee's work performance (Brown and Sessions 1999).

Arrow (1973a, p.194) proposed that '[h]igher education . . . contributes in no way to superior economic performance; it increases neither cognition nor socialization. Instead, higher education serves as a screening device, in that it sorts out individuals of differing abilities, thereby conveying information to the purchasers of labor'. He argued that qualifications are an imperfect measure of productivity rather than evidence of acquired skills. He assumed that each individual has three characteristics in this regard: pre-college record, admission to college and productivity during college, which positively correlate. However, employers know about an individual's productivity during college only upon graduation with a qualification and through the GPA the graduate obtained. He argued that higher education institutions act as a double filter, first in selecting entrants and again in passing or failing students.

The main difference between *human capital theory* and *sorting theories* is in the role of education in enhancing productivity. Educational qualifications can signal future productivity, and employers can use them to distinguish between prospective employees with high or low productivity potential. Human capital theory proposes that education is an investment in productive skills while the sorting theories contend that education is a signal of not easily measurable productivity (Brown et al. 2020).

Thus, a main difference between human capital theory and sorting theories is not the role of education with respect to job opportunities. Both sets of theories assume that education improves job opportunities and income, but they differ in their understanding of the ways or mechanisms by which education does so (Jelonek 2021). In other words, whether education is the primary driver of productivity or due to unobservable characteristics, such as motivation and perseverance—especially since job applicants went through screenings by higher education institutions at the admissions and graduation stages—is difficult to determine. Thus, the success of their admission applications can be attributed to their abilities (Hoekstra 2009).

On the one hand, *human capital theory* assumes that through education, job applicants acquire knowledge that increases their productivity, and employers reward job applicants by hiring them. In this case, employers assume that these potential employees provide firms with a profit as their productivity can compensate employers for increased labour costs. On the other hand, *sorting theories* reject the claim that education is a direct indicator of productivity but consider it a signal of unobservable characteristics of job applicants that link to potential productivity. These signals can appear in the form of degree type and institution type, rank and education level (amongst other things). Thus, *sorting theories* contend that education signals employers about unobservable characteristics that help them distinguish potentially productive applicants, a useful recruitment mechanism to sort/screen job applicants.

3.2.3 Queue Theory

> The human-capital research program is silent on why there should be such a persistent bias in the preferences of employers: it may be because educated workers possess scarce cognitive skills, it may be because they possess desirable personality traits, such as self-reliance and achievement drive, and it may be because they display compliance with organizational rules. But whatever the reason for the preference, the fact remains that all of these desirable attributes cannot be known with certainty at the time of hiring. The employer is therefore faced

with a selection problem: given the difficulties of accurately predicting the future performance of job applicants, he is tempted to treat educational qualifications as a screening device to distinguish new workers, in terms of ability, achievement motivation, and possibly family origins, that is, in terms of personality traits rather than cognitive skills; cognitive skills are largely acquired by on-the-job training, and employers are therefore fundamentally concerned with selecting job applicants in terms of their trainability. This may not be the whole story but it is, surely, a good deal of the story. (Blaug 1976, p.846)

The notion of *queue theory/a job competition model* (Thurow 1975) contributes to the perspectives on education and labour market relations, by understanding that education is not only an indicator of productive skills or productivity potential but also of trainability. It suggests that labour markets consist of two virtual queues: workers and jobs. Employers play an important role in placing workers in the queue and determining their order in this queue, then selecting from the top, based on their training costs. However, quantifying such costs is difficult, and employers rely on a general estimation of how long and costly training potential job applicants will be, according to such characteristics as level of education, age, sex, previous skills, and psychological tests (Thurow 1979). Therefore, the job applicant's place in the queue for a job depends on trainability, appearing through the general perception of a wide range of characteristics.

As mentioned, education is one of the characteristics on which employers rely to estimate the training costs of potential job applicants. Thurow (1975) contends that education serves as a rational screen because schools make students more trainable, even without teaching specific job-relevant skills. Education serves not only as proxies for unobserved productivity but also as an indicator of trainability. Consequently, employers will look for easily trainable candidates at the hiring stage, to save future training costs. For example, employers may put applicants in ranked order based on their education level or academic performance (e.g. GPA).

Queue theory (Thurow 1975) argues that if a job applicant has both general and specific skills perfectly matched to the occupation, then the cost of training will be zero. Thus, employers will look for job applicants who possess both types of skills, and job applicants will invest in both types of skills to improve their employment chances. A job applicant with any shortage in one type will result in increased training costs which, in turn, will decrease the applicant's employment chances.

One main criticism of *queue theory* is that it neglects the variations between sectors and occupation profiles and the dynamics of labour markets (i.e. rapid technological changes, mass higher education) that also determine the value of education. Recent studies address this gap. For example, Di Stasio (2014) and Di Stasio and van de Werfhorst (2016) showed that employers' hiring preferences in the Information, Communication and Technology sector (ICT) in Italy, England and the Netherlands differ in their interpretations of education's value. They rank job applicants in labour queues on the basis of the country's education system and labour-market characteristics.

3.2.4 Social Capital Theory

This section starts with a discussion of social closure as a means to enter debates on social capital.

Social closure (Weber 1978; Parkin 1979; Brown 2000) is an inclusionary or exclusionary mechanism that elite groups use to set the rules of the game to their own benefit. Social closure theorists question that employers screen job applicants' attributes in the context of predicting future productivity or training costs. Instead, they assume that education is a means of inclusion and exclusion to reproduce social inequalities, and the value of education is not exclusively or primarily related to consideration of productivity or trainability. An alternative perspective on the mechanisms of allocating job applicants in the labour market distinguishes social closure theories from the other theories here. To study domination in society and social stratification, Weber (1978) proposes social closure as an explanation, producing social stratification as individuals try to close off other groups' opportunities and maintain their advantage.

Any group can vie for this monopoly on opportunities (Murphy 1988). The basic concept is that dominant group members—here, employers—maintain access to resources (jobs) and rewards (wages) by excluding members of subordinate groups (applicants) from opportunities, on the basis of such characteristics as race, gender, social origin, knowledge, skills and education (Weber 1978; Collins 1979; Parkin 1979; Murphy 1988).

Social closure theories see education as a legitimised means of securing access to occupational positions (Weeden 2002; Bol and Weeden 2015). Elite groups use educational qualifications, such as diplomas or other credentials, to control access to privileged jobs (Rivera 2015). A country may institutionalise and even sanction such educational requirements for certain jobs (Omanisation is one pertinent example). From our perspective, employers mobilise power either to give job applicants an opportunity to secure a job or to block them from sharing the rewards of education. Recruitment and selection are social processes that can involve reproducing such practices. Social closure theorists "either deny the relationship between education and productivity or consider it irrelevant" (Di Stasio et al. 2016, p.55). Educational qualifications for employment reflect exclusionary groups' interest in imposing their powers on middle ranks rather than serving positions' technical needs (Murphy 1988).

Social closure perspectives criticise the functionalist tone of human capital theory and encompass a diverse set of perspectives, such as credentialism (Collins 1974; 1979), cultural reproduction theory (Bourdieu 1984) and Bowles and Gintis's (1976) correspondence principle (Van De Werfhorst 2011).

For example, Collins (1979) suggests that groups use their cultural resources to close off opportunities and exclude others from getting access to their resources. Under this view, the expansion of higher education institutions and, thus, qualifications may not relate to the demand for a skilled workforce. Instead, it can be a means of certain groups of job applicants gaining advantages over others or an employer's screening device in the selection process, reflecting their professional or cultural preferences. The demand for a skilled and certified workforce shows the 'status group' strategies, using education requirements to exclude and restrict access to resources (Collins 1979).

According to Collins (1979), education is similar to ethnicity and race because they are sources of status culture and criteria for membership in status groups. Recruitment and selection processes can lead to discrimination and reproduce social divisions of gender, class and ethnicity (Brown and Hesketh 2004; Pager and Karafin 2009; Rivera 2015).

Amongst the conceptual resources that social closure theories use, the concept of 'social capital', a key element in Bourdieu's (1986) social reproduction theory, has been particularly popular in the analysis of employers' hiring decisions. Although the term *social capital* has many interpretations (Bourdieu 1986; Putnam 2000), the consensus agreement is that social capital focuses on the quantity and the quality of relationships and the value of the resources available through these relationships. Lin (1999, p. 39; 2019) defined social capital "as investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns of instrumental or expressive actions". That is to say, social capital consists of actual and potential resources embedded in social networks, which can be invested to increase the probability of achieving a purposive action (Bourdieu 1986; Coleman 1988; Lin 1999). Employers tend to rely on social capital (i.e. referrals) in the recruitment process to realise three key benefits: (i) to have a large and diverse applicants pool (ii) to find a better match (iii) to reduce recruitment costs (Fernandez et al. 2000). Several studies by sociologists and economists prove employers' reliance on referrals from incumbents and acquaintances, and the chances of the referral candidates securing the job are higher than others' chances (Fernandez and Weinberg 1997; Fernandez et al. 2000; Petersen et al. 2000; Marsden 2001; Fernandez and Galperin 2014; Burks et al. 2015). In their reviews of the literature on the role of social ties in job matching, Marsden and Gorman (2001) found that private-sector organisations use informal recruiting methods where social capital is often of central importance more than public organisations and for highly skilled positions that require additional training rather than low-skill occupations. Fernandez and Weinberg (1997) investigated whether referred applicants from current employees at a large retail bank in the U.S. had a greater chance of being hired than non-referred applicants. They analyse the hiring process for four jobs: customer service representative, personal banker, business banker and mortgage

consultant. The findings show that referred applicants were more likely to get job offers, and they reported no difference in terms of hiring chances among the four jobs. Fernandez and Castilla (2001) studied the impact of referral programs on hiring chances for a customer service position in a phone centre in the U.S. Petersen et al. (2000) investigated the role of personal networks (and sex and race) in the hiring chances at a midsized U.S. technology firm. They found that personal networks help referred applicants to get hired.

Granovetter (1973; 1995) argues that among a person's social contacts 'weak ties', such as acquaintances, provide information about job opportunities and job candidates' characteristics more readily available than 'strong ties', such as close friends or family members. Despite the prevalence of weak ties among job seekers to find jobs, these ties are used by employers and can play a role in the hiring process (Marsden and Gorman 2001).

Previous studies have investigated the role of referrals in employers' hiring decisions in developed countries (Fernandez and Weinberg 1997; Fernandez et al. 2000; Petersen et al. 2000; Erickson 2001; Marsden 2001; Fernandez and Galperin 2014; Burks et al. 2015). Moreover, these studies have tended to investigate the role of referrals in single firms. Yet, Flap and Boxman (2001) show that the role of social networks varies substantially across jobs. Based on in-depth interviews with Chicago employers, Miller and Rosenbaum (1997) found that employers do not trust information received from schools about job candidates, and they prefer to rely on their self-judgements and social networks in the absence of trusted educational credentials (see also Ioannides and Loury, 2004).

These studies rely on surveys and observational data to analyse employers' hiring decisions. Recently, renewed interest arose in studying the role of referrals in labour-market outcomes, using the factorial survey experiment from employers' perspectives (e.g. Di Stasio and Gërxhani 2015) and from students' perspectives (e.g. Kim and Fernandez 2017). Di Stasio and Gërxhani (2015) investigated whether referrals from employers' business and professional contacts (institutional referrals) figured in employer hiring decisions. They targeted 34 employers in the information,

communication and technology sector in England and found that the English employers preferred not to hire applicants whom a business and professional contact referred, despite considering such applicants more trainable. In addition, the role of the employers' business and professional contacts varies, depending on an applicant's level of education, and the effect is larger for master's degree holders than non-tertiary education (A-level) graduates.

Employers also rely on their own networks of family, friends and business contacts (individual referrals) for hiring (Gërxhani and Koster 2015). Gërxhani and Koster (2015) conducted a survey of 288 Dutch employers to examine how their networks affected the hiring process. They found that employers rely more often on informal recruitment channels (i.e. online networks, friends and family, incumbent personnel, and work and business relations), for jobs in highly skilled occupations than for jobs in low-skilled occupations. Burks et al. (2015) argued that referred applicants tend to be more productive than non-referred applicants, but Barr et al. (2019) found that performance differences between referred and non-referred applicants diminished after six months of employment.

These studies suggest that employers rely on referrals to reduce recruitment costs and gain more reliable information about potential job applicants' characteristics. Yet, there is a need to further explore whether and to what extent employers rely on different types of referrals while making hiring decisions and whether their decision to rely on referrals varies across occupations, firm size and labour-market characteristics.

There is a growing body of literature on the use of social media platforms in employers' hiring decisions (Skeels and Grudin 2009; Rhee et al. 2018). Social media platforms such as LinkedIn have become increasingly common for collecting information about potential candidates during the initial process of hiring (Zide et al. 2014). For example, LinkedIn is considered the most trusted social media platform where employees can look for their desired company and organisations can search for potential candidates (Merskin 2019; Prodromou 2019). Professional social media networks such as LinkedIn also provide employers with an alternative way to the traditional referral approach. LinkedIn provides employers and employees with the opportunity to connect and

exchange information. Employers have the ability to navigate through a potential candidate's page and see who has provided recommendations and referral to candidates. The emergence of professional career platforms such as LinkedIn has repercussions on the hiring process and the notion of "strong" and "weak" ties. There is evidence that employers are more reliant on strong ties when using social media platforms to recruit potential candidates (Gee et al. 2017). Gee et al. (2017) used data of 6 million Facebook users and found the majority of people got hired through various strong ties.

Barr et al. (2019, p.1268) claim that "some key questions related to the nature, transmission, and effect of referral information remain unexplored, including the impact of referrals on screening and self-selection during the hiring process". This thesis examines the effect of referrals and social media platforms in employers' hiring decisions. This thesis contributes to the literature on social capital and, in particular, the relationship between social networks and graduate labour market outcomes that aims to determine which type of social ties are most valuable in employers' hiring decisions.

3.2.5 Critical Reflections on Education and Labour-Market Theories

Human capital, sorting, queue and social capital theories offer helpful insights into the reasons for selection criteria and hiring decisions that employers use, particularly at entry into the labour market. These theories assume that employers have different reasons and beliefs when they make decisions to hire potential employees.

While sorting theories attempt to address the critics of human capital theory, they fall short in several ways. First, sorting theories assume that employers rely on all signals available about job applicants, but the theories do not predict the relative impact/strength of each signal, and employers may prefer some signals over others. Sorting theories also do not explain under what conditions information is meaningful and employers trust it. For example, the value of a signal may differ based on such labour-market characteristics as job type, firm size and national policies (Brown and Sessions 1999). Third, sorting theories fail to describe the recruitment process; it is

"hard to define the process by which a signal gets to be recognized as such and how the receiver learns to discriminate among them" (Arrow 1973b, p.15). Finally, sorting theories do not take into account social background (e.g. race, ethnicity) (Van De Werfhorst et al. 2003).

Valiente (2014) argues that the imperatives of HCT are an endemic aspect of skills policy, which national governments and influential organisations, such as the Organisation for Economic Co-operation and Development (OECD) and the World Bank, promote as such, particularly pushing the approach on developing countries. However, such policies fall short in addressing labour-market challenges in developing countries, like Vietnam (Mori and Stroud 2021). Indeed, in similar ways they negatively impact education in Oman by imposing ineffective education policies (Al'Abri 2011).

The literature review has shown the highly debated reasons why and how employers reward education in the labour market. Three overarching perspectives provide explanations for why educational credentials pay off in the labour market. However, they endorse conflicting assumptions and explanations about the relationship between education and the labour market. Moreover, most of their applications have occurred in developed contexts. Evidence to test these theories comes largely from supply-side data or wage returns (Burton-Jones and Spender 2011) and does not rely on direct evidence from employers to support their claims or provide explanations as to how employers conceptualise their decisions. Thus, validating these findings requires clear evidence from studying the gatekeepers of employment. Another important shortcoming of these theories is that they do not sufficiently account for the role of social, organisational and institutional contexts in the labour market. The structure of their organisational environment and their labour market may influence employers' understandings of education.

3.3 Overview of Methods Used to Study Employers' Hiring Practices

This section discusses the rationale for studying the relationship between education and labour-market outcomes by targeting employers and critically engaging in more

depth with the research on employers' recruitment and selection practices. Then, it reviews the methods the extant literature has used to study employers' hiring behaviour and justifies the use of a factorial survey and semi-structured interviews for this thesis.

The role of employers as gatekeepers in providing or denying individuals access to the labour market has received growing academic attention over the past few years (Bills et al. 2017). Still, relatively little sociological research exists on employers' perceptions and use of educational credentials in the hiring process. Previous studies have tended to examine the supply side, i.e. the characteristics of job seekers and job incumbents (Bills et al. 2017, p. 292). Investigating employers' hiring decisions can also help determine the theory with which employers generally conform and explain the rationale for their hiring decisions. As Gerber and Cheung (2008, p. 313) suggest, "data from employers assessing how they evaluate different types of the same credential might help resolve whether human capital, social capital, or signaling processes are at work".

Researchers have used various methods to study hiring processes. They include interviews, focus groups, observation and audit studies (e.g. Bills 1988a; Bills 1988b; Pager and Karafin 2009; Rivera 2011; Bonoli and Hinrichs 2012) and organisational field studies. Various surveys characterise research methods on this subject, such as surveys of job-holders (e.g. Breen et al. 1995; Bernardi 2003; Van der Velden and Wolbers 2007; McCoy and Smyth 2011), field surveys (e.g. Marsden 2001; Gërxhani and Koster 2015) and factorial surveys (De Wolf 2001; Di Stasio 2014; Di Stasio and Van De Werfhorst 2016). Researchers have applied more complex content-analysis methods to job advertisements (e.g. Jackson 2007; Dörfler and Van De Werfhorst 2009) and experiments to evaluate hiring practices (Gërxhani et al. 2013; Jackson and Cox 2013; Di Stasio 2014; Protsch and Solga 2015; Di Stasio et al. 2016; Protsch and Solga 2017; Damelang et al. 2019; Van Belle et al. 2019; Protsch 2021). This section briefly discusses these methods and highlights their benefits and shortcomings, then offers justifications for this study having used a factorial survey and semi-structured face-to-face interviews. The first part focuses on studies that use interviews and surveys to infer employer perceptions; the second part reviews simulations for studying hiring processes.

Different studies use interviews, focus groups and observation to study employers' hiring behaviour or job applicants (Bills 1988a; Bills 1992; Pager and Karafin 2009; Rivera 2011; Bonoli and Hinrichs 2012; Rivera 2012). These studies allow deeper analysis and description. However, under observation and in interviews, employers may not reveal actual practices, especially when they relate to factors such as race and gender. Employers may feel unwilling to provide answers that include sensitive information, due to social desirability biases. Also, employers may even be unaware of the motivations underlying their hiring decisions.

In a series of studies, Bills (1988a; 1988b; 1990; 1992b) conducted interviews to examine employers' recruitment and selection practices in the United States and found that they use a range of information beyond educational credentials to make their hiring decisions. He also found that employers evaluated the link between education and skills differently, depending on such individual characteristics as age or gender.

Bills (1988b) examined the perspectives of hiring managers in six Chicago organisations across twelve occupations, on the value of educational credentials. Based on interview data with operating and personnel managers, he found that employers value job history and the substitutability of specific experience for education, over-education and personality. In interviews, employers provided detailed descriptions of the hiring process and their use of educational qualifications. Bills focused on a broad range of occupations, from management to unskilled workers, but he did not consider the effect of organisational context.

Surveying employees is one method for examining the hiring process and the behaviour of employers during the recruitment and selection processes. Several studies in different countries have used this method (Breen et al. 1995; Bernardi 2003; Van der Velden and Wolbers 2007; McCoy and Smyth 2011). Although surveys of job seekers or job holders can provide rich detail on hiring practices and how employers perceive job-applicant information, these surveys have issues that relate to the inability to control for entire applicant pools. They do not provide data about rejected job seekers, and researchers cannot compare who gets the job and who does not (Petersen and Togstad

2006). These studies indirectly investigate employers' hiring behaviour as the source of the data is post-hire surveys (Fernandez and Sosa 2005; Fernandez and Mors 2008). Therefore, other methods that would allow for comparing successful and unsuccessful applicants could provide relative information about the hiring practices of employers that would be preferable for this study.

Other sociological studies directly target employers to participate in field surveys that examine their hiring behaviour (Marsden 2001; Gërxhani and Koster 2015). The field surveys ask for information about the most recently hired employees and they yield information about strategies used to select job candidates, but they fail to provide information about the attributes that lead employers to select the successful candidates. Field-survey studies do not allow comparisons between who got a job offer and who got a rejection; also, they are very costly.

In the past two decades, researchers have also used experimental methods to study employers' decision-making (Gërxhani et al. 2013; Jackson and Cox 2013; Protsch and Solga 2015). The main strengths of experimental methods are their ability to control variables and isolate the mechanisms underlying employers' hiring behaviour (Jackson and Cox 2013). However, their main limitation is the external validity, so generalising findings is difficult without a sufficient number of respondents.

Audit or conjoint studies are a type of field experiment that can study a real hiring scenario, absent from laboratory experiments. Respondents do not know that they are involved in such a study, and the call-back rates for job interviews measure the effect of the experimental variables. Participants evaluate two matched pairs of job applicants with the same attributes. Audit studies mainly focus on real hiring process and often study existing employer discrimination (Pager and Quillian 2005). They allow for experimental control of applicant pools and have high-level external validity, but they receive criticism for failing to consider the overall composition of applicant pools (Petersen and Togstad 2006). They differ from vignette studies by allowing the manipulation of only one treatment condition, to avoid unrealistic combinations of characteristics in a résumé. In vignette studies, multiple factors or treatment

conditions support the simultaneous examination of different factors, as each respondent can judge a large number of vignettes. The factorial-survey experiment differs from audit studies in which participants are unaware that their hiring decisions are under investigation.

Content analysis of job advertisements frequently collects data on employers' recruiting criteria (Jackson 2007; Dörfler and Van De Werfhorst 2009). It can provide rich details about the requirements and characteristics that employers seek over a long period. However, it fails to address the attributes of the job seekers who apply for a certain job, as well as the issue of employers deviating from the criteria that the ad lists and their actual evaluation of applicant attributes.

Researchers have also used organisational field studies to analyse who does or does not get a job (Fernandez and Weinberg 1997; Fernandez and Sosa 2005; Petersen et al. 2005). Organisational field studies differ from field surveys and audit studies in that they can study an entire pool of applicants. Accordingly, researchers analyse the written records and application files from real organisational hiring practices. This methodology's main limitations are that organisations may dispose of relevant records and application files or keep researchers from accessing those files.

A promising methodology for studying the hiring process is a factorial survey that constructs a hypothetical pool of candidates and asks employers to engage in a simulation exercise that mimics a real hiring scenario. A factorial survey helps to elicit the intentions and beliefs behind the hiring decision and has proved to be an effective way to study employers' preferences. It allows the researcher to control the stimuli optimally and focus on theoretically relevant characteristics (Hainmueller et al. 2015). This study used the factorial survey method, which has attracted some social science researchers over the last decade (e.g. Di Stasio 2014; Di Stasio and Gërxhani 2015; Di Stasio and van de Werfhorst 2016; Petzold 2017; Protsch 2021; Shi and Di Stasio 2021). Factorial survey experiments study participants' decisions in and judgements, and evaluations of hypothetical situations, the vignettes mentioned above. Rossi and Lazarsfeld first introduced and applied the factorial survey in the 1950s, and it became

an important method for studying justice concerns and social norms in the 1970s (Rossi 1979). Other researchers have contributed to the development of factorial surveys, such as Jasso (2006); Wallander (2009)—who wrote a review of sociology studies between 1982 and 2006 that used factorial surveys—and Auspurg and Hinz (2015), who published a detailed book about factorial-survey experiments.

In factorial surveys, respondents confront a set of vignettes that reflect selected factors, to elicit their beliefs, knowledge, attitudes, judgements or intended behaviour. Vignettes can take different forms, such as text vignettes in keyword, dialogue or narrative style, visual vignettes in cartoons or pictures and audio or video vignettes. The form depends on the nature and objectives of the research questions.

One advantage of using factorial-survey experiments is that they allow participants to act as though they were making real judgements in a real situation. Another is that vignette studies measure social norms, beliefs and judgements indirectly, using multiple factors to measure a single item. For instance, to measure the effect of educational credentials (human capital) on employers' hiring decisions during the screening of résumés, such factors as the field, level of study and grade would enable ranking select decision criteria and their relative importance in evaluating candidates. Thus, researchers could reveal the underlying relative importance of attributes and trade-offs among attributes.

Factorial-survey experiment studies can predict whom employers prefer to get a particular job or not. Thus, they allow more control over the composition of applicant pools than surveys of job holders, which only provide information about job applicants after entry into labour market. As the researcher randomly combines vignette levels, self-selection is not an issue. Furthermore, in factorial surveys, the researcher can select a few factors of theoretical relevance that will present to employers during the hiring process. Finally, factorial surveys can estimate the value of applicants' positive and negative characteristics. Employers may find negative screens of job applicants discouraging, which may affect hiring decisions. In factorial surveys, the researcher can

randomly mix both positive and negative aspects in job applicants' profiles, representing several stages of the process.

More recently, researchers have begun to study employers' hiring behaviours using factorial surveys. Di Stasio and van de Werfhorst (2016) explored the role of educational backgrounds in employers' selection criteria and whether they consider education a provider of skills, as human capital theory suggests, a signal of trainability, as queue theory assumes, or a requirement to enter specific occupations, as closure theory implies. The study targeted 72 employers using the vignette approach and found that the employers rewarded educational credentials differently in the two countries covered (England and the Netherlands). English employers attached importance to aspects such as grades, work experience and on-the-job training. The Netherlands employers preferred the match between job requirements and candidate credentials.

The factorial survey and semi-structured interviews are appropriate methods for answering the study research questions, as they help elicit the intended beliefs and intentions of employers evaluating the educational features of job applicants, as well as social capital's impact on their hiring decisions. Participants can consider different factors simultaneously, so the survey examines the actual hiring behaviour of employers during the recruitment and selection processes. Few studies have applied this method in sociological research (e.g. De Wolf and Van Der Velden 2001; Di Stasio 2014; Humburg and van der Velden 2015; Protsch and Solga 2015; Di Stasio and van de Werfhorst 2016; Protsch 2021; Shi and Di Stasio 2021).

3.4 Conclusion and Gaps in the Literature

This chapter reviews the theories that explain the relationship between education and labour-market outcomes. It explains how human capital theory, sorting theories, queue theory, and theories of social capital relate to different perspectives on the role of education and aid understanding the relationship between education and the labour market. They all agree that education plays a role; however, their interpretations differ on why education relates to certain labour-market outcomes (Bills 2003; Van De Werfhorst 2011; Brown and Souto-Otero 2020).

This thesis identified four gaps in the literature and aimed to address them and contribute to the literature. First, the theoretical perspectives discussed above indicate that education pays off, and employers reward job applicants through three different mechanisms: (i) an indicator of productivity, as HCT proposes; (ii) a signal of potential competence through characteristics such as motivation and hard work, as sorting theories assert; (iii) an indicator of trainability to save training costs, according to queue theory. Table 3.1 outlines the three mechanisms and their relevant educational attributes that previous studies reported (Weiss 1995; Bills 2003; Gerber and Cheung 2008; Andersen and Van De Werfhorst 2010; Van De Werfhorst 2011; Di Stasio 2014; Humburg and van der Velden 2015; Protsch and Solga 2015; Di Stasio and Van De Werfhorst 2016; Bills et al. 2017). However, these theories 'say little about which attributes of education are important to employers (e.g. grades or type of degree)' (Di Stasio and van de Werfhorst 2016, pp. 80–81). Arguably, education cannot be limited to one attribute (i.e. a degree), but it can involve several attributes, such as grades and fields of study (Andersen and Van De Werfhorst 2010; Protsch and Solga 2015; Di Stasio and Van De Werfhorst 2016). This thesis complements and contributes to the previous studies, by ranking employers in terms of their correspondence to the three mechanisms; that is, whether they select on productivity, potential competence or trainability (Van De Werfhorst 2011; Di Stasio 2014; Di Stasio and Van De Werfhorst 2016).

Table 3.1 Theories explaining the relationship between education and labour-market outcomes

Theory	Why employers value education	Relevant attributes
Human capital theory (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974)	Education enhances productivity and develops skills and competencies	Years of schooling, relevant field of study, experience
Sorting theories (Arrow 1973a; Spence 1973; Spence 1974; Stiglitz 1975)	Education signals characteristics, such as willingness to learn, motivation and perseverance	Grades, no delays in the study, level of education,
Queue theory (Thurow 1975; Thurow 1979)	Indicators for trainability, capacity to learn new skills, skills acquired on the job, not at school	Grades, level of education

Source (Weiss 1995; Bills 2003; Gerber and Cheung 2008; Andersen and Van De Werfhorst 2010; Van De Werfhorst 2011; Di Stasio 2014; Humburg and van der Velden 2015; Protsch and Solga 2015; Di Stasio and Van De Werfhorst 2016; Bills et al. 2017)

Second, this thesis aims to study how employers use educational attributes and other job applicants' characteristics, interpreting their role in the recruitment and selection processes. It investigates several educational attributes (i.e. field of study, level of education, GPA, place and rank of university), experience and internship and other social and demographic characteristics (gender, nationality, extra-curricular activities, referrals). Some of these attributes have been investigated in Anglo-Saxon contexts but not in a rentier and a developing-state context. For example, Di Stasio (2014) investigated the role of several educational attributes in employers' hiring decisions in Italy. She found that employers associated grades and levels of study with trainability,

as queue theory proposed. Another study conducted in the Netherlands and England by Di Stasio and van de Werfhorst (2016) found that English employers associated education with the notion of trainability rather than productivity while Dutch employers associated educational attributes with the notion of productivity.

Third, this thesis aims to understand the story from a rentier-state perspective and to address a gap in how employers in a rentier state interpret job applicants' characteristics that they can obtain in their hiring decisions, such as educational attributes and demographic characteristics, and how their interpretations correspond to the three mechanisms of productivity, sorting, trainability. Gerber and Cheung (2008, p. 313) noted that "data from employers assessing how they evaluate different types of the same credential might help resolve whether human capital, social capital, or signalling processes are at work". This thesis sought to address these gaps in the literature.

Fourth, in recent years, a renewed interest has arisen in the use of experimental methods to explore the factors underlying employers' hiring decisions (Bills et al. 2017). Conventionally, the majority of studies focus on the supply side and study the perceptions of employees on the role of education, alongside other factors in hiring decisions, such as age and gender (Bills 1988c; Bills 1992; Bills 2003). Studying the demand side using an experimental methodology has received little attention (Bills et al. 2017). Recent sociological studies have used survey experiments to examine how employers evaluate and interpret education during the hiring process (Di Stasio 2014; Humburg and van der Velden 2015; Protsch and Solga 2015; Di Stasio and Van De Werfhorst 2016; Protsch 2021; Shi and Di Stasio 2021). However, what we know about the factors that affect employers' hiring decisions is largely based on studies in developed countries that investigate how employers react to differences in educational credentials and other factors, such as gender and age, during the recruitment and selection process. This thesis begins to address the gap in this area, by studying employers' job-candidate selection processes in a rentier-state and developing country, through a factorial survey design and semi-structured interviews.

Combining a factorial survey experiment and interviews offered insights into these factors and gained in-depth information on employer rationales for their hiring decisions and the use of referrals, not observed in previous studies. The use of factorial survey experiments in investigating the role of referrals in employer hiring decisions is important, as referral types were uncorrelated with the other characteristics of résumés, and this conveys confidence that the results are not spurious and due to unobserved differences in job applicants' characteristics (Mouw 2003; Fernandez and Galperin 2014).

Chapter 4 Methodology and Methods

4.1 Introduction

This chapter presents the methodological considerations for this thesis. First, it begins by considering the ontological and epistemological positioning in relation to the study's aims and objectives. Second, it outlines the main research aim, and the three broader research questions underpinning it. Third, it progresses to detail the data collection methods and research participants. Fourth, it describes the steps taken to conduct a factorial survey and the analysis techniques used. Fifth, it provides some critical reflections on the factorial survey design adopted. Sixth, it outlines the semi-structured interviews and the analysis of the interview data. Lastly, it discusses access, considers the risks involved in the field, and outlines ethical considerations.

4.2 Ontological and Epistemological Position

My ontological and epistemological position informs the nature and scope of the study. Ontology is concerned with the nature of reality and its characteristics. Meanwhile, epistemology relates to a branch of philosophy that concerned with the origin, nature, methods, and reasons behind knowledge claims (Creswell and Poth 2018). Ontologically and epistemologically, the position I adopted within this study can be described as critical realism.

4.2.1 Critical Realism

Critical realism is a philosophical position that sits between positivism and interpretivism but does not reject them – it combines explanation and interpretation and contributes to the bridging of the perceived gap between qualitative and quantitative research (Denzin and Lincoln 2017). Bhaskar (2013) proposed critical realism but other scholars have contributed to its development (e.g. Archer 1995; Sayer 2010). The ontological and epistemological positions of critical realism can be described as follows: "things exist and act independently of our descriptions, but we can only know them under particular descriptions. Descriptions belong to the world of society and men (sic); objects belongs to the world of nature. We express [our understanding

of] nature in thought" (Bhaskar 2013, pp.241-242). In other words, our view of reality is that it exists independently from the observer, but it only becomes apparent through individuals' perceptions and interpretations (Ritchie et al. 2014). In this case, it is important to recognise the crucial role of individuals' own interpretations of the issues researched, and we believe that different perspectives will produce different and diverse interpretations and understandings of the issues. As the external reality is itself complex, then the purpose of research is to take that reality into account in all its richness, diversity, and complexity.

Bhaskar (2013) argues that critical realist ontology consists of three primary domains: the real, the actual, and the empirical (see Table 4.1). The real domain is the underlying structures that exist and act as causal forces and mechanisms to produce and generate social phenomena and events. The second domain is the actual which consists of events caused by the real mechanisms and structures. The third domain is the empirical which is the experiences of effects or the interpretation of the effects as they are experienced or observed by those exposed to them.

Table 4.1 Domains of critical realism

	Domain of the real	Domain of the actual	Domain of the empirical
Mechanisms	/		
Events	/	/	
Experiences	/	/	/

Source: (Bhaskar 2013, p.2)

Bhaskar (2013, p.238) argues that "Social structures [e.g. language], unlike natural structures [e.g. water], cannot exist independently of their effects"[12]. Therefore, from a critical realist perspective, the aim of research is to go beyond the empirical domain to understand the mechanisms of the actual and the real domains (Joseph and Roberts 2004). The empirical will be the individuals experience of recruiting, which will be interpreted through the lens of the real (social structures of labour markets and education or economic systems e.g. capitalism) and the actual (i.e. the mechanisms of the latter as they influence the patterns and processes of recruitment). The aim of critical realism, then, is to uncover and explain the mechanisms that cause these social phenomena and events (Bhaskar 2013) and that influence their behaviours (Bygstad et al. 2016).

In terms of methodology and methods, this multi-dimensional approach to understanding the underlying mechanisms and the complex reality of employers' hiring decisions requires. This can help to identify causal powers and relationships and so explore the diversity of the manifestation of the real (i.e. individuals, organisational characteristics, job characteristics) and control for bias. The relationship and causal powers between the structures can be identified from data or literature (Bhaskar 2005). The research strategy of this thesis entailed a factorial survey experiment and semi-structured interviews. The integrated use of both these research tools provided an in-depth understanding of employers' hiring decisions and their rationale for and interpretations of these. In particular, the factorial survey experiment allowed me to explore what factors are important in the screening stage and to investigate the interaction between the factors as well as the differences among jobs and firm size. The detail and complexity of the qualitative interviews gave explanatory depth and nuance to the analysis and made it more sensitive to the complex reality of employers' hiring decisions. The uncovering of generative mechanisms at a rentier state context and with three different occupations in different firm sizes contributes to a providing

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[12] "An example of a natural structure is H2O by virtue of which water boils at 100 degrees, quenches a thirst, and so on. An example of a social structure would be the landlord-tenant relationship, by virtue of which landlord and tenant possess reciprocal enablements and constraints, for example, the tenant can use the accommodation but has to pay rent". (Brown and Roberts 2014, p.303)

a foundation for the exploration of the relationship between education and the labour market.

Employers play a crucial role in determining access to the labour market. It is important to account for the influence of underlying power structures and the impact of social and institutional factors on the decisions employers make. Therefore examining employers' role as gatekeepers in providing or blocking access or entry to the labour market is important to understand what are the factors that shape their hiring decisions and the rationale and perceptions behind these decisions. Overall, critical realism can facilitate this perspective by incorporating, as a meta-theory, a critical engagement with participants' knowledge and experience. It provides a useful lens to complement the research aims in examining employers' hiring decisions, and how and why they affect job applicants' chances of obtaining entry-level positions. The next section explores the research questions and objectives.

4.3 Research Questions and Objectives

As mentioned in Chapter 1, the overarching aim of this thesis is to explore employers' hiring decisions when recruiting mechanical engineers, accountants and software developers in a rentier state context. In order to develop the research questions, gaps in the existing literature on the transition from education to work were identified (see Chapter 2). This thesis aims to address the following research questions:

Question 1: To what extent do employers attach value to particular educational attributes when screening job-applicant résumés, and why?

Question 2: To what extent, if at all, is an applicant's social capital a factor in employers' screening of résumés, and why?

Question 3: In what ways do employers' assessment of job applicants vary across occupational and organisational contexts? And why?

4.4 Research Design – A Mixed-Methods Approach

This thesis used a mixed method approach incorporating a factorial survey design and semi-structured interviews to develop an understanding of employers' hiring decisions

in three occupations. The following sections elaborate more on how this approach was implemented and tested.

The mixed-methods approach (as it is adopted here and in more general terms) can be used to achieve a level of triangulation (Denzin and Lincoln 2017) and to capture different dimensions of employers' hiring decisions and the rationale behind these. Triangulation can be defined as "the combination of methodologies in the study of the same phenomena" (Denzin 1989, p.291). Mathison (1988) argues that the common understanding of the use of triangulation is that different sources and methods yield a singular conclusion about the phenomenon under study, but this is not always the case. The main purpose of using triangulation in this study was not only to cross-validate the data that emerged from the factorial survey, but also to go beyond the employers' preferences regarding job applicants to explore employers' perspectives and interpretations of their hiring decisions through semi-structured interviews (see Chapter 7 for more detail).

4.5 Development of the Factorial Survey

This section outlines how the factorial survey is developed and implemented.

4.5.1 Occupations Selection

Three occupations - software developer, accountant and mechanical engineer - were selected to create the scenario of the vignettes, design the integrated survey and guide the interviews. It was decided that a selection of occupations might allow for a more accurate judgement of the vignettes. The above three occupations were selected to ensure that the study has good coverage of the Omani labour market, as these occupations are the most common posts advertised by private sector firms in Oman (Ministry of Higher Education Research and Innovation 2016). (see Chapter 2, Section 1.2).

Participants were asked to choose among the three occupations which they most frequently recruited for in their firms (see Figure 4.1) followed by a job description of the chosen job to indicate whether the job description provided in the survey matched

the job description used in their firms (see Figure 4.2). Almost 86% of the respondents indicated that the job description matched the one they used in their firms.

Figure 4.1 Vignette text and occupations

In this survey, I would like to ask you to rate 12 résumés of job applicants based on a number of criteria.
Could you please indicate, for which occupation you most frequently recruited for?

Accountant	○
Software Developer	○
Mechanical Engineer	○

← →

Figure 4.2 Job description of a software developer position

Please read the following job description before you rate 12 résumés.

Software Developer duties include:

(a) researching, analysing and evaluating requirements for software applications and operating systems;
(b) researching, designing and developing computer software systems;
(c) consulting with engineering staff to evaluate interfaces between hardware and software;
(d) developing and directing software testing and validation procedures;
(e) modifying existing software to correct errors, to adapt it to new hardware or to upgrade interfaces and improve performance;
(f) directing software programming and development of documentation;
(g) assessing, developing, upgrading and documenting maintenance procedures for operating systems, communications environments and applications software;
(h) consulting with customers concerning maintenance of software systems.

Please click the next button to continue

← →

4.5.2 Preparing Factors and Levels of the Vignettes

A combination of the vignettes with an integrated survey in a factorial survey experiment followed by additional semi-structured face-to-face interviews was used to collect data about employers' hiring decisions for this thesis. There were two main

stages of data collection and analysis: (i) the factorial survey data were collected and analysed to understand employers' hiring preferences and (ii) semi-structured interviews were conducted with 29 employers and then analysed to identify emerging patterns. The interview schedule was shaped based on trends emerging from the factorial survey data and from the literature. First introduced by Rossi (1979) to measure household social status, factorial surveys are often used to study the judgments and behaviour of participants. The idea behind factorial surveys is to present respondents with stimuli that resemble real-world situations and to force them to make trade-offs between a range of factors (e.g. sex) and levels (e.g. male, female). In this research, respondents were asked to evaluate resumes that incluse a list of factors and levels. The levels of these factors were experimentally varied across the vignettes so that the impact of these levels on respondents' judgments could be estimated (Auspurg and Hinz 2015).

Operationalisation is a fundamental step in the construction of a factorial survey. The factorial survey can be constructed to include a range of factors and levels that are expected to influence employers' screening and hiring decisions. The selection of the factors and levels were based on the empirical and theoretical literature to test the hypotheses and answer the research questions of this study. Empirically, to select the factors and levels for the Omani context, I relied on several resources: the result of the employer survey (2016) conducted by the Ministry of Higher Education in Oman as it has information about employers' preferences when hiring job seekers and the criteria, they use to evaluate job candidates; job advertisements in various online platforms in Oman; and several factors derived from a pilot study with 21 respondents (see section 4.5.8). Theoretically, I identified the factors and levels that were expected to have an effect on employers' screening and hiring judgments based on the theoretical literature of employers' hiring behaviour and the recruitment and selection process (see chapter 3).

In this section, I review the factors and levels used to create the vignettes and the rationale underlying the selection of these factors and levels. Nine factors and 29 levels were used to examine employers' hiring decisions in Oman (see Table 4.2).

Table 4.2 Factors and Levels of the Vignettes

Number	Vignette factors (independent variables)	Vignette levels
1	Gender	- Male - Female
2	Nationality	- Omani - Expatriate
3	Field of Study	- Engineering - Business and Management - Information Technology
4	Level of Education	- Diploma - Bachelor's degree - Master's degree
5	Grades (GPA)	- 4 out of 4 and within the top 5% of their class - 3.5 out of 4 - 2.7 out of 4 - 2 out of 4
6	Place of Study	- A leading university in Oman. - A non-leading university in Oman. - A leading university abroad. - A non-leading university abroad.
7	Experience and Internship	- Internship at your organisation. - Internship outside of your organisation. - Relevant experience. - Not relevant experience/internship.
8	Extra-Curricular Activities (i.e. clubs, societies, volunteer work)	- Yes, in a leadership position. - Yes, as a member of a group. - No
9	Referral by an existing employee or through cooperation with universities in Oman or abroad	- Yes, by an existing employee. - Yes, from an Omani university with which your organisation cooperates. - Yes, from another university with which your organisation does not cooperate. - No

The first factor is the gender of the applicants. The inclusion of this factor in the vignette allows the researcher to identify the role of gender and explore how the value of qualifications varies by gender. This study is not looking particularly at gender discrimination but including this factor in the vignettes may reveal a new direction worth highlighting. Therefore, the inclusion of gender is appropriate to explore if there

are gender differences in the hiring decisions among occupations and hiring preferences in general in Oman. This study hypothesises the following:

H1: Omani employers are more likely to use gender as a screening criterion to hire job applicants and predict their trainability.

The second factor, nationality, has two levels: *Omani and expatriate*. Nationality can be an indicator of ethnic penalty by employers (Heath and Cheung 2006). There is evidence that there is discrimination between nationalities in the European labour market (see Chapter 3, section 3.3). This thesis captures the preferences between Omanis and expatriates. Firstly, the difference between Omanis and expatriates can be explained by the human capital characteristics of the candidates as shown by an employer survey (2016), i.e. Omani employers prefer expatriates as employers have low trust in the skills of Omani graduates. Secondly, the graduate survey (Ministry of Higher Education Research and Innovation 2015) conducted by the Ministry of Higher Education in Oman in 2015 revealed that Omani graduates state that Omani employers' prefer to hire expatriates, as they can pay them low wages compared to Omani graduates, who must receive a minimum salary of 325 Omani Rials per month. This minimum wage was defined by the Ministry of Manpower[13] in 2013 to encourage Omanis to join the private sector. This study hypothesises the following:

H2: Omani employers are more likely to hire expatriate candidates than fresh Omani graduates and to perceive them as more trainable.

The third factor is the field of the study – whether the field of study is relevant or not- with three levels: *engineering, business and management and information technology.* According to the employer survey conducted by the Ministry of Higher Education (2016), engineering, IT and business administration are the top three fields of study where most Omani graduates found jobs in the private sector (seee Table 4.3).

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[13] The new government has changed the name to the Ministry of Labour in 2020.

Table 4.3 Top three fields of study that graduates get hired in

Sector	Males	Females
Engineering	61.3%	20.4%
IT	11.0%	21.1%
Business and Administration	8.7%	25.5%

Source: Employer Survey (2016)

From a human capital perspective, specialisation in the job-relevant field of study could be considered a strong screening device as students learn subject-specific knowledge while in school. Employers could use the field of study to inform as an indicator of the types of skills that candidates have acquired during formal schooling (Di Stasio et al. 2016). This study hypothesises the following:

H3: Omani employers are more likely to rely on relevant field of study to hire fresh graduates and predict their trainability.

The fourth factor is the level of education. Three levels are selected to examine this factor: *college diploma, bachelor's degree and master's degree.* Di Stasio (2014) found that Italian employers use level of education to predict trainability of job applicants. Humburg and van der Velden (2015, p.32) found that UK employers prefer to hire bachelor's degree graduates over master's degree graduates, whereas employers in the Czech Republic, France, Germany and Poland prefer graduates with master's degree over graduates with bachelor's degree for entry level occupations. Furthermore, they found that some employers mentioned that a diploma was the minimum requirement for ICT occupations despite these occupations being considered highly skilled occupations. Humburg and van der Velden (2015) argue that the value of educational degrees may vary across labour market contexts. In the Omani context, this factor can also tell us about employers preferences regarding wages and their preferences to hire graduates with a college diploma to avoid paying the minimum wage set by the Ministry of Labour. As noted, in 2013, the Ministry of Labour issued a decision to determine the minimum salary for Omani nationals employed in the private sector -but not for foreign expatriates. The following table shows the type of qualifications preferred by employers in Oman and the percentage of graduates who got jobs:

Table 4.4 Percentage of graduates who got jobs in the private sector in 2015

Type of qualification	Percentage
PhD	1.4%
Masters	5.8%
Bachelor	38.6%
Diploma (college, higher and professional)	54.2%

Source: Employer Survey (2016)

This study hypotheses the following:

H4a: Omani employers are likely to prefer to hire college diploma holders due to wage expectations.

H4b: Omani employers are likely to perceive holders of master's degrees as more trainable than holders of bachelor's degrees and diplomas.

The fifth factor is the grade obtained. Di Stasio and Van De Werfhorst (2016) found that grades serve as a sorting criterion among employers in England. Grades in Omani universities mostly ranged from 1 to 4, and 2 is the minimum grade to graduate (the passing grade). A grade of 4 is the highest grade which is the equivalent to a First or Distinction in the UK grade system. The university grades in the vignettes of this study are *2, 2.7, 3.5 and 4 out of 4 and within the top 5% of their class.* Sorting theories argue that employers use grades as a sorting criterion as they can derive information about candidates' capacity to learn new materials, and their effort and motivation to succeed. Queue theory considers that candidates with higher grades are perceived as more trainable and as a better fit. This study proposes the following:

H5: Omani employers are likely to hire job applicants with higher grades and perceive them as more trainable.

The sixth factor is the place and reputation of the institution of study. It has four levels which are *Leading university in Oman, Non-leading university in Oman, Leading university abroad and Non-leading university abroad.* Petzold (2017b) found that international employers specifically use studying abroad as a sorting criterion in the hiring process. As no similar study has previously been conducted in Oman to explore

the preferences of Omani employers on the place of study and rank of educational institutions, then, this study proposes the following:

H6: Omani employers are likely to prefer fresh graduates who have graduated from leading and non-leading universities abroad and perceive them trainable.

The seventh factor is experience and internship. This factor has four levels: *an internship at your organisation or internship outside of your organisation or relevant experience or no relevant experience/internship*. Employers consider candidates who have experience are easily trainable and have familiarity with a business environment (Bills et al. 2017). The literature has also noted that employers usually use work experience as a screening criterion if they do not have a clear idea of the skills acquired during formal education (Bills 2003). Employers often select candidates partly on their experience (Tharenou 1997; Passaretta and Triventi 2015). Theoretically, experience is linked to productivity and rewards (Becker 1962; Mincer 1974; Tharenou 1997). Also, experience sometimes helps candidates to gain tacit knowledge and different levels of proficiency (Lubit 2001) which may help candidates to market themselves to employers. Information about internship benefits is often derived from students' perceptions (Taylor 1988; Gault et al. 2000; Callanan and Benzing 2004; Cook et al. 2004; Häkkinen 2006; Beck and Halim 2008; Hergert 2009; Klein and Weiss 2011; Matthew et al. 2012; Robert and Saar 2012; Wilton 2012; Weiss et al. 2014; Cook et al. 2015; Jackson 2015; Passaretta and Triventi 2015; Silva et al. 2016; Margaryan et al. 2020; Baert et al. 2022), from employers' perceptions (Taylor 1988; Gault et al. 2000; Alpert et al. 2009; Gault et al. 2010; Nunley et al. 2016; Baert et al. 2021), from academics' perceptions (Alpert et al. 2009), from employees' perceptions (Rigsby et al. 2013), from internship programmes (Silva et al. 2018)[14]. Therefore, this study proposes the following:

H7: Omani employers are likely to hire fresh graduates who have experience and/or internship and perceive them to be more trainable.

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[14] For a full summary of studies conducted to investigate the role of internships on employment opportunities, see (appendix A).

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The eighth factor is extra-curricular activities (i.e. clubs, societies, volunteer work). This factor has three levels: *Yes, in a leadership position; Yes, as a member of a group and No*. Extra-curricular activities may inform employers about candidates' soft skills and motivation. Some employers associate candidates who have participated in extra-curricular activities with possession of interpersonal skills (Rubin et al. 2002). Students use extra-curricular activities to distinguish themselves (Brown and Hesketh 2004; Roulin and Bangerter 2013). Employers also can infer leadership competencies from a job candidates's role as vice-president of a club (Roulin and Bangerter 2013). It can also tell about leadership skills as there is a difference between, for example, leading a club or just being a member. This study proposes the following:

H8: Omani employers will prefer fresh graduates who have been extra-curricular group/club presidents/leaders rather than fresh graduates who have been members of extra-curricular groups or have not participated in extra-curricular activities.

The ninth factor will be referral. Four levels are used to capture employers' hiring behaviour: *Yes, referred by an existing employee or Yes, referred from an Omani university with which your organisation cooperates or Yes, referred from another university with which your organisation does not cooperate or No*. This study proposes that:

H9: Omani employers will prefer fresh graduates who have been referred by someone they know or through cooperation with universities.

4.5.3 Factorial Survey Design

Detailed guidelines on how to conduct factorial survey experiments and their main advantages and limitations are discussed in the literature (Wallander 2009; Auspurg and Hinz 2015; Atzmüller et al. 2017; Auspurg and Jäckle 2017; Su and Steiner 2020). In the following lines, I will outline the steps I followed in designing the factorial survey for my study, as per the guidelines in the expert literature.

To set up a factorial survey, specific steps need to be followed. The first step is identifying the numbers and types of factors and levels (independent variables) of the vignettes. Generally, a vignette consists of factors and levels that resemble real-life judgments or decision-making situations, and that can play a role in the evaluation of a situation. The factors and levels are selected by the researcher based on theoretical assumptions to answer specific research questions (Rossi and Nock 1982; Jasso 2006). These factors and levels allow the researcher to assess the impact of each of these levels on the judgment situations and are considered to be the most important for the decision-making process (Jasso 2006; Atzmüller and Steiner 2010; Killick and Taylor 2012; Auspurg and Hinz 2015). The factors and levels can be seen in Table 4.2.

The recommended number of factors is generally between 5 to 9 factors and between two and three levels for each factor to estimate nonlinear relationships (Wallander 2009; Auspurg and Hinz 2015). An excessive numbers of factors might affect the cognitive load of the participants resulting in an ineffective result (Wallander 2009; Auspurg and Hinz 2015). However, this issue is still debatable, and few empirical studies highlighted this issue providing conclusive results (Auspurg et al. 2009; Sauer et al. 2014). This study used 9 factors and between 2 to 4 levels for each factor.

4.5.4 Vignette Sampling

The combinations of all factors and levels that are systematically varied produce the vignette universe - also called the full factorial or vignette population (Alexander and Becker 1978). The vignette size is calculated by multiplying all the levels of the factors. This study had 9 factors and 29 levels - 2 factors with 2 levels, 3 factors with 3 levels and 4 factors with 4 levels; thus the number of the vignettes was 2*2*4*3*4*3*3*4*4 = 27,648 vignettes.

As the vignette population in this study consisted of 27,648 vignettes, meaning it was impossible for them to be judged by every participant, each participant evaluated only a certain number of vignettes (Jasso 2006; Wallander 2009; Auspurg and Hinz 2015). This can be done by partitioning the total vignette population into smaller vignette sets

or decks. However, by doing this, potential issues arise as the factors might not be orthogonal and balanced compared to a full factorial design; in the full factorial design, each level of a factor appears equally often, and all main interaction effects can be estimated. Dülmer (2007, p.383) argues that "by reducing the sample size, the question of getting an optimal sample becomes important".

Therefore, there are two general designs suggested in the literature that are used to obtain the vignette sample and to make sure the vignette samples are orthogonal and balanced, that is by randomly combining all levels of all factors to make sure that they have an equal chance of occurring. For example, all three levels of level of education (diploma, bachelor's degree and master's degree) have an equal opportunity to occur in the vignettes (Table 4.5). The first one is *a random design,* which is used in this study, where samples are drawn randomly from the vignette universe; therefore, all main and interaction effects are estimated uncorrelated (Rossi and Anderson 1982; Jasso 2006; Dülmer 2007; Auspurg and Hinz 2015; Dülmer 2016; Su and Steiner 2020). The second design is *quota* where all the central features of the vignette universe are represented by constructing one or few sets of vignettes (Dülmer 2007; Atzmüller and Steiner 2010; Dülmer 2016; Atzmüller et al. 2017).

Table 4.5 Distribution of the levels of the educational level among decks

Vignette Deck	Level of Education			Total Vignettes
	College Diploma	Bachelor's Degree	Master's Degree	
1	4	4	4	12
2	3	4	5	12
3	4	4	4	12
4	4	5	3	12
5	5	4	3	12
6	5	3	4	12
7	4	4	4	12
8	4	4	4	12
9	4	3	5	12
10	4	4	4	12
11	4	4	4	12
12	3	5	4	12
Total Vignettes	48	48	48	144

Source: Factorial surevy data

Therefore, participants assessed a reduced sample from the entire vignette universe. To create vignette sets, random sampling design is used in this study to ensure a wide coverage of the vignette population (Dülmer 2007; Dülmer 2016). D-efficient sample[15] from SAS[16] was used to produce the most efficient design and most balanced vignettes within decks (see Table 4.6). The vignette population was partitioned into 144 vignettes and 12 decks. That means each participant evaluated 12 vignettes from one of the sets. The choice of 12 vignettes is in line with the acceptable limit that may not lead to boredom and fatigue effects (Jasso 2006; Wallander 2009; Auspurg and Hinz 2015). Recruiters and human resource professionals screen a large number of résumés in their day-to-day job duties, and are used to sustained efforts in assessing résumés.

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[15] The D-efficiency values are a function of the number of points in the design, the number of independent variables in the model, and the maximum standard error for prediction over the design points. The best design is the one with the highest D-efficiency (National institute of standards and technology 2015).

[16] SAS is a statistical software suite developed by SAS Institute for data management, advanced analytics, multivariate analysis, business intelligence, criminal investigation, and predictive analytics.

I used a D-efficient randomisation to produce all possible combinations of the levels of the factors and to minimise the correlation between different vignette factors. This design helps to maximise the level balance and orthogonality of the vignettes. The orthogonality of factors helps the researcher "to disentangle the unique effect of dimensions (factors) that are normally very highly correlated" (Wallander 2009, p.507). Therefore, statistical precision is enhanced (Auspurg and Hinz 2015) and each factor in the vignette varies independently with respect to its levels. A high D-efficiency of 97.2 was obtained, in this study, following the algorithm in Auspurg and Hinz's (2015) book resulting in 12 decks and 144 vignettes to achieve a high D-efficiency of 97.2.

Table 4.6 D-efficiency obtained from SAS

Design Number	D-Efficiency	Average Prediction Standard Error
1	97.2121	0.5951

Source: Factorial survey

4.5.5 Rating of the Vignettes and Dependent Variables

The participants were asked to rate the vignettes based on two rating questions (see

Table 4.7). The participants rate the vignettes using a number Likert scale from 0 to 100 where a score of 0 indicates the lowest likelihood and 100 indicates the highest likelihood. It is recommended not to use more than three rating tasks per vignette not to confuse participants (e.g. Ludwick et al. 2004). In this study, two questions were constructed to investigate each participant's hiring decisions:

Table 4.7 Dependent variables with rating scales

Questions (dependent variables)	Rating scale (extremely unlikely – extremely likely)
(1) How likely is it that you would hire this applicant?	0 to 100
(2) If this applicant were hired, how likely is it the applicant would be easy to train?	0 to 100

4.5.6 Software Used to Prepare and Implement the Factorial Survey

There is no specialised software that can generate and implement a factorial survey at one time, but there are several software packages that can be used together to create a factorial survey. Firstly, the Statistical Analysis System (SAS[17]) was used to create the sample and the expected interaction effects between the factors then STATA[18] version 15.1 was used to create the vignettes. Qualtrics was then used to implement the vignettes and survey. To avoid order effects, the vignettes were randomised. An example of a résumé vignette and questions is provided below (see Figure 4.3 and Appendix B).

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[18] Stata is a general-purpose statistical software package developed by StataCorp for data manipulation, visualization, statistics, and automated reporting. It is used by researchers in many fields, including biomedicine, epidemiology, sociology and science.

Figure 4.3 Résumé sample

A résumé of Mechanical Engineer applicant:

Personal Information

gender	Female
nationality	Omani

Experience

experience and internship	Relevant experience
Extra-Curricular Activities (clubs, societies, volunteer work, etc.)	Yes, as a member of a group

Education

place of study	A non-leading university in Oman
level of education	Diploma
field of study	Engineering
grade (GPA)	3.5 out 4

Reference

referral by an existing employee or through cooperation with a university	Yes, by an existing employee

Please rate the above résumé by moving the slider along the line. The answers to the two questions may differ.

Extremely unlikely									Extremely likely
0	10	20	30	40	50	60	70	80	90	100

How likely is it that you would hire this applicant?

If this applicant hired, how likely is the applicant would be easy to train to meet the job demands?

→

4.5.7 Integrated Survey

A factorial survey experiment combines vignettes and a follow-up survey (Atzmüller et al. 2017). Following the presentation of the vignettes, participants responded to a short questionnaire that could not be incorporated into the vignettes (see Figure 4.4). This questionnaire consisted of demographic questions and a small set of other questions relevant to the study. This made it possible to investigate heterogeneities across employers and conduct an effective analysis of respondent characteristics on the judgment of differences between participants (Atzmüller and Steiner 2010).

The first question asked about the importance of specific criteria; that is, the nine factors of the vignettes, for recruitment into their organisations (see Figure 4.4). Also, there was a chance for respondents to specify other criteria that were not presented in the question. This provided a comparison with the results of the hiring preferences in the factorial survey experiment. Questions 2 to 6 asked about the respondent's demographic characteristics, including gender, nationality, age, the highest qualification and the place of the highest qualification. Questions 7 to 10 asked about the respondent's work profile – current position, length of tenure, experience in recruitment, the number of screened résumés. Questions 11 to 14, asked for information about the respondent's organisations – the number of employees, part of a multinational organisation and the links or collaborations. The final questions invited the respondent to provide their contact details if they agreed to be interviewed. Questions 1 to 14 were validated and there was a request-response while question 15 contained no validation options for neither force nor request responses.

Figure 4.4 Integrated survey

Q1: Please rate the following characteristics of applicants in terms of importance for your organisation: (where 1 equals not important at all and 10 equals very important)

	1 2 3 4 5 6 6 7 8 9 10
Gender ()	
Nationality ()	
Experience and internship ()	
Grade ()	
Extra-curricular activities ()	
Place of study ()	
Level of education ()	
Referral by an existing employee or through cooperation with a university ()	
Field of study ()	
Other, please specify ()	
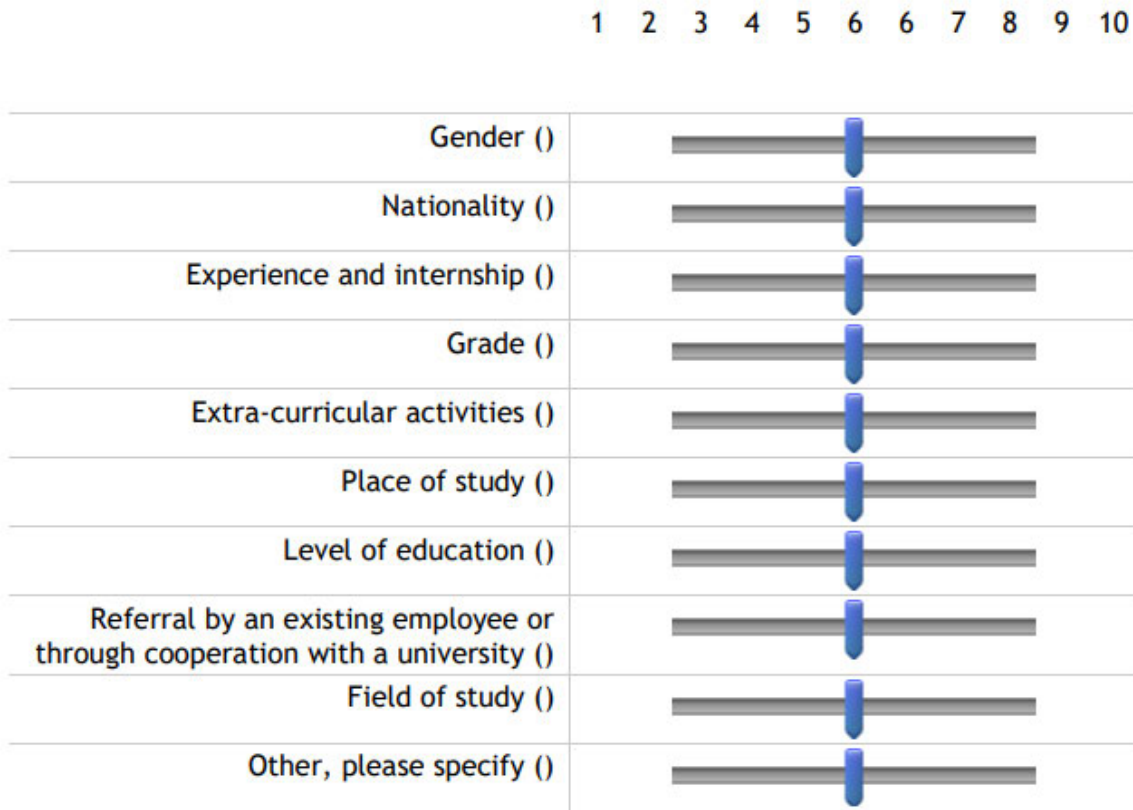
4.5.8 Pilot Study for the Factorial Survey

Being influenced by a critical realist philosophy (Bhaskar 2013), I was keen to conduct a pilot study to refine the factorial survey design and to detect any flaws in the methodology. I therefore conducted a pilot study throughout January and February 2019 with 21 participants (15 HR managers, 5 experts in factorial survey design, and one expert in Qualtrics). There were several amendments to the format and order of questions of the factorial survey based on feedback from respondents, experts, and my supervisors. For example, first, I placed the integrated survey as a second part and the vignettes as the first part to avoid any bias in rating the vignettes, as question one of the integrated survey asked about the most important characteristics employers use to

sort out job applicants to double check the vignettes' validity. Third, I clarified from the start why the study is relevant and how many vignettes the respondent should rate, as some might otherwise have thought the survey was broken. Fourth, some respondents found the layout of the vignette confusing, and I considered showing the categories of the variables/vignette dimensions one below the other on the right, and the corresponding features of the candidate (female, master's degree, business economics) on the left, like in a table (see Appendix 3C for a sample of a pilot study vignette). Fifth, some respondents found that the use of red and black was very harsh on the eyes, so I changed the colours to white and black. Finally, I made some of the vignette levels more specific, e.g. I changed the wording of high and low GPA to numerical (*2.0, 2.7, 3.5, 4 out of 4 and within the top 5% of their class*) in response to feedback from respondents as some words were confusing to some participants, and I added what type of tasks or responsibilities the student had while taking part in extracurriculars.

4.5.9 Access Negotiation and Gaining Access

Getting access to the research field is a continuous and dynamic process (Feldman et al. 2003). It is important for the researcher to think about how to get access and negotiate this with the gatekeepers. The researcher should talk to the gatekeepers by developing a rapport with them (Feldman et al. 2003). For this study, I contacted several institutions to help to distribute the survey. I contacted the graduate survey department, which was responsible for the Employer Survey project, a national survey conducted by the Ministry of Higher Education in Oman in 2016 that targeted CEOs and/or HR managers across 33 different private sectors to assess the challenges employers face, as it has access to the e-mails and contact details of previous participant of that survey, but I was not able to get any information. Then I contacted friends who were human resource professionals in the private sector in Oman to discuss with them the intended study and facilitate access to other employers. Additionally, I contacted employers who met the inclusion criteria via LinkedIn and invited them to participate.

4.5.10 Sampling and Inclusion Criteria

The sample of this study was selected from small, medium, and large organisations from the private sector in Oman in three different sectors (oil and gas, banking and insurance, and information and communication technology) to have good coverage of the labour market. Following access negotiations as described above, the target sample was accessed and met a set of criteria for inclusion in the study. First, they were responsible for hiring and selection procedures in their current organisations. Second, the participants had at least one year's experience in the recruitment and selection process and had taken part in hiring decisions in their employment of the jobs they chose to evaluate in the study. For this study, the term 'employers' is used to refer to individuals or groups who are responsible for selecting and hiring job applicants.

The selection of participants in this study followed a purposive sampling technique in which the sample is selected on the basis of one's knowledge of the population, its elements, and the nature of its research aims (Atchison and Palys 2008). Purposive sampling is a non-probability form of sampling where the data are selected for the important information they can provide (Maxwell 2013). It consists of several strategies that the researcher uses to select the samples. In this study, I used criterion sampling, which involved searching for cases or individuals who met a specific criterion. In this study, I focused on individuals who were responsible for making hiring decisions.

Regarding occupations, the focus of the study was on three different occupations: software engineers, accountants, and mechanical engineers. According to the Graduate Survey (2015) and the report from Oman Council, these jobs were in demand from 2015 to 2020, and most graduates were entering these professions. The top three fields of study that employers in Oman were looking for to hire job applicants are engineering, business, and information technology (Ministry of Higher Education Research and Innovation 2016).

There is a lack of evidence in the literature regarding the sample size used for factorial surveys (Lauder 2002). However, there are different techniques to estimate the

required sample size. Auspurg and Hinz (2015) recommend that at least five respondents are required for each vignette or deck, while Oll et al. (2018) suggest using 20 times more cases than factors and levels. Lauder (2002) suggests that the required sample size can be estimated through the use of statistical power calculations. The low number of respondents required in factorial surveys can be justified, because the factorial surveys require fewer respondents compared to traditional surveys, as multiple vignettes are assessed by per respondent (Auspurg et al. 2009). As each participant evaluated 12 vignettes in this study, the target sample size of this study was at least five respondents per deck, but this study managed to achieve more evaluations than the targeted sample size, as each deck was evaluated by 14 to 15 respondents.

4.5.11 Characteristics of Respondents

This section summarises demographic characteristics of respondents (see Table 4.8). One hundred and ninety employers completed the factorial survey, with 75 per cent of respondents identifying as male. This high percentage corresponds to the general dominance of males in private sector jobs in Oman i.e. 74 per cent of Omani employees are male [19] (NCSI 2019). The majority of respondents were Omani nationals (approximately 80 per cent compared to 18 per cent non-Omani while 2 per cent did not reveal their nationality). The reason for having a high share of Omani respondents can be explained by the decision of the Ministry of Labour not to allow expatriates to work in HR managerial positions as a part of implementing the Omanisation policy (see Chapter 2). Most respondents, almost 77 per cent, were between thirty and forty-nine years of age, 16 per cent were under 30, while 4 per cent of respondents were over 50 years old. As might be expected, respondents had high levels of educational attainment, with the overwhelming majority of respondents having a higher education qualification and often a postgraduate qualification. The highest educational qualification of respondents was a diploma in 7 per cent of the cases, bachelor's degree

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[19] According to (NCSI 2019), 187,090 Omani males worked in the private sector compared to 65,042 females while 1,531,709 male expatriates and 198,004 female expatriates worked in the private sector in Oman till the end of 2018.

in 46 per cent of the cases, masters' degree in 42 per cent and PhD in 2 per cent of the cases.

There is a balance between those who obtained their qualification from Oman and those who obtained it abroad. Around half of respondents worked in Human Resources (HR) as managers or staff while the other respondents worked as operational managers (almost 10%), CEO and owners (about 5%) or in other positions (around 23%). A large share of respondents had less than five years of tenure in their jobs at about 45 per cent and about 26 per cent of respondents had tenure between five and ten years. About 26 per cent of respondents had more than eleven years of tenure, whereas fewer than 2 per cent did not state their length of tenure. The sample had high levels of experience: about 40 per cent of respondents had between five and ten years of experience in recruitment and selection, about 17 per cent of respondents had eleven to fifteen years of experience in the hiring process and 13 per cent have more than fifteen years, whereas 28 per cent of had less than five years. Respondents also had substantial recent experience dealing with graduate recruitment as about half had screened more than fifty résumés during the twelve months prior to their completion of the survey experiment.

Table 4.8 Demographic profile of respondents to the factorial survey

Characteristics		Frequency	Percentage
Gender	Male	143	75.3
	Female	38	20.0
	Prefer not to say	8	4.2
Nationality	Omani	151	79.5
	non-Omani	34	17.9
	Prefer not to say	4	2.1
Age	Under 30	31	16.3
	30 - 39	97	51.1
	40 - 49	50	26.3
	50 - 59	6	3.2
	60+	1	.5
	Prefer not to say	4	2.1
Highest qualification	Diploma	14	7.4
	Bachelor's degree	88	46.3
	Master's degree	80	42.1
	PhD	3	1.6
	Other, please specify	3	1.6
	Prefer not to say	1	.5
Place of qualification	Oman	89	46.8
	Outside Oman	98	51.6
	Prefer not to say	2	1.1
Current position	CEO	6	3.2
	HR Manager	63	33.2
	Owner	3	1.6
	Operational Manager	18	9.5
	HR Staff	42	22.1
	Other, please specify:	44	23.2
	Prefer not to say	13	6.8
Length of tenure	Less than 5 years	85	44.7
	Between 5 and 10 years	49	25.8
	More than 10 years	50	26.3
	Prefer not to say	4	2.1
Experience in recruitment and selection of personnel	Less than 5 years	54	28.4
	5 -10 years	75	39.5
	11-15 years	33	17.4
	More than 15 years	24	12.6
	Prefer not to say	3	1.6
Number of résumés screened during the past 12 months	0	6	3.2
	1-9	39	20.5
	10-50	40	21.1
	More than 50	94	49.5

Source: Factorial Survey Data

4.5.12 Characteristics of Organisations

This section describes the characteristics of the organisations where respondents worked (see Table 4.9). The section serves as a reference for the discussion of organisational characteristics' impact on respondents' evaluation of job applicants' résumés in Chapter 5. About seven in ten organisations where respondents worked were large organisations, about two in four were medium organisations and four per cent were small organisations. Almost 55 per cent of organisations were part of multinational organisations. Around 39 per cent of respondents reported that their organisations had no links with educational institutions, about 27 per cent of reported their organisations has having links and collaboration with a leading university in Oman and 15 per cent reported having links with a leading university in Oman and abroad.

Table 4.9 Characteristics of organisations

Characteristics		Frequency	Percentage
Number of employees	5 - 9 employees	8	4.2
	10 - 99 employees	45	23.7
	100 or over	134	70.5
Part of a multinational organisation?	Yes	104	54.7
	No	79	41.6
Links or collaborations	Yes, with a leading university in Oman	51	26.8
	Yes, with a leading university abroad	6	3.2
	Yes, with a leading university in Oman and abroad	29	15.3
	Yes, with a non-leading university in Oman	3	1.6
	Yes, with a non-leading university abroad	3	1.6
	Yes, with a non-leading university in Oman and abroad	5	2.6
	No	74	38.9

4.5.13 Factorial Survey Analysis

The unit of analysis in the factorial surveys is the vignette rather than the number of respondents, as each vignette consists of randomly assigned factors and levels; hence, each vignette is independent (Rossi and Anderson 1982). Each respondent evaluated 12 vignettes; then, the sample size was the number of respondents multiplied by the number of the vignettes. The minimum target number of respondents in this study was 60, as there were 12 sets and each set should be evaluated by at least 5 respondents to be in line with recommendations in the literature (Auspurg and Hinz 2015). The number of observations generated from 190 respondents is 190 multiplied by 12, which equals 2,280 observations. Multiple measurements were obtained, as each respondent judged a set of 12 vignettes.

According to the literature, there is a general consensus that the most appropriate statistical tool to analyse the factorial survey in order to identify the effect of independent variables (factors) on dependent variables (judgment questions) is multilevel regression analysis (Rossi and Anderson 1982; Raudenbush and Bryk 2002; Jasso 2006; Wallander 2009; Auspurg and Hinz 2015; Dülmer 2016).   Multilevel regression can identify linear relationships between a dependent variable and independent variables to predict the outcomes. For example, regression was used to examine the impact of factors such as grade (independent variable) on the likelihood that employers will hire a job applicant (dependent variable). There are several advantages to using multilevel regression analysis in the factorial survey analysis. Firstly, it can help to identify the impact of each independent variable (factors) on the dependent variables (the two questions) in the vignettes. Secondly, it can indicate the relative strength of the effect of different independent variables on the dependent variable. Thirdly, it helps to make predictions. Fourth, it can indicate if there is an interaction effect between the independent variables that can affect the rating of the dependent variables. The analysis was carried out using STATA versions 15.1 and 16.

4.6 Strengths and Limitations of Factorial Survey Experiments

This section outlines strengths and limitations of the factorial survey.

4.6.1 Strengths of factorial surveys

The factorial survey is an *ad hoc* survey where respondents are confronted with a set of vignettes that reflect selected factors, to elicit their beliefs, knowledge, attitudes, judgements or intended behaviour. Factorial survey experiments indirectly measure such judgements by using multiple factors to measure a single item. For instance, in this study, the effect of educational credentials on employers' hiring decisions is measured by using several factors such as the field, level of study and grade. This enabled ranking selected decision criteria and their relative importance in evaluating candidates. One of the main strengths of the factorial survey is that it combines the strengths of traditional surveys, such as high external validity, cost effectiveness, generalisability and reliability, with the rigour of the experimental methods such as control of variables, high construct and internal validity (Lauder 2002). Both of which make the factorial survey a robust design.

Another advantage of the factorial survey is that it allows the researchers to integrate vignettes with a questionnaire to collect respondents' characteristics. It can be of benefit to compare these characteristics with respondents' evaluations of the vignettes (see Section 4.5.7) because it makes it possible to test whether the respondents' characteristics have an effect on vignettes evaluations. The factorial survey method looks at many different characteristics of job candidates at the same time, rather than just one or two factors, which allows for a more comprehensive understanding of the hiring process (Gutfleisch et al. 2021). In other words, it allows the researcher to gather rich information about the characteristics of staff who screen résumés and characteristics of companies as well as allowing researchers to find the interaction of different combinations of factors influencing the dependent variable (i.e. likely to hire) and establishing a relationship between factors (e.g. field of study and GPA). This enables an in-depth analysis of the mechanisms underlying employers' decision-making processes.

Factorial survey experiments are characterised by high construct validity which allows for a high degree of certainty in establishing causal relationships between vignette factors and causal interpretation of results regarding vignette factors. Construct validity refers to the extent to which a measure or instrument is able to accurately assess a theoretical construct or concept. In the context of a factorial survey, construct validity refers to the extent to which the factors being measured by the survey are representative of the theoretical construct being investigated. The factorial survey allows researchers to control the stimuli optimally and focus on theoretically relevant characteristics (Hainmueller et al. 2015). The conditions that respondents are exposed to in the factorial survey can be manipulated to test the hypotheses. Vignettes may be adapted to the research context and question using different formats such as text vignettes in a keyword, dialogue or narrative style, visual vignettes using cartoons or pictures and audio or video vignettes.

One of the main strengths of the factorial survey experiment lies in its ability to present a vignette in which the factors are orthogonal, that is, statistically independent. Canonical correlations are used "to evaluate nonorthogonal designs and the extent to which factors are correlated or are not independent" (Kuhfeld 2010, p.101). The correlation matrix in Table 4.10 shows the orthogonality of the variables. All correlations are close to zero which indicates that the factors are statistically independent and fit for analysis.

In addition, factorial survey experiments have high internal validity which refers to whether the factorial survey measures what is intended to be measured in relation to the study participants and whether findings result from experimental manipulation (Auspurg and Hinz 2015; McDonald 2019; Gutfleisch et al. 2021; Petzold 2022). Thus, researchers could reveal the underlying relative importance of attributes and trade-offs among attributes.

Internal validity in factorial surveys refers to whether the variation in the outcome variable is truly caused by the experimental treatment (McDermott 2002). This issue

can be addressed by randomising the participants to the vignettes and making sure that there is a sufficient number of respondents rating every single vignette. Thus, it can control threats to internal validity due to randomly assigned respondents. The vignettes in this study were randomised using *Qualtrics* software, and each deck had a minimum of five respondents before moving to evaluate another deck as suggested in the literature (Auspurg and Hinz 2015). Furthermore, the internal validity was increased because of the random variance of the factors and levels across the vignette universe, the orthogonality of the factors and levels and the factors were not correlated (see Table 4.10).

Table 4.10 Canonical correlations between vignette factors

	Block	x1	x2	x3	x4	x5	x6	x7	x8	x9
Block	1	0.11	0.08	0.11	0.13	0.10	0.08	0.11	0.11	0.12
x1	0.11	1	0.01	0.04	0.03	0.03	0.02	0.02	0.05	0.02
x2	0.08	0.01	1	0.07	0.01	0.01	0.02	0.02	0.05	0.03
x3	0.11	0.04	0.07	1	0.07	0.15	0.04	0.04	0.10	0.02
x4	0.13	0.03	0.01	0.07	1	0.02	0.02	0.04	0.02	0.09
x5	0.10	0.03	0.01	0.15	0.02	1	0.03	0.03	0.02	0.11
x6	0.08	0.02	0.02	0.04	0.02	0.03	1	0.04	0.03	0.06
x7	0.11	0.02	0.02	0.04	0.04	0.03	0.04	1	0.03	0.05
x8	0.11	0.05	0.05	0.10	0.02	0.02	0.03	0.03	1	0.14
x9	0.12	0.02	0.03	0.02	0.09	0.11	0.06	0.05	0.14	1

X refers to each factor

The factorial survey can help predict who it I that employers prefer (or not) to get a particular job. It allows more control over the composition of applicant pools than surveys of job holders, which only provide information about job applicants after entry into labour market (McDonald 2019; Petzold 2022). As researchers randomly combine vignette levels, self-selection is not an issue. Furthermore, in the factorial survey, the researcher can select a few factors of theoretical relevance that will present to employers during the hiring process. Finally, the factorial survey can estimate the value

of applicants' positive and negative characteristics. Employers may find negative screens of job applicants discouraging, which may affect hiring decisions. In factorial surveys, the researcher can randomly mix both positive and negative aspects in job applicants' profiles, representing several stages of the process.

Another advantage is that factorial surveys are considered a reliable method to gain information on employers' hiring judgment (e.g. Di Stasio 2014). Indeed, "(t)he reliability of a design depends on its D-efficiency and therefore on the precision with which a respondent-specific β can be estimated" (Dülmer 2016, p.339). The D-efficiency of this study was very high, at 97.2 (see Table 4.6).

4.6.2 Limitations of Factorial Survey Experiments

As noted above, factorial survey experiments have several strengths, but as with all other methods there are limitations, too. This section outlines some methodological issues related its hypothetical vignettes, lacking external validity and reliability and how to overcome these limitations.

One of the main limitations of the factorial survey is that it may not be considered realistic as it is not reflecting real judgements in a real decision-making process, and the hypothetical design of the vignettes and the selected sample may not be representative. In the case of studying employers' hiring decisions, as the factorial survey design allows for only a limited number of job applicant characteristics to be included in the applicant profiles, hypothetical applicant profiles may provide employers with insufficient information to make an informed decision. Pager and Quillian (2005) criticised the factorial survey for measuring the hiring intentions of employers rather than their real hiring decisions, which do not reflect real-life hiring decisions.

However, few studies have examined the effects of presenting hypothetical vignettes rather than examining real judgments. Some studies found that hypothetical decisions in experimental settings closely resemble those displayed in real life (e.g. Hainmueller et al. 2015; Petzold and Wolbring 2019). Other studies suggest that this criticism can

be overcome by sampling real-world occupations and selecting respondents who are responsible for screening resumes and making hiring decisions (Pager and Quillian 2005). However, more studies are needed to examine this limitation as the question remains whether using vignettes is enough to trigger more valid judgments compared to a completely hypothetical situation.

Another issue with the factorial survey is the lack of external validity of the findings. To overcome this issue, the literature suggests that by including a survey component in the design, the external validity of the findings can be improved as it allows for examination of the characteristics of respondents which in turn improves the validity of the study (Auspurg and Hinz 2015). Random sampling of the large population can be easily accomplished in factorial surveys which enhances the generalisability of the results of factorial surveys (Dülmer 2007; Dülmer 2016).

Another issue with the factorial survey experiments is the high amount of information respondents have to cope with. This information comes from the number of dimensions used to describe the vignette situation and the number of vignettes that each respondent has to evaluate. Therefore, this may cause cognitive overload and fatigue to the participants as discussed by several researchers (Jasso 2006; Wallander 2009; Auspurg and Hinz 2015). To overcome these issues, I followed the suggestion of Sauer et al. (2014) and Auspurg and Hinz (2015) and used 9 factors and each participant had to evaluate not more than 12 vignettes.

4.6.3 Assessment of the Factorial Survey Design

The researcher in this study reviewed the factors and levels used to create the résumés with five human resource professionals responsible for selecting candidates in five companies located in Muscat and Suhar (the majority of companies in Oman are located in big cities like Muscat, Suhar and Duqum) and three experts in recruitment research to make sure that they are realistic and valid. They recommended a number of changes to some factors of the vignettes like nationality, grades and extra-curricular activities. After discussion with my supervisors, most of the recommendations were implemented.

Ceiling effects or censored observations can occur when using a fixed answering scale for vignette ratings. This can occur in this factorial survey experiment in the case of some respondents evaluating vignettes with extreme values on the scale (extremely unlikely or extremely likely). Taylor (2010, p.2) defines the ceiling effect as "a measurement limitation that occurs when the highest possible score or close to the highest score on a test or measurement instrument is reached, thereby decreasing the likelihood that the testing instrument has accurately measured the intended domain". To avoid the ceiling effects that occur when the repeated evaluation of the vignettes per single respondents might lead to censored responses and in turn to the underestimation of the influence of the covariates, respondents were able in the factorial survey experiment to go back to previous vignettes to correct their evaluations if needed. One method to inspect the frequency of evaluation is by looking at the frequency distribution of the evaluations. Figure 4.5 and Figure 4.6 show that evaluation on the left end of the scale (extremely unlikely) was chosen more often than most other judgments. This might lead to a downward bias of regression coefficients. To test if there was any ceiling effect, *Tobit* and robust *Tobit* tests were used. "*Tobit* fits models for continuous responses where the outcome variable is censored. Censoring limits may be fixed for all observations or vary across observations" (StataCorp 2017, p.2835). I compared the coefficients from the random-intercept model with the two *Tobit* models and I found that there were no ceiling effects in the factorial survey data as the differences between the coefficients were small (See Appendices D and E).

Figure 4.5 Frequency distribution of evaluations of the vignettes for hiring probability
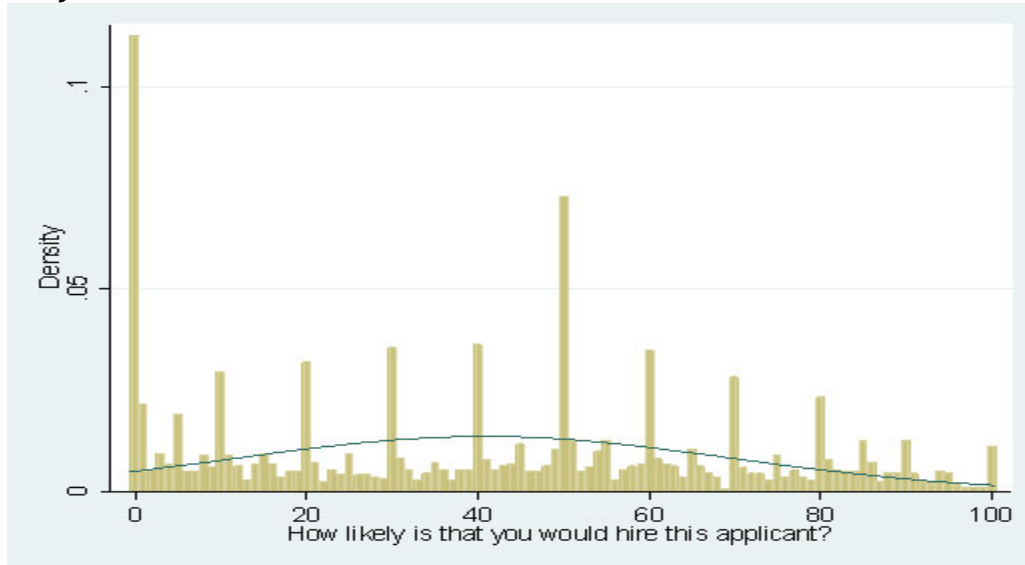
Figure 4.6 Frequency distribution of evaluations of the vignettes for expected trainability
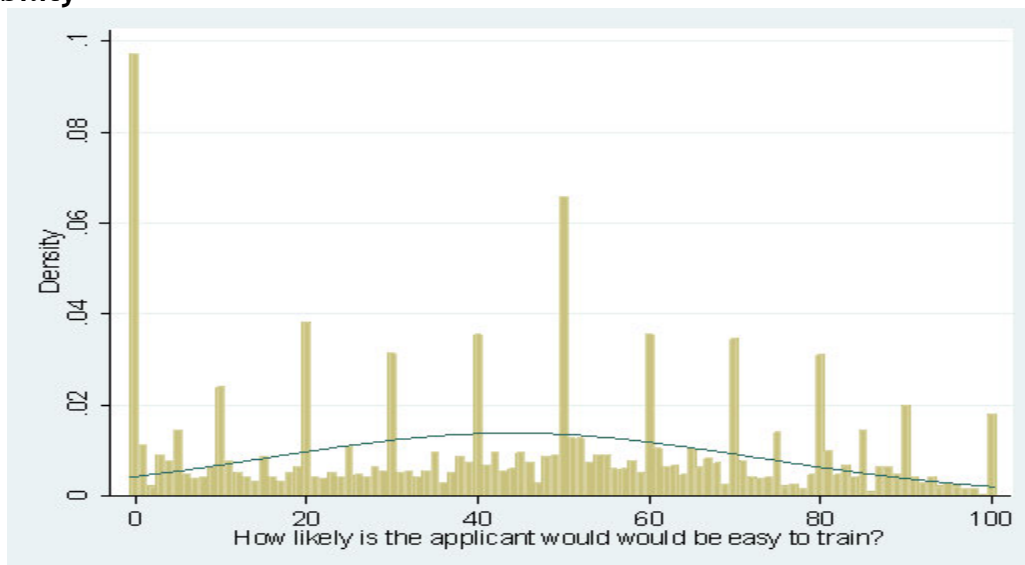
4.7 Interview Data

Semi-structured interviews provide insight into the reasons for employers' hiring decisions, which interpretation of the factorial survey data alone is unable to offer. In this section, the five main processes in interviewing are discussed, including: (i) justifying the use of semi-structured interviews; (ii) preparing and piloting an interview

schedule; (iii) sampling and gaining access; (vi) interview procedure; and (iv) interview data analysis.

4.7.1 Why Semi-Structured Interviews

In qualitative interviews rich data are obtained from a sample of the respondents (Carruthers 1990). For the current study, the use of interviews helped to generate data regarding employers' hiring decisions and their experiences in the recruitment and selection process. This allowed for triangulation of the data generated from the factorial survey.

There are different types of qualitative interviews (e.g. structured, semi-structured and unstructured). Structured interviews were not applicable for this study as they tend to offer limited chances to discuss experiences while unstructured interviews tend to be useful in studies where the researcher has limited or no knowledge of the investigated topic (Kvale and Brinkmann 2009; Merriam and Tisdell 2016). Hence, conducting the latter type of interviews to investigate employers' hiring decisions for the three occupations was not preferred as the aim of the study is cover a specific hiring process and use specific questions to allow for comparisons between the three occupations (Creswell 2014). Therefore, the use such a type of interviewing might generate data beyond the scope and focus of this study and was deemed unsuitable.

Instead, this thesis employed and benefited from the use of semi-structured interviews. Semi-structured interviews tend to be more flexible, which give the researchers greater control over the focus and direction of the interview (Clark et al. 2021) and allow interviewees to discuss their ideas. In this study, the flexibility in semi-structured interviews allowed me much more room in terms of the order and wording of questions and the use of follow-up question and gave the interviewees space to share their experiences in hiring decisions in relation to the specified research questions.

4.7.2 Preparing and Piloting the Interview Schedule

In designing the interview schedule, I took into consideration that the questions allowed the interviewer (me) to gain interviewees' perspectives on their hiring decisions and on how they select job applicants for the three occupations. The interview schedule was

developed following these steps: first, I analysed the factorial survey data and summarised the main findings which helped to inform the interview schedule. I then reviewed the research questions to align the design of the interview schedule with them before conducting pilot interviews.

It is argued that pilot studies can play an important role in designing and refining a research study (Sampson 2004; Kim 2011; Creswell 2014; Creswell and Poth 2018). I conducted four pilot interviews in June 2019. I also sent the interview schedule to an HR lecturer who had previously worked in the private sector in Oman as a member of staff of an HR department before moving to the HE sector, to gain his/her written feedback. There were several valuable pieces of input, reflections, and amendments regarding the interview schedule and the wording, the order of the questions, and the timing. In addition to the amendments provided Table 4.11 and Appendix 4D, there were two general observations from the pilot interviews. First, I noticed that participants tended to progress to talk about hiring in general rather than talking about the hiring of fresh graduate. To avoid this, I informed the participants at the beginning of the interviews that the interview was about graduate jobs, and I re-formulated some questions to fit this purpose. Second, I noticed that participants were reluctant to talk about gender in hiring, so I asked this question at the end of the interviews to avoid any misinterpretation of the purpose of the study.

Table 4.11 Summary of pilot interviews

pseudonym	Position	Duration (h:mm)	Reflections
Ali	HR manager	00:43	- HR managers prefer to use English language, as it is the business language in Oman and most of recruitment wordings are in English. - Try to put the audio recording equipment in a place where it will not distract the participant, as they tend to look at it, which might make them feel uncomfortable
Mustafa	HR manager	00:36	- HR managers often tend to have a tight schedule during the working day. It is better to conduct the interviews after work, if it is possible. - Responses were very short – use more probing questions.
Rubaa	HR staff	1:21	- Silence between questions sometimes triggers participants to reflect on their answers and provide more details.
Ahmed	HR staff	00:51	- Try to take demographic information before the interview starts

In formulating the final questions for this study, I split the interview schedule into five sections (see Appendix G). The first section consisted of introductory questions to put the participants at ease. The second section discussed the hiring decisions in general and it started with introductory questions about the stages of recruitment and selection that employers follow at their organisations and this was followed by specific questions about the target occupation to elicit the views, opinions, and experiences of interviewees (Kvale and Brinkmann 2009; King et al. 2019; Clark et al. 2021). The

questions were posed in a neutral tone to prevent prompting participants to express a desirable point of view (King et al. 2019). The third section consisted of questions related to training at work and how employers select trainees. The fourth section asked about the interviewees' perceptions of the role of social capital and social media platforms in their hiring decisions. The final section concluded with closing questions to elicit any missing information and /or any further points that the participants wanted to express in relation to the discussion during the interview. At the beginning of interviews, I collected background information about the interviewees and their organisations, which I also generated from the factorial survey, with some additional questions.

Liechti et al. (2017) suggest combining interviews with factorial surveys because of the complexity of studying decision-making processes. There is evidence from the literature that employers are willing to share their actual hiring preferences to researchers (Pager and Karafin 2009; Bonoli and Hinrichs 2012), and "[t]his type of qualitative research could be helpful in understanding the meaning behind the signalling effects highlighted by the experimental literature" (Liechti et al. 2017, p.267). Vignettes were used in this study to stimulate qualitative interviews, as respondents were asked to comment on their judgments, provide a rationale, and stimulate further discussion about their choices (Ganong and Coleman 2006).

4.7.3 Sampling and Access for Interviews

As mentioned above, for the factorial survey experiment, participants were recruited purposefully. For the interviews, the following criteria were used to select the sample: (i) firm size; and (ii) occupation type they recruited for (i.e. mechanical engineers, accountants, software developers) to ensure there was variation and diversity among the sample (Trost 1986; Small 2009).

Participants were selected from those who had participated in the factorial survey and who were willing to be interviewed. A total of 80 respondents showed an interest in being interviewed (see Table 4.12).

Table 4.12 Respondents who volunteered for the interviews

Occupation Type Recruited for Firm Size	Mechanical Engineers	Accountants	Software Developers	Total
SMEs	9	10	9	28
Large	20	20	12	52
Total	29	30	21	80

Source: Factorial Survey Data

I contacted them all using the contact details, i.e. phone or email, they provided at the end of the factorial survey. A total of 29 participants out of 80 were selected for interviews based on the inclusion criteria. I managed to conduct 10 interviews with employers who chose to recruit for accountants, 10 interviews with employers who recruited for mechanical engineers, and 9 interviews with employers who chose to recruit for software developers. For interviews numbers 5 and 29, the participants attended with HR staff who showed an interest in being part of the interview. As they were from the same firm and shared hiring knowledge and practices, I considered each as one interview or a conjoint interview. The conjoint interviews are suitable for studying complex shared practices and add analytic value (Polak and Green 2016). In this study, it was an added value to the interview data and for studying employers' hiring decisions. I obtained their details and consent forms after explaining to them the purpose of the study, and I provided them with an information sheet about the study. The interviews were conducted face-to-face between August and September 2019 at a time and location that was suitable for the participants, which was in their employers' offices or in coffeeshops. The interviews lasted from 32 minutes to 1 hour and 11 minutes.

Table 4.13 Interviewee characteristics

Interview Number	Interviewee Name	Gender	Age	Firm Size	Current Position	Position recruited for
1	Salma	Female	30-39	Large	HR Generalist	Mechanical Engineers
2	Younus	Male	40-49	Medium	HR manager	Mechanical Engineers
3	Assad	Male	60+	Large	HR manager	Mechanical Engineers
4	Amana	Female	40-49	Large	HR manager	Mechanical Engineers
5	Salim and John	Male Male	40-49 30-39	Large	HR manager HR Staff	Mechanical Engineers
6	Matheo	Male	30-39	Medium	Consultant	Mechanical Engineers
7	Abdullah	Male	30-39	Medium	HR manager	Mechanical Engineers
8	Bashar	Male	30-39	Large	HR staff	Mechanical Engineers
9	Rasha	Female	40-49	Medium	HR manager	Mechanical Engineers
10	Jabir	Male	40-49	Medium	HR manager	Mechanical Engineers
11	Mazin	Male	40-49	Large	HR manager	Accountants
12	Ahmed	Male	40-49	Large	HR manager	Accountants
13	Shakir	Male	30-39	Large	HR manager	Accountants
14	Omar	Male	30-39	Large	Head of talent development	Accountants

15	Binu	Male	60+	Medium	HR manager	Accountants
16	Sameera	Female	30-39	Large	HR manager	Accountants
17	Miraj	Female	30-39	Medium	HR manager	Accountants
18	Sami	Male	30-39	Large	HR manager	Accountants
19	Iman	Female	40-49	Large	HR staff	Accountants
20	Adil	Male	Under 30	Large	HR manager	Accountants
21	Ibrahim	Male	40-49	Large	IT manager	Software Developers
22	Monther	Male	40-49	Medium	IT manager	Software Developers
23	Humood	Male	30-39	Medium	IT manager	Software Developers
24	Sebastian	Male	40-49	Large	Operational Manager	Software Developers
25	Redha	Male	30-39	Medium	Sales and Marketing	Software Developers
26	Majid	Male	Under 30	Large	HR staff	Software Developers
27	Latifa	Female	30-39	Medium	HR manager	Software Developers
28	Qasim	Male	40-49	Medium	CEO	Software Developers
29	Idris and Lujain	Male Female	30-39 30-39	Large	IT manager HR staff	Software Developers

4.7.4 Transcribing and Translation

I recorded all the interviews digitally except for one interviewee, who preferred to not be recorded. This produced approximately 1,218 minutes (20.3 hours) of audio data. I transcribed all the audio data from the interviews. Regarding language, 24 interviews were conducted in English, and 4 interviews were conducted in Arabic. I translated the four interviews conducted in Arabic language to English, and I sent the transcript to a professional translator to double check the transcripts both in Arabic and English. I used pseudonyms to maintain interviewees' anonymity. Transcribing interview data proved to be a useful exercise. I listened to the interviews several times and obtained a sense of the data and familiarised myself with the preliminary patterns.

4.7.5 Data Analysis for Interviews

The flexibility of the Critical Realist Analysis made it possible to explain quantitative data patterns with the analysis of qualitative data. For example, I counted the most important criterion that employers said they used for sorting job applicants and then I produced a table to compare which criterion was used most often (the outcomes are reported in the findings, in Chapter 6). This technique of integrating quantitative with qualitative data was helpful in the interpretation of employers' hiring decisions, before asking them why they used such criterion (Vinet and Zhedanov 2010; Creswell and Poth 2018). It was useful to understand the overall picture of employers' screening criteria, which was then supplemented with employers' interpretations and perspectives of why they used such criteria.

Figure 4.7 NVivo coding tree

Table 4.14 Data patterns emerged from the interview data

Main patterns	Sub- patterns
Educational attributes	Relevant field of study
	Level of education
	Grades
	Reputation of universities and place of Study
Related attributes	Experience and internship
Social characteristics	Referrals
	LinkedIn
	Links and cooperation with HEIs
National labour market characteristics	Occupational characteristics
	Organisational context
	Omanisation policy
	Minimum wage policy

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4.7.6 Positionality

Researcher positionality refers to a researcher's worldview and how this view and the position a researcher adopts is shaped and influenced by social, cultural, and political contexts (Tillman 2002; Savin-Baden and Major 2013; Coghlan and Brydon-Miller 2014; Corlett and Mavin 2018).

Savin-Baden and Major (2013) propose three ways to identify a researcher's positionality: research topic, participants, and research context. Regarding the research topic being investigated, the role of educational attributes and social capital in Omani employers' hiring decisions, I consider myself highly motivated to investigate this topic and have an experience in education both in schools and in higher education in the private and the public sector in Oman. I worked as an English language teacher in government schools for 5 years before moving to work in a private higher education institution as a lecturer for almost 2 years then deciding to transfer to a government higher education institution, where I have been working since 2014. These experiences shaped my understandings of how students in schools and universities formed their experiences. In terms of recruitment and selection, I was interested in the issue of employment and unemployment in the country since the uprising in 2011 that led to changes in the structure of the labour market and the education sector in Oman. I have been fascinated by the transition from education to work and how this transition can be made smoother for students. Such experiences and ideas had a direct impact on my positionality and my motivation to study such topics.

Regarding my positionality with participants, the researcher's positionality is based on whether they are insiders or outsiders within the community they are investigating. "Insiders are the members of specified groups and collectivities or occupants of specified social statuses: Outsiders are non-members" (Merton 1972, p.21). However, Merton (1972) acknowledged that there are complexities in identifying the boundaries of groups and the criteria of group membership. Griffith (1998, p.362) considers an insider as "someone whose biography (gender, race, class, sexual orientation and so on) gives her [sic] a lived familiarity with the group being researched", while the outsider is "a researcher who does not have an intimate knowledge of the group being

researched prior to their entry into the group" (ibid.). Others consider researchers as 'multiple insiders and outsiders' (Deutsch 1981, p.174). Being an Omani working in an academic institution as a lecturer and conducted research in my own country, I consider myself as an insider to the society and an outsider to the participants' community (i.e. recruitment staff). Therefore, I was mindful of my own positionality during the various stages of conducting research and interpreting, analysing and discussing the research data findings.

Being an insider to the Omani culture and having awareness of its political, cultural and societal contexts had positive and negative impacts on my research. First, it facilitates access to employers through my personal networks. Being familiar with the culture, I was more trusted when interviewees talked honestly about nepotism and the use of power from key people to secure job for their relatives. One disadvantage of being an insider is that the researcher might be biased to the society and culture, I was mindful of this, and I adhered to the interview schedule and research ethics.

Overall, I felt always as an insider as the topic under investigation is considered a national topic that concerned the Omani nation and that was clear from interviewees at the end of interviews when shared their concerns and hopes for better labour market opportunities for Omani graduates. This perhaps explains to some extent their preferences for Omanis over expatriates in addition to the impact of the Omanisation policy on their hiring decisions (see Chapters 5, 6, and 7 for a detailed discussion).

4.8 Ethics

The factorial survey experiment and semi-structured interviews used to conduct this research were carried out in compliance with the requirements of Cardiff University's School of Social Science Research Ethics Committee and the Ethical Guidelines for Educational Research of the British Educational Research Association (BERA 2018).

Approval to conduct this study was obtained from the ethics committee at Cardiff University's School of Social Sciences on 17 October 2018 (see Appendix H). It was an ethical requirement to ensure that all aspects of the study adhered to the agreed code of conduct and research standards. The research adhered to the following ethical

principles (see sections 4.8.1, 4.8.2, 4.8.3 and 4.8.4), in accordance with the Cardiff University ethical code and the BERA.

4.8.1 Informed Consent

I ensured that participants were informed in advance of any potential benefits, risks, inconvenience, and obligations associated with the research that might influence their willingness to participate. For the factorial survey experiment, participants were provided with an initial page before they started the survey which contained detailed information about the study, and about participants' consent which I obtained online (see appendix I). In addition, prior to the interviews, participants were given a written consent form with detailed information about the study (see appendices J and K). Interview participants were provided with a hard copy of the signed consent form and information sheet that they could keep. Both consent forms emphasised that participation in the study was voluntary and that participants could withdraw from the study at any time without giving a reason however, I did not receive any requests to withdraw. Interviews were recorded with a digital recorder upon participant agreement, and I notified them that it could be turned off anytime upon request. Participants were also given the choice at the end of survey to submit their answers or not.

4.8.2 Anonymity and Confidentiality

The confidentiality and anonymity of participants' identities and data was respected at all times. It was maintained through the use of pseudonyms to protect participants' identity and through concealing any identifying information. In addition, participants were given the option to reject the use of the audio recording device during the interview. Amongst the twenty-nine interviewees, one participant preferred to not be recorded, so I took detailed notes instead of recording the interview.

4.8.3 Data Storage and Management Procedures

I took appropriate measures to store research data in a secure manner. Data obtained stored online using Cardiff University online network. This online store is secure,

resilient and backed-up. Also, a folder in 'H' drive was created to keep an alternative copy of the data and to share the data with my supervisors.

The digital recorder was kept in a safe place in my room in a locked suitcase with my laptop during my field search in Oman and during my stay in Cardiff. The data will be retained for a minimum period of five years after the end of the study in line with Cardiff University retention requirements.

4.8.4 Protection from Harm

Every effort was made to minimise the risks of any harm, physical or psychological, for participants although my assessment was that the participants and the researcher (myself) would not face any harm or negative impact. No harm was reported during or after conducting the field research.

I ensured that the potential participants fully understood the context and objective of the study by providing sufficient details before the study was conducted. I did not disclose the main aim of the project or detailed hypotheses to the extent that might have undermined the aim of the factorial survey and the interviews.

4.9 Conclusion

This thesis aims to provide a comprehensive and general understandings of employers' hiring decisions by using a factorial survey experiment and semi-structured interviews. This chapter consisted of four main sections. The first section outlined my ontological and epistemological position and offered a detailed explanation of how a critical realist philosophy influenced this study. The second section provided a detailed explanation of how the factorial survey was developed and implemented. This included specifying how the factorial survey was designed, the selection of occupations, the identification of factors and levels of the vignettes, and the sampling strategy. Then it described how the pilot study was conducted, and it outlined the amendments generated from respondents. It then moved to describe how the factorial survey was operationalised and analysed using SAS and STATA software before it concluded with a critical reflection of the design. The third section discussed how the interview data were collected. This included outlining the rationale behind choosing semi-structured interviews, preparing

the interview schedule, and piloting the interview. It then described how the data were transcribed and analysed. The fourth section detailed the ethical considerations including specifying how informed consent was obtained, how anonymity and confidently were maintained, the process of data management and storage, and the strategy to ensure protection from harm for the researcher and participants.

This thesis utilises this methodology and design to provide empirical findings that provide a better understanding of employers' recruitment and selection practices in the rentier state of Oman. The next two chapters (5 and 6) present the empirical findings from the factorial survey experiment and semi-structured interviews.

Chapter 5 Findings from the Factorial Survey

5.1 Introduction

This chapter presents and interprets the findings from the factorial survey experiments. First, it presents the estimation strategies and the analytical tools used to analyse employers' ratings of the vignettes followed by an overview of the research questions. Then, it presents the impact of the vignette factors on employers' ratings of job applicants. The chapter concludes with an analysis of occupational and organisational impact on employers' hiring preferences.

5.2 Analytical Strategy and Estimation Methods

Data obtained from factorial surveys have a nested data structure as the same respondent rates several vignettes. The vignettes are the main unit of analysis (Auspurg and Hinz 2015). Researchers using factorial surveys are often interested in the impact of the vignette factors and respondents' characteristics and commonly also in the interaction between both types of factors. Regressions are the most frequently used analysis technique to explore such impacts. As factorial surveys have a hierarchical data structure (level 1: vignettes; level 2: respondents) the analysis can be addressed using two different types of regression models. Regression with robust standard errors or multilevel models (fixed or random effects regressions). Both models might lead to similar results when the respondents evaluate less than 30 vignettes per respondent and 5 or more factors (Auspurg and Hinz 2015).

In this study, the dependent variables are the influence of the different factors of the vignettes on employers' ratings (e.g. likelihood of hiring the applicant and how easy the applicant would be to train) while the vignette factors are the independent variables. Following recommendations in the literature (Rossi and Anderson 1982; Jasso 2006; Wallander 2009; Rabe-Hesketh and Skrondal 2012; Auspurg and Hinz 2015),

multilevel models were used to analyse the factorial surveys data, as they produce complex hierarchically structured data. I performed the Hausman test to test the appropriateness of the random-effects estimator compared to the fixed-effects model. The Hausman test rejects the null hypothesis that the difference in coefficients is systematic (p-value >= 0.1) (see Table 5.1). Therefore, the random-effects model (the estimator) is efficient and consistent (Rabe-Hesketh and Skrondal 2012).

Table 5.1 Hausman test for the study dependent variables

	Hiring Probability		Trainability
Chi-square test value	27.888		26.477
P-value	.112		.151

In order to account for the dependency of the error term within respondents, I estimated linear multilevel models with random intercepts that allow the intercept to vary across respondents. (Steenbergen and Jones 2002; Rabe-Hesketh and Skrondal 2012). The random-intercept model requires that the group-level effects and the factors must be uncorrelated; in such cases, random-intercept estimation is unbiased, consistent and efficient as it uses both within-and-between group variation whereas the fixed-effects model uses only within-group variation (Auspurg and Hinz 2015).

I analysed employers' hiring tendencies and their estimation of job applicants' trainability. The two dependent variables (the likelihood of hiring the candidate and the likelihood that the candidate, if hired, would be easy to train) were regressed on the independent variables (see Table 5.5). Figure 4.5 and Figure 4.6 show that the two dependent variables are normally distributed. For example, Figure 4.5 shows the distribution of the intentions to hire applicants across all the presented vignettes. This indicates that the factors and levels of the vignettes varied were relevant for the employers and it also justifies the use of linear estimation models. Regression coefficients indicate the influence of a vignette factor on employers' decisions where

standardised *b* coefficients measure the value of each factor on employers' evaluation of attributes. This section summarises the analytical strategy used to obtain the factorial survey data.

5.3 Consistency in Employers Ratings

To test the consistency of the individual's ratings of job applicants' résumés in terms of how consistently they favoured one factor over others in their decisions, I ran an individual regression analysis for each individual. Table 5.2 shows that the minimum R-squared obtained was 44.75 and the highest was 99.98 (high level of consistency), while the average was 88.41. This shows that respondents were consistent in their evaluations. Besides this, I obtained consistency in the ratings for the decks (see Table 5.3). The average was 68.52, which indicates that the accuracy of distribution of ratings across the vignettes was high. It is worth noting that decks 5 and 9 had the lowest consistency ratings at 35.44 per cent and 13.55 per cent respectively due to the missing data; however, this had no significant impact on the overall consistency.

Table 5.2 Consistency of employers' ratings

Respondent ID	Consistency R2	Respondent ID	Consistency R2	Respondent ID	Consistency R2	Respondent ID	Consistency R2	Respondent ID	Consistency R2
1	99.04003	37	85.46744	73	91.557	109	64.96444	145	91.97758
2	83.69347	38	94.0612	74	93.12835	110	68.96497	146	95.48872
3	99.78869	39	77.29356	75	82.40713	111	90.6494	147	67.07262
4	75.44683	40	94.05137	76	95.11206	112	89.41307	148	99.46298
5	70.03455	41	98.88434	77	95.83118	113	97.31385	149	72.97045
6	96.95829	42	94.15209	78	98.17838	114	76.77254	150	80.04286
7	99.18649	43	91.3941	79	98.50424	115	97.49477	151	81.3412
8	91.6643	44	88.41068	80	94.97572	116	92.52107	152	81.31367
9	80.93911	45	86.04107	81	90.31076	117	86.9008	153	96.15493
10	94.86266	46	99.41351	82	93.29185	118	87.64641	154	90.98017
11	90.671	47	93.05629	83	88.63742	119	60.66996	155	83.66529
12	97.11761	48	95.75205	84	96.55182	120	97.7905	156	89.35162
13	97.53069	49	94.52423	85	60.99535	121	94.65349	157	97.66877
14	94.72347	50	80.95789	86	91.31355	122	95.66865	158	89.35527
15	44.75789	51	99.97084	87	84.36193	123	90.46109	159	83.3521
16	97.58841	52	94.1622	88	96.33009	124	92.78806	160	96.09077
17	68.08658	53	90.81592	89	75.90002	125	97.3965	161	95.85347
18	78.49272	54	79.39677	90	97.23685	126	93.62681	162	84.37247
19	89.64993	55	99.95803	91	95.52244	127	91.87211	163	95.16492
20	95.66869	56	56.71211	92	99.6223	128	60.4403	164	95.72238
21	90.97802	57	87.89126	93	93.24764	129	80.72119	165	84.50475
22	92.90014	58	77.36741	94	76.42791	130	98.08673	166	91.29142
23	80.07976	59	95.2906	95	99.98913	131	90.13962	167	95.83166
24	88.068	60	89.77755	96	99.35235	132	66.99707	168	75.74803
25	64.88886	61	88.96582	97	88.98845	133	94.7593	169	92.16952
26	87.88761	62	79.22885	98	90.00827	134	85.83438	170	90.77213
27	73.44275	63	93.2885	99	92.43885	135	85.79647	171	91.10072
28	81.23676	64	79.93555	100	95.13174	136	92.64912	172	94.98925
29	85.82447	65	94.85506	101	99.9108	137	97.12547	173	96.20395
30	90.69297	66	69.50555	102	91.3757	138	78.83694	174	99.32213
31	98.28168	67	99.64862	103	90.29805	139	92.36168	175	99.97717
32	98.78519	68	98.45012	104	72.80163	140	99.19706	176	85.29719
33	84.77021	69	82.73091	105	61.37133	141	98.66149	177	94.88474
34	70.38267	70	78.39442	106	94.0976	142	95.47715	178	94.34025
35	97.26727	71	63.00447	107	94.74258	143	98.10008	179	79.28827
36	94.91306	72	70.61234	108	98.72238	144	88.66856	180	79.32211
								181	90.7302

Table 5.3 Consistency in employers' ratings for decks

Deck number	R-Squared (consistency in ratings)
1	95.98%
2	89.64
3	81.15%
4	96.95%
5	35.44%
6	70.79
7	77.18%
8	69.71%
9	13.55%
10	57.18%
11	43.25%
12	91.47%

5.4 Findings from the Factorial Survey Experiment

5.4.1 The Mean Scores

Comparison of the mean scores of the vignette factors and regression analysis are the two common data analysis techniques for factorial surveys. The main aim of these tools is to determine the impact of single factors on respondents' judgments. Table 5.4 shows the mean scores of the vignette factors for employers' hiring propensity and trainability assessment of job applicants. The mean is the average of the rating scores from 0 to 100 in the rating scale of the vignettes. The results show that male job applicants received higher ratings than females in both hiring chances and trainability assessment. Omani nationals also received higher ratings than expatriates in hiring chances and trainability assessment. It is also interesting to note that being referred by a university with which a firm does not cooperate increased the hiring chances and trainability assessment of job applicants. Having relevant experience, relevant degree, or high grade, and graduating from a leading university, along with obtaining bachelor's and master's degrees received higher ratings for both hiring chances and trainability assessment. There was no notable difference in the rating of the different types of extra-curricular activities that job applicants were involved in during their studies.

Table 5.4 Mean scores for employers' hiring propensity and trainability assessment of job applicants per occupation

Rated vignettes per occupation		Accountant		Software Developer		Mechanical Engineer		Overall	
Dependent variables		Hiring	Trainability	Hiring	Trainability	Hiring	Trainability	Hiring	Trainability
Gender	Male	39	43	49	50	41	44	42	45
	Female	38	42	49	50	35	39	39	43
Nationality	Omani	43	45	54	54	42	46	45	47
	expatriate	34	39	44	47	33	37	36	40
Experience and internship	internship at your organisation	37	42	49	52	38	41	40	44
	internship outside of your organisation	38	42	49	52	38	41	40	43
	Relevant experience	41	45	55	53	43	46	45	47
	No relevant experience/internship	37	41	43	44	34	39	37	41
Extra-curricular activities	Yes, in a leadership position	39	41	52	52	36	39	40	43
	Yes, as a member of a group	40	44	49	51	37	41	41	44
	No	36	42	45	48	42	45	40	44
Place of study	A leading university in Oman	37	42	53	53	38	43	41	44
	A non-leading university in Oman	37	42	47	48	37	40	39	42
	A leading university abroad	42	44	50	51	39	42	43	45
	A non-leading university abroad	37	42	47	49	38	41	39	43
Level of education	Diploma	37	39	47	47	36	39	39	41
	Bachelor's degree	38	44	49	51	41	44	42	45
	Master's degree	39	44	51	53	37	41	41	45
Field of study	Engineering	34	38	47	48	51	54	43	46
	Business and management	47	51	42	42	31	34	40	43
	Information and communication technology	34	38	58	60	33	36	39	42
Grade (GPA)	4 out of 4 and within the top 5% of their classes	42	48	54	57	43	47	45	50
	3.5 out of 4	40	43	50	52	41	44	43	45
	2.7 out of 4	37	41	46	48	36	40	39	42
	2 out of 4	34	38	45	45	32	35	35	38
Referrals	Yes, by an existing employee	35	42	49	47	37	40	39	42
	Yes, from an Omani university with which your organisation cooperates	40	44	49	49	37	40	41	43
	Yes, from another university with which your organisation does not cooperate	39	43	49	53	41	45	42	46
	No	38	42	49	51	37	41	40	44

To explore the impact of the vignette factors on employers' ratings of job applicants' résumés, I regressed all the vignette factors and independent variables (see Table 5.5 and Figure 5.1) on the likelihood that the job applicant would be hired – the first dependent variable - and the likelihood that recruiters considered that the job applicant would be easy to train - the second dependent variable (see Table 5.5 and Figure 5.2).

To examine the effect of the selected factors on the hiring chances of job applicants, I ran a multilevel regression in STATA using *xtreg* command. Results are reported in Table 5.5, and Figure 5.1 and Figure 5.2 summarise the regression findings graphically. High grades make a marked difference, post-diploma level is also significant, expat is rather negative, and there is a noticeable level of consistency between hiring and trainability. The following section reports the results for each factor in more detail starting with demographic characteristics (gender, nationality) then educational attributes (field of study, level of education, GPA, place of study), experience, and internship, and it concluded with social factors (referrals and extra-curricular activities).

Figure 5.1 Effects of the vignette factors on employers' hiring decisions
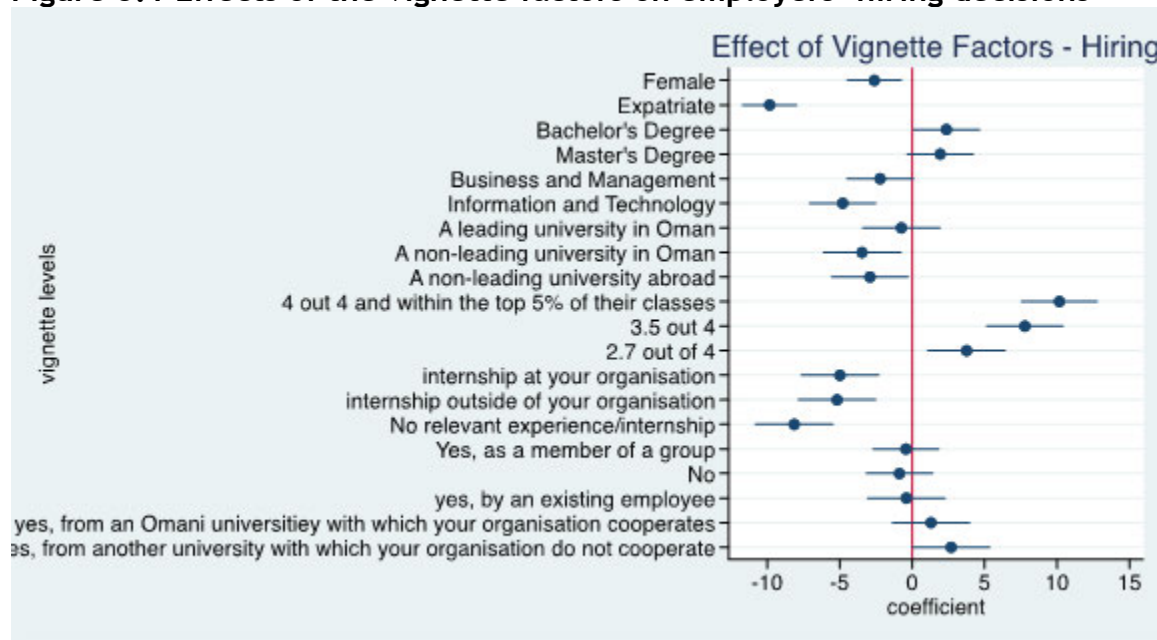
Note: Dots represent the difference in the rating compared to the reference category

Figure 5.2 Employers' assessment of applicants' trainability
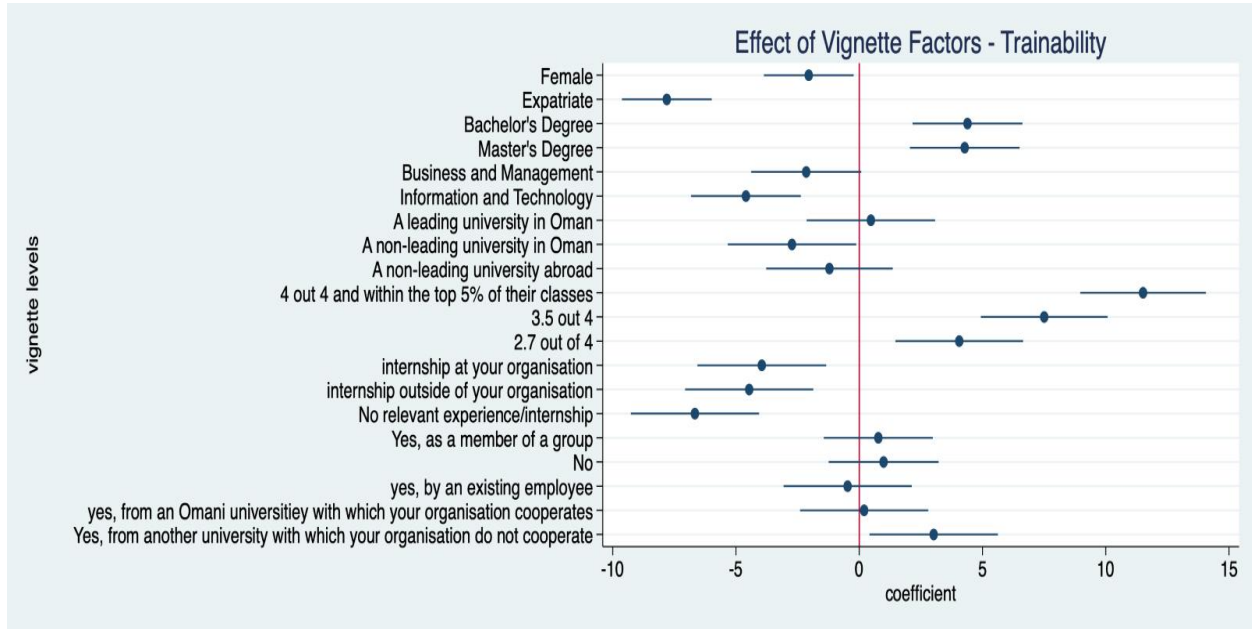
Note: Dots represent the difference in the rating compared to the reference category

Table 5.5 Linear random-intercept model of hiring and trainability probability.

Vignette Factors	Levels	Hiring		Trainability	
		Coefficients	Std. Errors	Coefficients	Std. Errors
Gender (ref. male)	Female	-2.609**	(0.956)	-2.049*	(0.929)
Nationality (ref. Omani)	Expatriate	-9.834***	(0.956)	-7.806***	(0.929)
Level of Education (ref. Diploma)	Bachelor's degree	2.370*	(1.170)	4.391***	(1.137)
	Master's degree	1.940	(1.168)	4.279***	(1.135)
Field of Study (Ref. Engineering)	Business and management	-2.207	(1.173)	-2.151	(1.139)
	Information communication and technology	-4.789***	(1.169)	-4.596***	(1.136)
Place of Study (ref. A leading university abroad)	A leading university in Oman	-0.750	(1.367)	0.472	(1.328)
	A non-leading university in Oman	-3.456*	(1.367)	-2.728*	(1.330)
	A non-leading university abroad	-2.910*	(1.347)	-1.209	(1.309)
Grade (GPA) (Ref. 2 out of 4)	4 out of 4 and within the top 5% of their class	10.16***	(1.337)	11.51***	(1.301)
	3.5 out of 4	7.782***	(1.349)	7.503***	(1.312)
	2.7 out of 4	3.758**	(1.360)	4.057**	(1.321)
Experience and Internship (Ref. Relevant experience)	internship at your organisation	-4.981***	(1.371)	-3.952**	(1.333)
	internship outside your organisation	-5.179***	(1.364)	-4.464***	(1.326)
	No relevant experience	-8.140***	(1.365)	-6.665***	(1.328)
Extra-curricular Activities (Ref. Yes, in a leadership position	Yes, as a member of a group	-0.434	(1.160)	0.774	(1.128)
	No	-0.875	(1.170)	0.989	(1.138)
Referral (No referral)	Yes, by an existing employee.	-0.398	(1.366)	-0.471	(1.327)
	Yes, from an Omani university with			0.199	(1.327)
	which your organisation cooperates.	-1.304	(1.365)	3.020*	
	Yes, from another university with which your organisation does not cooperate	2.692*	(1.367)		(1.329)
Constant		51.18***	(2.467)	49.11***	(2.429)
Number of the vignettes		2238		2241	

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

5.5 Demographic Characteristics

5.5.1 Gender

An applicant's gender had a statistically significant impact on employers' ratings of hiring intentions and predicted trainability. The analysis provides a clear support of hypothesis 1 that employers are likely to use gender in their hiring decisions. Employers preferred male candidates over female candidates by almost two per cent points. The coefficient β of gender is estimated as minus 2.609 for hiring probability and minus 2.049 for expected trainability. This means that the likelihood that employers will hire the female candidates is 2.609 times lower than for male candidates and the likelihood that employers will expect that female job applicants will be easy to train is 2.049 times lower than for male job applicants. This finding indicated that there appears to be some gender discrimination against female job applicants in the private sector in Oman. There is similar prima facie evidence of discrimination based on gender in other countries too, for example, Firth (1982) in the UK, Riach and Rich (1987) in Australia, Albert et al. (2011) in Spain and Protsch (2021) in Germany (see Baert 2018 for a review).

This result is also consistent with statistics from females' participation in the labour force in the private sector in Oman as approximately 83.8 per cent of the total employment in 2018 were males and 16.2 per cent were females, although the number of female graduates (17.050, 62%) were higher than male graduates (10.771, 38%) was in 2018 (NCSI 2019). As such, while in 2018 women accounted for 62 per cent of graduates, they constituted about 16.2 per cent of new hires by private sector companies in Oman (NCSI 2019). Regarding graduates by subject covered in this study in 2018, women accounted for 62 per cent of graduates for management and commerce, 39 per cent for engineering and 75 per cent for information technologies. In 2018, the female unemployment rate was 7.1 per cent compared to 0.8 per cent for males (NCSI 2019).

There are several possible explanations of this result. One possible explanation might be related to the occupational gender segregation in which there is a stereotype among employers of the suitability of certain occupations for a certain gender. Herman et al.

(2013) claim that females' representations are still weak in science, engineering and technology sectors. Bertogg et al. (2020) conducted a factorial survey to investigate gender discrimination in recruitment for two male-dominated occupations, namely mechanics and ICT professionals, across four European countries: Bulgaria, Greece, Switzerland, and Norway. They found that employers prefer to hire males in Bulgaria and Greece and to a lesser extent in Switzerland, but there was no gender preference in Norway. They found also that the gender discrimination was higher in mechanics than in ICT.

I could rely on data from the three occupations in order to check if there is occupational gender segregation in this study. The results show a difference in employers' evaluations in the three occupations as there was a statistical significance of gender in employers' evaluations because they prefer males over females by almost 5.491 per cent points for mechanical engineers (Figure 5.3). There was no gender preference for accountant and software developer jobs (not statistically significant).

Figure 5.3 Employers' evaluation of résumés based on gender
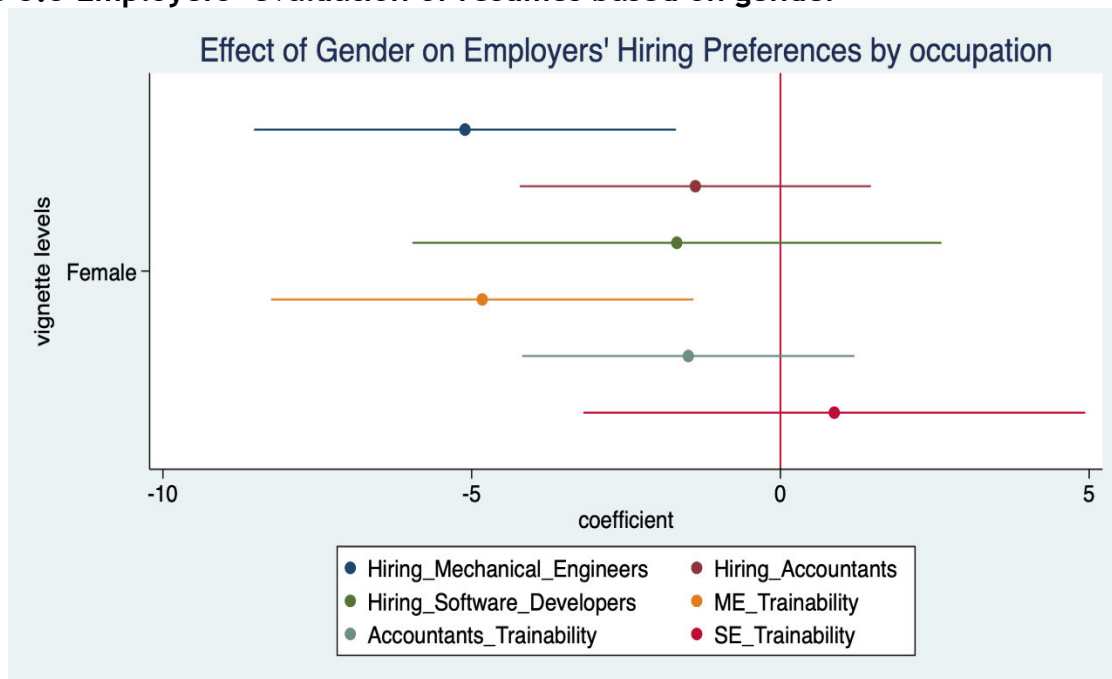
*SE: Software developers, ME: Mechanical Engineers

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5.5.2 Nationality

The results further suggest that nationality plays an important role in employers' hiring decisions (Figure 5.4). In contrast to the expectations in hypothesis 2, what is striking about the finding is that expatriates job candidates have lower chances of being selected than for Omanis, with a large difference of 9.834 points (see Table 5.5). This means that the likelihood that employers will hire expatriate candidates is minus 9.834 times higher than Omani candidates. When it comes to expected trainability, the likelihood that expatriates would be considered easy to train was 7.806 points lower than in the case of Omani graduates. These findings are surprising given that Omanis working in the private sector accounted for just 15 per cent (252.132) and expatriates 85 per cent (1.435.153) by (NCSI 2019). Although for graduates holding university degrees including diploma, higher diploma, bachelor's degree and master's degree, the difference is smaller, Omanis still accounted for only 24 per cent of workers in jobs that require higher education, whereas expatriates comprised for 76 per cent in 2018.

There are several possible explanations for this finding. One possible explanation can be related to the results of the Employer Survey (2016) which reported that employers prefer Omanis, but that Omanis with the right qualifications rarely apply, as they prefer the public sector. Another possible explanation can be related to Omanisation, the policy that forces firms in Oman, by law, to prioritise the hiring of Omanis where Omani graduates are available to fill in those jobs. The reasons for employers to prefer Omani graduates over expatriates can be further explored by asking employers to reflect on their preferences. The next chapter provides employers' reflections on this matter.

Figure 5.4 Employers' evaluation of résumés based on nationality
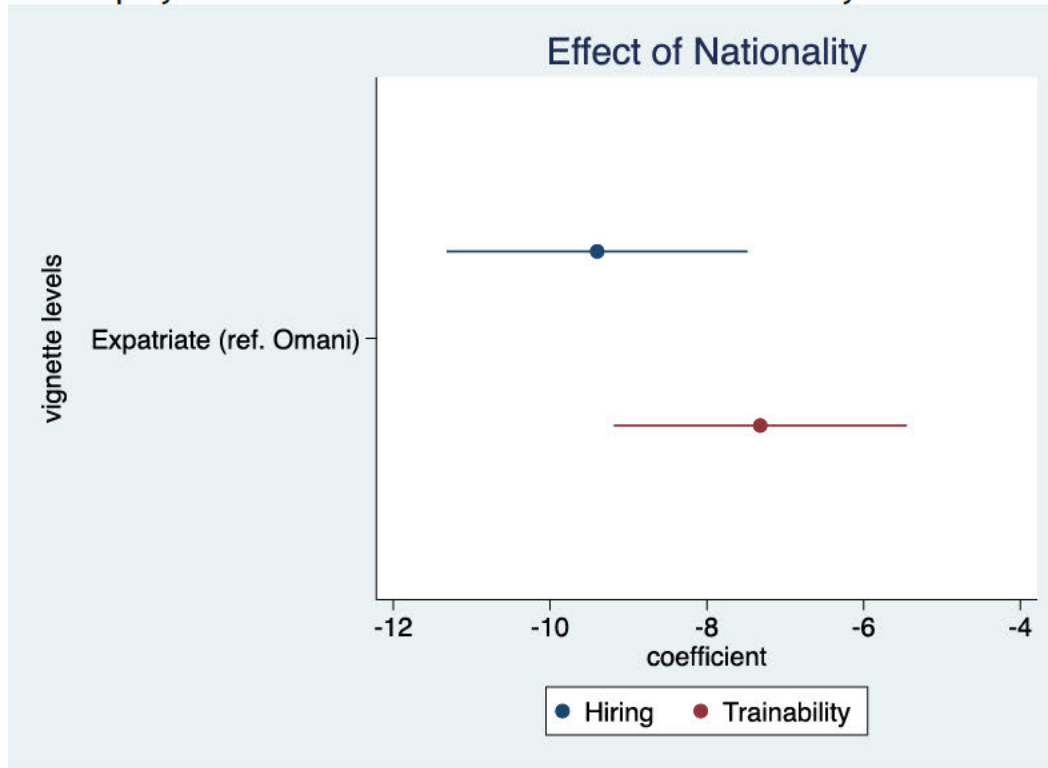
5.6 Educational Attributes

In this section, I present the results regarding the four aspects of education discussed in the literature review: the level of education achieved by the candidate, field of study, place of study, and grades obtained.

5.6.1 Level of Education

With regard to hypothesis 4a, I expected that employers have a tendency to prefer diploma holders because of their lower wages, however, employers reward job applicants who have a bachelor's degree. As shown in Table 5.5 and Figure 5.5, obtaining a bachelor's degree strongly affected job applicants' hiring chances compared to university diploma holders (the reference category) – increasing their chances by 2.370 per cent points. On the other hand, although the results show an impact on hiring chances associated with the achievement of a master's degree (by 1.940 per cent points) this result is not statistically significant (see Table 5.5). This means that job applicants with a bachelor's degree are preferred over graduates with

a master's degree or a university diploma. This is also the case in the UK when it comes to filling vacancies for junior positions (Humburg and van der Velden 2015). The interviews offer explanations as to why Omani employers are hesitant to hire graduates who hold university diplomas and master's degrees for junior positions (see Chapter 6).

Regarding the assessment of trainability, 'level of education' is a strong indicator of job applicants' trainability. In line with the expectations of hypothesis 4b, employers expect that candidates with a bachelor's or a master's degree would be easier to train compared to diploma holders (with a difference of 4.391 and 4.279 per cent points respectively) (see Table 5.5). Thus, while graduates with a master's degree are considered as trainable as those with a bachelor's degree, they are less likely to be considered for appointment because of wage (see Chapter 7 for a detailed discussion).

Figure 5.5 Employers' evaluation of résumés based on education level

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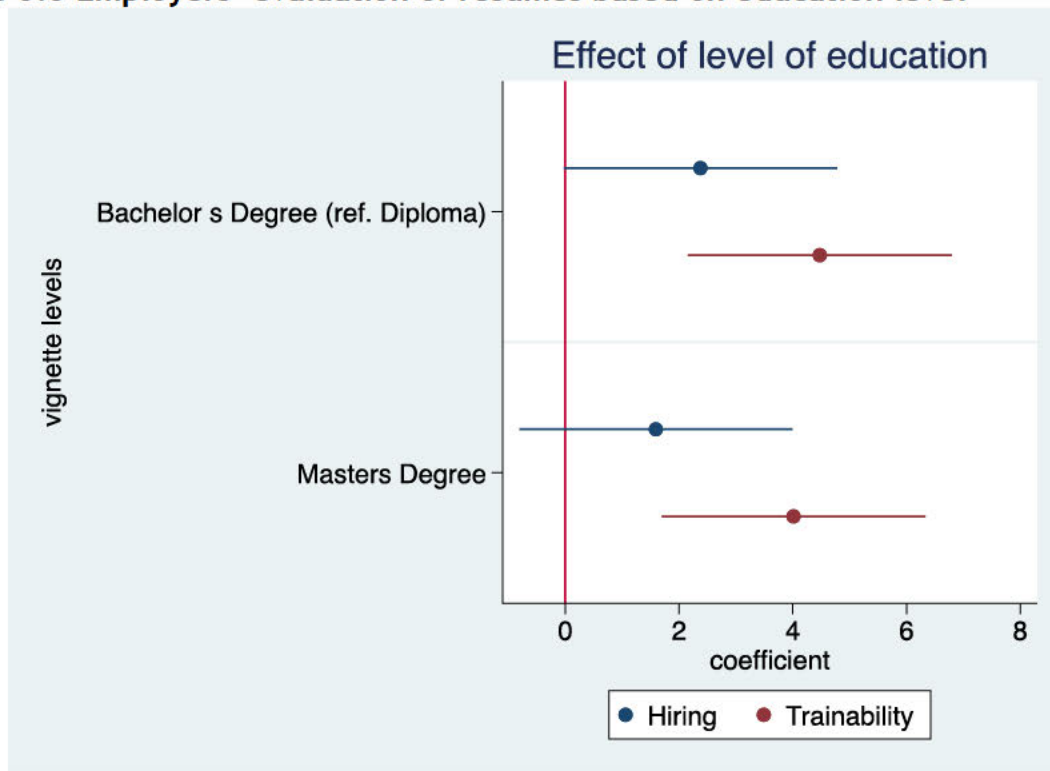
5.6.2 Field of Study

In hypothesis 3, I expected employers to rely on relevant field of study in their hiring decisions. The hypothesis is confirmed as field of study has a strong and significant impact on employers' ratings. Employers preferred job applicants with a relevant field of study. For example, if a job applicant has a degree in engineering and s/he is applying for a job in a different field, this affects her/his hiring chances negatively. The penalty, if the applicant applies for a software developer is -4.789 points in terms of hiring and -4.596 points in terms of their expected trainability (see Table 5.5). If the applicant comes from a business and management field, his/her hiring chances are lower by minus 2.207 and expected trainability by minus 2.151 per cent points although these differences are not statistically significant (see Table 5.5 and Figure 5.6). In support of this finding Humburg and van der Velden (2015) and Heijke et al. (2003) show that having a degree in a field of study which matches the job tasks is positively related to graduates' chances of finding a job in the field when competing with unmatched field of study. This result confirms the importance of considering the horizontal stratification of the education system (field of study) (Van De Werfhorst 2004).

Figure 5.6 Employers' evaluation of résumés based on field of study
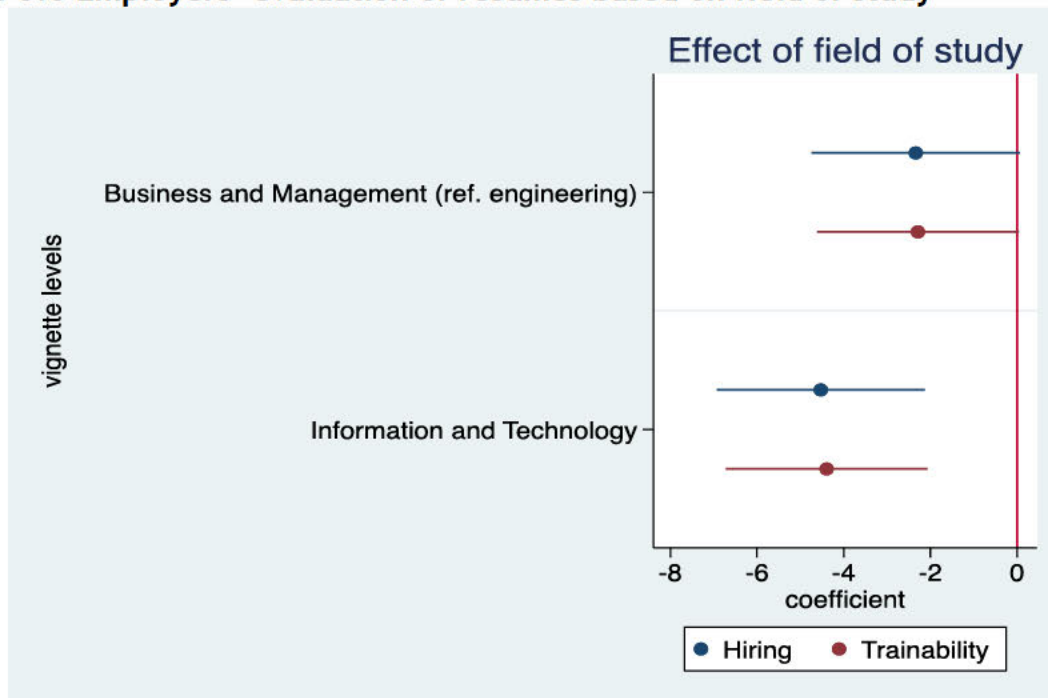
5.6.3 Location of Study and Rank of University

We investigated whether the institutional characteristics - university quality and its location - have an impact on employers' hiring decisions. I found that the status of the university where the job applicants graduated from had a significant effect on their hiring chances and their expected trainability as Omani employers prefer graduates from leading universities from Oman and abroad. Employers penalised applicants who graduated from non-leading universities either from abroad or Oman by -2.910 and -3.456 per cent points respectively in terms of hiring likelihood (the reference category is "a leading university abroad"). The analysis partially supports hypothesis 6.

Graduates from non-Omani leading university were considered more trainable than graduates from non-leading university graduates in Oman (-2.728 per cent points) and graduates from non-leading foreign universities (by -1.209 per cent points) although the difference with non-leading foreign universities is not statistically significant. This is replicated in other studies e.g. Coles et al. (2013) find that there is a link between the quality of the educational institutions that candidates attend and their employment prospects. Petzold (2017) found also studying abroad is rewarded by employers in Germany, although this was not confirmed in this study, as the differences between graduates from leading Omani and non-Omani universities are not statistically significant. The reasons behind Omani employers' preferences to hire graduates from prestigious universities will be explored in the next chapter.

Figure 5.7 Employers' evaluation of résumés based on place of study
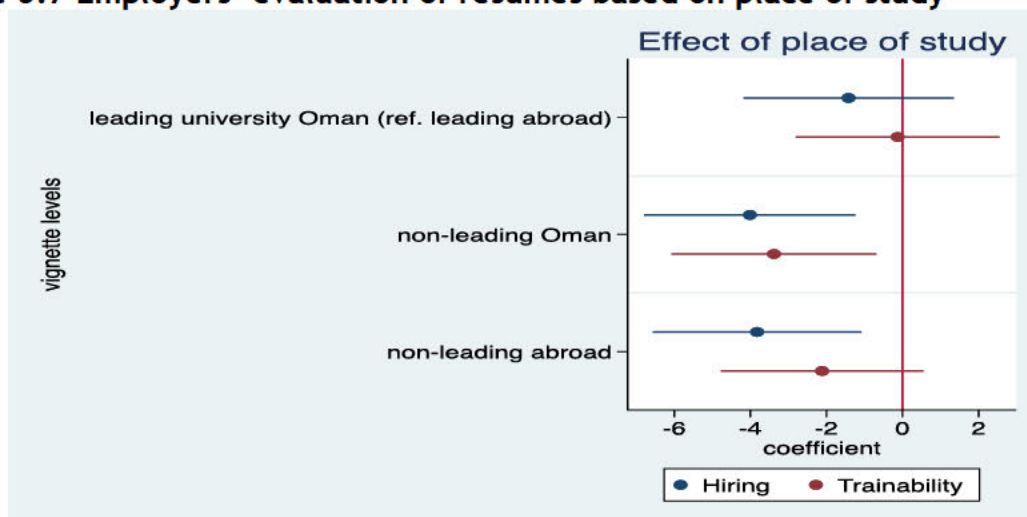
5.6.4 Grades (GPA)

In hypothesis 5, I expected positive effects of a high GPA on employers' hiring decisions. This hypothesis is confirmed as high GPAs have a strong impact on employers' ratings as they are positively correlated with higher chances for hiring and perceptions of trainability. There is a positive effect on getting a high grade at almost 10 per cent points (Figure 5.8). The result shows that the higher the job applicants' grade is, the higher the chance of being hired and considered trainable. Employers prefer to hire mostly the applicants who scored 4.0 out of 4 and within the top 5% of their class by 10 per cent points compared to 7.490 and 3.910 per cent points for candidates with GPA 3.5 and 2.7 respectively (the reference category is "2") (see Table 5.5).

Regarding the prediction of trainability of job applicants to meet job demands, employers expect candidates who scored high grades would be easy to train by 11.510 per cent points compared 7.503 per cent points for middle grade and 4.057 points for low grade (see Table 5.5). This is in line with our expectation and hypothesis that obtaining a high grade in a university degree is an added value to a job applicant and supported by previous studies (Humburg and van der Velden 2015; Di Stasio and Van De Werfhorst 2016; Kittelsen Røberg and Helland 2017; Piopiunik et al. 2020). To have a better understanding of why grades have affected employers' hiring decisions, the next chapter explores employers' perspectives on the correlation between grades and labour market outcomes.

Figure 5.8 Employers' evaluation of résumés based on GPA
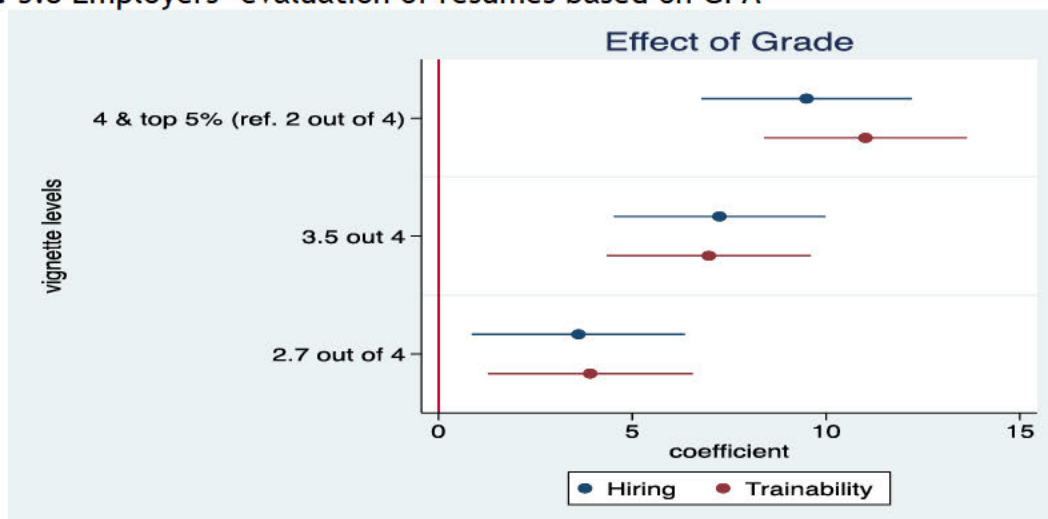
5.7 Experience and Internship

In hypothesis 7, I expected positive effects of experience and internship on employers' hiring decisions and the finding suggests that employers consider relevant experience (the reference category) as an important screening tool for both hiring tendency and expected trainability (hypothesis 7 is confirmed). If a job applicant has no relevant experience or internship, this is associated with a negative screening at about minus 8.140 per cent points for hiring tendency and minus 6.665 per cent points for expected trainability. In other words, the hiring chances and expected trainability of a job candidate with no relevant experience or internship is lower compared to a candidate with relevant experience. Employers consider candidates who have experience are easily trainable and have familiarity with a business environment (Bills et al. 2017).

There is a slight difference in employers' ratings for the hiring preference of candidates who have completed internships at employers' premises at about minus 4.9 per cent points and minus 5.1 per cent points for those who have done internships outside their premises, compared to candidates with relevant experience as the reference category. Thus, employers rewarded applicants with internships less than applicants with relevant experience. Within those who have undertaken internships, employers showed a slight preference to hire applicants who did internships at their organisations.

Omani employers believe that candidates who did internships inside their organisations are easier to train than candidates who did internships outside employers' organisations (minus 3.952 and minus 4.464 points respectively).

Figure 5.9 Employers' evaluation of résumés based on experience and internship

5.8 Social Characteristics

5.8.1 Extra-curricular Activities

Regarding hypothesis 8, I expected employers to base their hiring decisions on extra-curricular activities. Overall, there is no significant impact of extra-curricular activities on employers' hiring preferences or expected trainability of job applicants (hypothesis 8 is not confirmed). Either being in a leadership position or as a member of a group does not give job applicants an advantage in terms of hiring intentions or expected trainability compared to those who had not participated in extra-curricular activities (see Figure 5.10). This is in line with similar findings from Di Stasio (2014), yet it contradicts Hutchinson (1984), who found that leadership positions and club memberships were important to an applicant's résumé.

However, examining the differences in employers' ratings among the three occupations revealed that employers prefer mechanical engineer applicants who did not involve in extra-curricular activities by 3.822 per cent points whereas they prefer software developer applicants with leading roles by 5.207 per cent points. Not getting involved in extra-curricular activities also had a positive impact on trainability assessment of mechanical engineer applicants by 3.743 per cent points.

Employers often prefer job applicants to go beyond what is written in their résumés to demonstrate how these activities can be beneficial for the workplace and for a specific job as (Brown and Hesketh 2004, p.155) noted "Where it was once enough to simply state that one had canoed up the Khyber backwards, one now has to demonstrate the individual competences, which have been acquired and developed through undertaking such an exercise, and how they relate to the required competencies being sought by the organization one was hoping to work for. This is not always an easy task".

Figure 5.10 Employers' evaluation of résumés based on extra-curricular activities
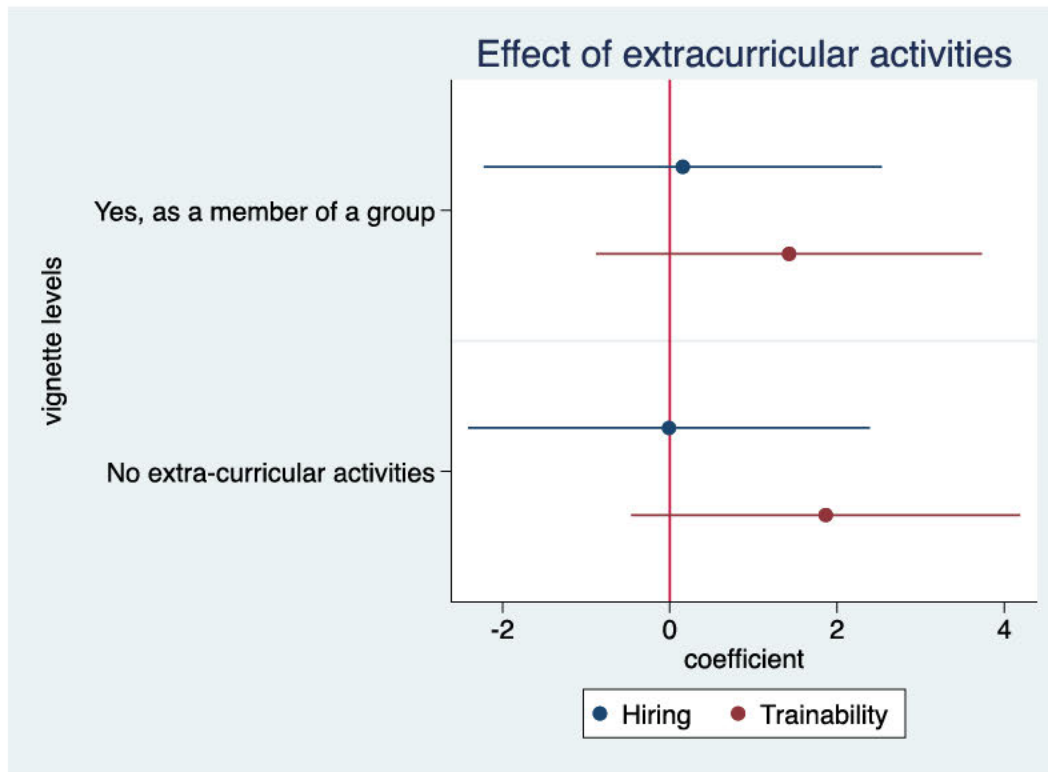
5.8.2 Referrals

In contrast to the expectations in hypothesis 9, the analysis did not support hypothesis 9 as the referrals by an existing employee or universities, job applicants do not get an advantage to be hired if they were referred either by existing employees or universities with which the firms cooperate. This is in line with what other studies have found, albeit not for Oman e.g. Van Belle et al. (2019) found this to be the case in Belgium. One possible explanation is that these referral are associated with the likelihood of lower motivation from job applicants (Bonoli and Hinrichs 2012), but this will be discussed in more detail in Chapters 6 and 7.

Interestingly, job applicants who were referred by universities which firms do not cooperate with; applicants had a positive impact on their chances to be hired by 2.692 per cent points. Employers believe that job applicants would be easier to train by almost 3.020 per cent points if they were referred by universities which they do not cooperate with compared to the candidates with no referral. It is unclear why

employers trust referrals from educational institutions they do not cooperate with whereas they do not trust referrals from the institutions which they cooperate with. But, this is perhaps supports Granovetter's (1995) arguments on weak ties, which offer greater advantages to job seekers than strong ties.

There are several possible explanations to this finding which contradicted the above finding i.e. where employers do not consider referral from universities they cooperate with, but they do consider applicants from universities they do not cooperate with. This finding may be related to the weak relationship between Omani employers and higher education institutions, as only 25% of employers report that there was some sort of collaboration between them and higher education institutions (Employer Survey 2017). The second possible explanation might be related to recruitment channels used by Omani employers to hire graduates. Table 5.6 shows that employers tend not to rely heavily on recruitment from career guidance offices at universities (10.1%).

Table 5.6 Recruitment channels of private sector firms in Oman

Number	Recruitment Channels	Number of firms	Percentage %
1	Government bodies (Ministry of Manpower)	179	43%
2	Newspaper ads	179	43%
3	Referral from trusted companies and sources	157	37.7%
4	Company website	138	33.2%
5	Recruitment agencies	90	21.6%
6	Social media websites (e.g. Facebook, LinkedIn)	80	19.2%
7	Job fairs	73	17.5%
8	Career guidance offices at universities	42	10.1%
9	Others	39	9.4 %

Source: Employer Survey 2017

To determine whether the employers' evaluations of the impact of referral on hiring probability and trainability assessment depends on other vignette factors, we ran two-way interaction effects by regressing the four referral levels with other vignette factors in one pooled model to examine if these interactions affect the results. By investigating the two-way interaction between the referral and other factors, we found that there was an important advantage for job applicants who had done an internship at employer's organisation and were referred by an existing employee as it increased their trainability score by 10.965 percent points. Pallais and Sands (2016) similarly found that referrals provide insight into applicants' performance that is not readily available from observable characteristics alone. They also find that the performance of referrals is improved when they work with their referrers.

Figure 5.11 Employers' evaluation of résumés based on referrals
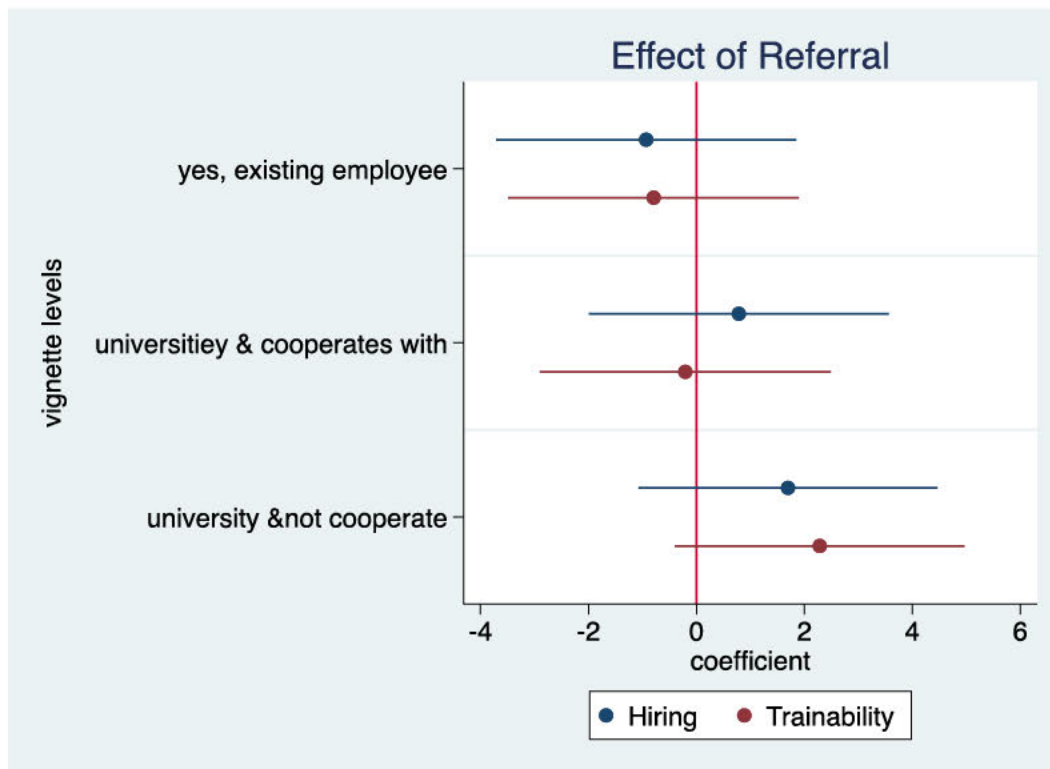
5.9 The Differences in Employer Evaluations According to Occupational and Organisational Contexts and Employers' Characteristics

5.9.1 Introduction

The previous analyses highlighted the impact of the vignette factors and levels on employers' hiring decisions. This section investigates the effect of recruiters' characteristics, occupational and organisational characteristics on those decisions. After rating the vignettes, employers completed an integrated survey that included questions about their personal characteristics (e.g. gender, age, nationality), their qualifications, their length of tenure and their experience in recruitment and selection as well as questions about their firms (e.g. size) (see Table 5.7). With this information, it was possible to investigate whether the effects of different vignette factors vary by characteristics of recruiters, characteristics of firms and type of occupations.

In particular, this section reports how the characteristics of respondents and the occupational and organisational context of recruitment inform the results of résumé evaluations. It focuses on the differences in employers' hiring decisions and their expectations of job applicants' trainability based on the characteristics of individual recruiters, their organisations and the occupations for which they were recruiting. This is related to the third research question for this thesis, which investigates in what ways employers' assessment of applicants vary across the occupational and organisational contexts.

The section starts with an overview of analytical strategy, then with an analysis of the impact of recruiters' characteristics on employers' evaluations of job applicants' résumés. Next, it describes the characteristics of organisations and their impact on employers' evaluations. After that, it reports on the impact of occupational context on employers' hiring decisions.

5.9.2 Analysis

In order to examine whether the occupational, organisational contexts and employers' characteristics affect employers' evaluations of résumés, the characteristics of the

résumés were regressed into the characteristics of respondents, organisations and occupations. The random-intercept regression analysis [20] showed that occupation type, respondent's experience in screening, and organisation size had a significant effect on vignette evaluations while the other characteristics had no main effects (see Table 5.7). The main effect is the effect of one independent variable (e.g. gender) on the dependent variable (hiring) — averaging across the levels of the other independent variables (Auspurg and Hinz 2015). The main effect of each factor captures how the factor influences the dependent variable on its own, while interactions explore how various factors work together to influence the dependent variable. An interaction effect occurs when the effect of one factor (e.g. gender) depends on the value of another factor (e.g. nationality).

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[20] The intercept/ constant describes the average outcome of dependent variable (hiring probability) when all independent variables (e.g. gender, nationality, etc) X = 0.

Table 5.7 Effect of respondents' characteristics on hiring and trainability results

Characteristics of Respondents	Variables	Effect on Hiring Decisions	Effect Trainability assessment
Gender	Male/female	No	No
Nationality	Omani/non-Omani	No	No
Age	Under30/ 30-39/ 40-49/ 50-59/ over 60	No	No
Level of education (highest educational qualification)	High school certificate/ Diploma /Bachelor's degree/ Master's degree/ PhD	No	No
Place of qualification	Oman/ outside Oman	No	No
Occupational profile of respondent	CEO/ HR manager/ owner/ Operational manager/ HR staff/ other	No	No
Length of tenure	Less than 5 years/ between 5 and 10 years/ more than 10 years/	No	No
Experience in résumés screening	0/1-9/10-50/ more than 50/	Yes	Yes
Characteristics of the organisation			
Firm size	Small/ medium/large	Yes	No
Multinational organisation	Yes/no	No	No
Links and collaborations	Yes, with a leading university in Oman/ Yes, with a leading university abroad/ Yes, with a leading university in Oman and abroad/ Yes, with a non-leading university in Oman. / Yes, with a non-leading university abroad/ Yes, with a non-leading university in Oman and abroad/ No	No	No
The characteristic of the Occupational Context			
Occupation Type (ref. mechanical engineer)	Mechanical engineer/ Software developer/ Accountant	Yes	Yes

Notes: Yes and No is based on the result of regressing each characteristic into the nine vignette factors in one pooled model. Yes= significant, No= not significant.

There were two ways to test whether the main effect of the previous three characteristics (occupation type, number of résumés screened by respondents and organisation size) had a significant effect on employers' hiring decisions or not. The procedures used were as described by Auspurg and Hinz (2015).

The first way was to run an F test or 'Chow-Test' as suggested by Wooldridge (2016). The F test gives an indication of whether a characteristic – for example, firm size - has a significant impact on employers' evaluations when it is included in the regression model with the nine vignette factors. If it is significant, it increases the model fit and it requires to run the second test. The second is testing the cross-level interaction terms for vignette and respondent variables using standard t-tests for the significant levels of these terms (Auspurg and Hinz 2015). It aims to explore which variable – for example, medium or large organisations- had an impact on employers' evaluations and whether the difference between variables is significant or not. Therefore, the second test only runs if there is a significant result in the first test. Both tests were implemented in this study as three factors (firm size, recruiter's experience and occupation type) were statistically significant.

To apply an F test, I built interaction terms for the three characteristics that showed a main effect [21] (occupation, number of résumés screened by respondents and organisation size), with each of the nine vignette factors (gender, nationality, experience and internship, level of education, field of study, place of study, grade, extra-curricular activities, referrals). Then, all of the nine vignette factors, each one of the three characteristics, and all of the interaction terms were included in one "pooled" model for all respondents (see Table 5.8) as an example, focusing on the case of 'firm size').

Table 5.8 Pooled model of organisation size and vignette factors

Dependent Variables	Vignette factors	Interaction Terms
Hiring Probability Expected Trainability	Gender	Firm size X gender
	nationality	Firm size X nationality
	place of study	Firm size X place of study
	level of education	Firm size X level of education
	Grade	Firm size X grade
	field of study	Firm size X field of study
	experience and internship	Firm size X experience and internship
	extra-curricular activities	Firm size X extra-curricular activities
	referral	Firm size X referral

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[21] The reason to focus only on these three characteristics is that the regression analysis shows that those three characteristics have main effects on employers' hiring decisions.

Hence, the main purpose is to explore the impact of the three following characteristics on employers' hiring decisions and their assessment of the expected trainability of job applicants:

- The impact of type of organisation (small and medium, large) on employers' hiring decisions and their assessment of the trainability of candidates
- The impact of type of occupation (accountant, software developer, mechanical engineer) on employers' hiring decisions and their assessment of the trainability of candidates
- The impact of number of résumés (less than 50, more than 50) screened by employers on their hiring decisions and their assessment of the trainability of candidates.

If we take the organisation size (factor with a main effect) and gender (as one of the nine vignette factors) as an example, the analysis checks whether there are differences in results in the hiring probability of female (compared to male) applicants in large organisations compared to small and medium-sized organisations. If the effects are not different, then the interaction coefficient would be zero.

The F test is formulated to reject the null hypothesis that all interaction terms are jointly zero which means that there are no different effects. I ran the F test of all the vignette factors with each respondents' characteristics, the occupational and organisational characteristics that influenced employers' ratings of résumés. The F test rejected the null hypothesis of equal evaluation principles between the respondents with the occupation for which they are recruiting and the number of résumés they had examined. That means that the employers' hiring decisions are affected by the occupation for which they are recruiting – accountant, software developer and mechanical engineer. The F test also shows that employers' hiring decisions are affected by the number of résumés the employers' screened. The F test also rejected the null hypothesis of equal evaluation principles between respondents working in organisations of different sizes and the assessment of hiring propensity (see Table 5.9). By contrast, the F test did not reject the null hypothesis of equal evaluation principles between respondents working in organisations of different sizes regarding their

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assessment of trainability. This informs us that the organisation size has an impact on the employers' hiring decisions, but it does not affect the employer's evaluation of the expected trainability of job applicants.

Table 5.9 F test results

Characteristics of respondents	F test result for hiring propensity	F test result for expected trainability
Occupation type	F (9,189) = 9.22 Prob > F = 0.0000	F (9,189) = 7.97 Prob > F = 0.0000
Organisation size	(F (9,189) =1.94 Prob > F = 0.0485)	(F (9,189) =1.07 Prob > F = 0.3834)
Experience of recruiters	(F (9,189) = 3.56 Prob > F = 0.0004)	(F (9, 189) = 4.1 Prob > F = 0.0001)

The second method to test the effect of the characteristics of respondents on employers' evaluations is to build and check only cross-level interaction terms for vignette factors and respondents' characteristics, which are of interest to the study and have theoretical assumptions, by using standard *t*-tests for the significance levels of these terms. In accordance with Auspurg and Hinz (2015), the following steps were followed to run this test:

- Regressing each dependent variable (hiring probability and expected trainability) into all the vignette factors and the target characteristic (e.g. organisation size). This is shown in Column 1 in the following regression tables.
- The regression result of the variables/values of the target characteristics (organisation size: small and medium/ large). This is shown in column 2 and 3 or 4 in regression tables below.
- The regression result of the cross-level interactions terms between the target characteristic and the nine vignette factors and this will be shown in the last column in the regression tables. This column is the main one that I rely on to

report the results as it contains the cross-level interaction terms while the previous columns have been reported in the earlier sections.

I focus on the three characteristics - job type, organisation size and the number of résumés screened by respondents- that showed a main effect on hiring and trainability results. A random intercept model with all interaction effects is presented in the following tables (see Table 5.10, Table 5.11 and Table 5.12) and each respondent characteristic effect on vignette evaluations is presented in the following sections.

5.9.3 Vignette Evaluations and the Experience of Recruiters

To assess the effects of recruiters' experience on their decisions, I combined respondents who screened from 0 to 50 résumés as one category and those who screened more than 50 résumés as a second category [22]. Therefore, I split respondents into two groups after combining the three categories of the respondents who screened (0, 1-9, 10-50) as one category - the second category being composed by those respondents who had screened 50 résumés or more. This was done to have a sufficient number of cases in each group and a statistical power to make comparisons and test as to whether or not there is a significant effect (see Table 5.10 and Appendix L for a detailed table)

The main finding that can be drawn is that experienced employers tend to prefer candidates who involved in extra-curricular activities. Table 5.10 shows that there is a significant cross-level interaction between extra-curricular activities and résumés screened by respondents by 1.5 per cent points, showing that employers who screened more than 50 résumés give an advantage to job applicants involved in extra-curricular activities by almost three per cent points (see Appendices L and M). This finding is similar to Piopiunik et al. (2020) who found experienced HR managers value social skills (i.e. extra-curricular activities, volunteering activities) more than cognitive skills such as GPA. These differences between experienced recruiters and less experienced

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[22] The question was 'How many résumés for graduate jobs have you approximately screened during the previous 12 months?'

recruiters might indicate that experienced recruiters have had a positive experience with job applicants who involved in extra-curricular activities.

Other significant results indicated that experienced employers prefer to hire Omanis over expatriates. Table 5.10 shows that there is a significant cross-level interaction between nationality and number of résumés screened by respondents (-2.9 per cent points). Employers who screened more than 50 résumés penalised expatriate applicants by more than 12 per cent points compared to respondents with fewer than 50 résumés, who do it by almost eight per cent points. These differences between experienced recruiters and young recruiters might indicate that have gained positive experience from recruiting Omanis.

Table 5.10: Multilevel linear models of hiring propensity and trainability evaluations (cross level interactions)

| Dependent variable | Cross Level interaction | |
	Hiring	Trainability
Number of résumés	-4.201	1.967
	(4.242)	(1.068)
Gender X résumés	0.865	-1.713
	(1.095)	(1.067)
Nationality X résumés	-2.893**	-0.311
	(1.093)	(0.655)
Field of study X résumés	-0.316	1.213
	(0.671)	(0.659)
Extra-curricular activities X résumés	1.508*	-0.426
	(0.675)	(0.478)
Place of study X résumés	-0.695	0.531
	(0.490)	(0.481)
Experience X résumés	0.708	0.321
	(0.492)	(0.482)
Referrals X résumés	0.255	-0.555
	(0.493)	(0.474)
GPA X résumés	-0.567	-0.270
	(0.485)	(0.650)
Field of study X résumés	-0.578	1.967
	(0.666)	(1.068)
Constant	75.50**	73.67***
	(7.508)	(7.552)
Number of vignettes	2108	2111

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

5.9.4 Vignette Evaluations and Organisation size

This section presents how organisational size affected vignette evaluations. Table 5.11 shows that the size of the organisation had an effect only on hiring results and no effect on their assessment of the trainability of applicants which is in line with the above F-test results. A random intercept model with all vignette factors and organisation size is presented in Column 4 of Table 5.11. There was a significant effect of the organisation size on the field of study. The results show that Omani employers in large organisations penalised job applicants with no relevant field of study by almost four per cent points compared to small and medium-sized organisations. This means that large employers were more discerning, possibly because they had greater choice and can target applicants with a relevant field of study.

Large employers preferred to hire candidates with bachelor's degree whereas SMEs considered a diploma as an acceptable threshold to get hired. Large and SME employers used GPA, relevant experience and nationality as a screening criterion. Large employers preferred applicants who referred by educational institution while SME did not use referrals as a screening criterion (not significant statistically). SMEs had no preference for rank of university while large employers prefer leading universities either from abroad or in Oman and non-leading university abroad and penalised applicants who studies in non-leading universities in Oman. Large and SMEs did not use extra-curricular activities for hiring preferences.

Table 5.11 Multilevel linear models of hiring propensity evaluations (random intercept models with respondents' characteristics, group comparisons and cross level interactions) [23]

		(1)	(2)	(3)	(4)
Factors	Levels		Small- and Medium-sized firms	Large firms	Cross Level interaction
Gender (reference: male)	Female		-2.913	-2.669*	-2.742
			(1.620)	(1.170)	(1.770)
Nationality (reference: Omani)	Expatriate		-8.577***	-10.34***	-8.644***
			(1.621)	(1.168)	(1.772)
Level of education (reference: diploma)	Bachelor's degree		-0.424	3.619*	1.795
			(1.993)	(1.428)	(1.485)
	Master's degree		0.527	2.570	0.735
			(1.987)	(1.427)	(2.166)
Extra-curricular activities (reference: yes, in a leadership position)	Yes, as a member of group		-0.889	-0.209	0.385
			(1.963)	(1.419)	(1.476)
	No		1.029	-1.697	0.709
			(1.982)	(1.432)	(2.163)
Field of study (reference: Engineering)	Business and management		2.846	-4.235**	0.296
			(2.002)	(1.432)	(1.484)
	Information and communication technology		0.541	-7.002***	0.360
			(1.985)	(1.430)	(2.164)
Place of study (reference: a leading university abroad)	A leading university in Oman		0.187	-1.071	0.482
			(2.344)	(1.667)	(1.910)
	A non-leading university in Oman		-2.381	-4.122*	-2.916
			(2.326)	(1.669)	(1.517)
	A non-leading university abroad		-3.397	-2.559	-3.407*
			(2.297)	(1.644)	(1.499)
Experience and internship)	Internship at your organisation		-1.477	-6.520***	-2.595
			(2.343)	(1.674)	(1.920)
	Internship outside your organisation		-3.070	-5.997***	-3.871*
			(2.338)	(1.665)	(1.521)
	No relevant experience		-7.636**	-8.292***	-9.306***
			(2.332)	(1.667)	(1.520)

[23] The small and medium organisation category is combined as one category as the number of the vignettes rated by respondents in small organisations is very low (89 vignettes). After combining both respondents, the total is 652 vignettes which makes it comparable to the number of the vignettes evaluated by large organisation respondents (1586 vignettes).

Referrals (reference: Yes, from abroad university with which your organisation cooperate with)	Yes, by an existing employee	0.341	-4.610**	-1.995
		(2.276)	(1.643)	(1.893)
	Yes, from an Omani university with which your organisation cooperates	2.771	-2.922	-0.770
		(2.306)	(1.656)	(1.506)
	No	0.504	-3.900*	-3.221*
		(2.325)	(1.670)	(1.520)
GPA (reference: 2)	4 out of 4 and within the top 5% of their class	9.989***	10.24***	9.112***
		(2.263)	(1.635)	(2.384)
	3.5 out of 4	4.407	9.068***	7.030***
		(2.265)	(1.658)	(1.879)
	2.7 out of 4	2.967	4.112*	3.423*
		(2.329)	(1.658)	(1.507)
	Firm size			-4.057
				(8.268)
	Gender X firm size			0.162
				(2.099)
	Nationality X firm size			-1.672
				(2.100)
	Level of education X firm size			0.877
				(1.283)
	Extra-curricular activities X firm size			-1.151
				(1.283)
	Place of study X firm size			0.843
				(0.936)
	Experience X firm size			1.722
				(0.944)
	Referrals X firm size			0.805
				(0.942)
	Grades X firm size			-0.452
				(0.928)
	Field of study X firm size			-3.646**
				(1.284)
	Constant	49.51***	51.85***	52.03***
		(4.328)	(2.989)	(3.880)
	Number of the vignettes	652	1586	2238

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

5.9.5 Vignette Evaluations and Job Type

Another respondent characteristic that is likely to affect employers' evaluation of résumés is the occupation for which they are recruiting. Therefore, I ran a multilevel regression analysis of the vignette factors with the three occupations: a mechanical engineer (the reference category), an accountant, and a software developer to investigate the impact of these occupations on employers' hiring decisions. A random intercept model in column 5 of Table 5.12 showed that there was a significant effect of occupation (using a mechanical engineer as the reference category) on the field of study and extra-curricular activities, pointing towards heterogeneities on how candidates were judged between occupations. Omani employers rewarded more job applicants with a relevant field of study by almost 19 per cent points for mechanical engineers, 13 per cent points for accountants and 9 per cent points for software developers (see Table 5.12). In terms of educational level, a bachelor's degree is important for mechanical engineer while for jobs in accounting and software developers they consider a diploma as an acceptable threshold to get hired. Employers who hired mechanical engineers preferred candidates who had experience and internships whereas those who hired for the other two occupations valued only experience, not internships.

Being a male job candidate increased hiring chances for a mechanical engineer, but it did not impact hiring chances for software developer and accountant positions. In particular, employers prefer male candidate for a mechanical engineer job by almost five percentage points; this is in line with our expectations with this male-dominated occupation which is different to the other two occupations i.e. accountants and software developers.

Having had no involvement in extra-curricular activities does not affect hiring chances for an accountant position even though there is a slight preference (by two per cent points) for those who have been in a leadership position or a member of a group. Employers rewarded less the job applicants for the mechanical engineer position who participated in extra-curricular activities by almost minus 3 per cent points compared

to the case of applicants for accountant and software developer positions (see Column 5 of Table 5.12).

There were also some differences in employers' hiring preferences and predictions of trainability of job applicants between the three highly skilled occupations researched: mechanical engineer, accountant and software developer. The main interesting result is that employers recruiting for a mechanical engineering job favoured candidates who have been in a leadership position in their assessments of trainability.

Table 5.12 Multilevel linear models of hiring propensity evaluations (random intercept models with respondents' characteristics, group comparisons and cross level interactions)

Vignette factors	Vignette levels	1 Mechanical engineers	2 Accountants	4 Software developers	5 Cross Level interaction
Gender (reference: male)	Female	-5.491***	-1.054	-1.039	-5.362*
		(1.518)	(1.334)	(2.111)	(2.361)
Nationality (reference: Omani)	Expatriate	-9.993***	-10.02***	-8.490***	-9.452***
		(1.521)	(1.329)	(2.120)	(2.314)
Level of education (reference: diploma)	Bachelor's Degree	4.484*	1.776	-0.0590	2.883
		(1.855)	(1.630)	(2.598)	(1.769)
	Master's Degree	1.878	2.615	1.111	2.871
		(1.853)	(1.629)	(2.584)	(2.939)
Extra-curricular activities (reference: yes, in a leadership position)	Yes, as a member of group	0.362	-0.411	-1.353	4.826**
		(1.843)	(1.622)	(2.541)	(1.753)
	No	3.822*	-2.099	-4.506	9.188**
		(1.867)	(1.629)	(2.571)	(2.913)
Field of study (reference: Engineering)	Business and Management	-19.44***	13.39***	-3.194	-15.01***
		(1.854)	(1.641)	(2.603)	(1.762)
	Information and Technology	-18.86***	0.0638	9.234***	-30.28***
		(1.863)	(1.628)	(2.564)	(2.910)
Place of study (reference: a leading university abroad)	A leading university in Oman	-0.205	-2.932	2.732	-4.730*
		(2.167)	(1.906)	(3.030)	(2.404)
	A non-leading university in Oman	-2.417	-4.201*	-2.628	-5.350**
		(2.179)	(1.898)	(3.034)	(1.673)
	A non-leading university abroad	-0.100	-4.285*	-4.014	-0.969
		(2.132)	(1.876)	(2.991)	(1.659)
Experience and internship)	Internship at your organisation	-6.317**	-2.476	-5.077	-6.425**
		(2.190)	(1.906)	(3.038)	(2.398)
	Internship outside your organisation	-5.450*	-3.535	-5.579	-5.449**
		(2.169)	(1.900)	(3.018)	(1.662)
	No relevant experience	-10.53***	-4.682*	-10.71***	-6.861***
		(2.172)	(1.901)	(3.013)	(1.663)
Referrals (reference: Yes, from abroad university with	Yes, by an existing employee	-3.842	-1.627	-0.811	-3.628
		(2.136)	(1.881)	(2.956)	(2.378)
		-4.378*	2.120	-2.329	-1.815

which your organisation cooperate with)	Yes, from an Omani university with which your organisation cooperates	(2.141)	(1.891)	(3.023)	(1.650)
	No	-4.612*	-0.943	-1.502	-2.057
		(2.174)	(1.899)	(3.047)	(1.672)
GPA (reference: 2)	4 out of 4 and within the top 5% of their class	12.19***	9.026***	8.713**	12.68***
		(2.137)	(1.856)	(2.961)	(3.241)
	3.5 out 4	10.46***	6.451***	6.065*	9.305***
		(2.152)	(1.874)	(2.975)	(2.371)
	2.7 out of 4	5.538*	2.752	3.008	4.793**
		(2.153)	(1.888)	(3.053)	(1.651)
	Job type				
	Gender X job type				1.417
					(1.167)
	Nationality X job type				-0.159
					(1.135)
	Level of education X job type				-0.287
					(0.728)
	Extra-curricular activities X job Type				-2.720***
					(0.718)
	Place of study X job type				-1.054
					(0.539)
	Experience X job type				-0.502
					(0.533)
	Referrals X job type				-0.232
					(0.531)
	GPA X job type				0.434
					(0.531)
	Field of study X job type				6.840***
					(0.719)
	Constant	57.16***	40.66***	56.62***	47.93***
		(3.935)	(3.526)	(5.247)	(4.576)
	Number of the vignettes	808	929	501	2238

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5.10 Conclusion

This chapter presents the results from the factorial survey experiment. It begins with an overview of analytical tools used to analyse the data. Then it presents the results of employers' evaluations of job applicants' résumés. The first part analyses the influence of personal characteristics, educational attributes, and social characteristics of candidates. The chapter then explores the role of respondents' and organisational characteristics on employers' hiring decisions, before it analyses differences by occupation. The factorial survey data shows that employers value a combination of factors during the screening of résumés: field of study, a high GPA, relevant experience and internship and bachelor's degree, a referral from educational institutions, male applicants and Omani nationals. In contrast, employers express less concern for referrals from existing employees, extracurricular activities and master's and diploma holders.

With regard to the impact of occupation types on employers' hiring decisions, the factorial survey data show that all employers for the three occupations valued relevant field of study and a high GPA. Employers who recruited for software developers and accountants had almost similar screening criteria, however, employers who recruited for mechanical engineers had some different screening criteria. They prefer male applicants, bachelor's degree holders, leading universities in Oman or abroad, relevant experience and internship, no extracurricular activities, and referrals from educational institutions.

The impact of firm size in employers' hiring decisions indicate some similarities and differences. Large firms and SMEs had a same decision that they preferred candidates with no extracurricular activities. Large employers preferred to hire job applicants with relevant field of study and bachelor's degree while SMEs had no preference for a certain type of educational level. SMEs valued relevant experience while large employers valued both relevant experiences and internships. Large employers preferred to hire candidates who graduated from leading universities while SMEs had no preferences for such criterion. Large employers preferred applicants who referred by educational institution while SME did not use referrals as a screening criterion.

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Chapter 6 Understanding the Role of Educational Background, Omanisation and Social Capital in Employers' Hiring Decision

6.1 Introduction

The previous chapter presented findings of the factorial survey to understand the factors that influence the decisions made during screening processes in three occupations. It is important to triangulate the results and to further develop our understanding of employers' motivations for their hiring decisions. This chapter aims to provide a comprehensive picture of employers' views on recruiting fresh graduates. It makes use of qualitative data from 29 semi-structured interviews with Omani employers in the oil and gas, information and communication technology (ICT) and banking sectors with reference to screening fresh graduate applicants for accountant, mechanical engineer and software developer positions respectively[24].

This chapter presents the key patterns emerging from the analysis of the interview data and aims to provide insights into the value of educational credentials, aspects of social capital e.g. referrals and contextual features such as Omanisation during the screening of résumés of job applicants. Overall, the interview data show that employers prioritise fresh graduate applicants within relevant fields of study, a bachelor's degree, high GPA, relevant experience and internship and leading universities. There were no preferences for gender or extra-curricular activities. Moreover, employers' perceptions of what constitutes essential criteria in the initial stage of screening varied based on the size of the organisation and the occupation being recruited for. These findings align with the factorial survey data except for referrals, gender and leading university.

The chapter is structured as follows. Section 6.2 discusses the stages of recruitment and selection that employers used to hire job applicants, to provide contextual information on where screening is located. Section 6.3 discusses the role of education,

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[24] See Chapter 4, Section 4.7.1 for the profiles of employers.

skills and experience and how such aspects inform the job applicants' chances of being hired. Section 6.4 describes the role of internships in employers' hiring decisions. Section 6.5 describes the role of social capital in employers' hiring decisions. Section 6.6 outlines the role of government policies in employers' hiring decision. Conclusions are presented in Section 6.7.

6.2 Stages of Recruitment, Selection and Employers Practices

This section outlines the hiring process in the three occupations covered, to contextualise the findings from the factorial survey. This is based on interview data from medium- and large-sized employer organisations. The interview data show that the stages of recruitment and selection employers in Oman followed are aligned with those documented elsewhere in the literature for other countries (e.g. Carless 2007). Differences attributed to organisation size (medium, large) tend to be small.

6.2.1 Overview of the Hiring Process

There are several steps that Omani employers in this study tend to follow during the recruitment and selection processes (see Figure 6.1). The first step in the recruitment process is to identify the hiring need, which might be a newly created or recently vacated position. The second step is budget approval for new vacancies, obtained from senior, middle, and junior management levels depending on the recruitment policy of each organisation. The next steps include developing a recruitment plan, writing a job description by determining the tasks, responsibilities, knowledge, and skills required to perform the job, then advertising the position. Some employers source new recruits by advertising internally and/or externally using different channels, such as the organisation website, local newspapers, social media platforms, the Ministry of Labour, and recruitment agencies. HR staff then compile a list of candidates from the applications received, based on any essential eligibility criteria listed in a job description, and submit it to a line manager for final approval before inviting applicants to the next stage of the hiring process, such as a test or an initial interview. The next steps relate to verification and vetting, where some employers verify information before inviting a candidate to an interview while others do this after the final interview. These steps are designed to verify information that candidates provide on their résumés

by employers calling candidates to review the applications and to collect further information that may be missing from the résumé, such as marital status[25] or place of residence that the employer perceives as important before including the applicant on the shortlist. This process can include contacting the candidates to discuss their start date availability and other working conditions that may not be written in the advertisement, such as job location and salary expected. Similarly, this process aims to reduce the number of applicants so that only the most suitable candidates (i.e. based on any essential eligibility criteria perceived by the employers) reach the later stages of the hiring process. Subsequently, employers conduct tests and/or final-round interviews to select the suitable candidates. Employers then notify candidates of their hiring decision. In the final step, the HR department processes the application and invites the candidate to begin the onboarding process. Figure 6.1 outlines this process graphically.

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[25] It is a common practice across employers in Oman to specify gender or marital status in job advertisements, which is not permitted in other countries, such as the U.K.

Figure 6.1 The recruitment and selection process across employers

Preparing		
Identifing hiring needs	Budget approval	Writing a job description

Sourcing	
Advertising e.g. firm website, social media platforms e.g. LinkedIn.	Through database of Ministry of Labour

Screening and Shortlisitng	
Screen job applicant resumes by an HR department and/or a line manager	Compile a list of candidates to invite them for the next stage

Selection
Conducting tests and/or interviews

Hiring
Contact successful candidates to start onboarding

Source: Interview data

6.2.2 The Screening and Shortlisting Stages

I outline here a combination of techniques that employers used to screen and select job applicants and the rationale(s) behind them.

Of the 29 employers interviewed across all sectors and organisations, 17 followed a ranking technique. This HR manager outlines such a process:

> We go through each CV, we do not miss out on any CV. So, some CVs that are sent to us even if they are not suitable for this particular vacancy, we keep them in our database for other vacancies or other positions that might come up in the future. And from then on, it depends on the job description that we have assigned to this vacancy, and we start shortlisting candidates. The HR manager, myself, is basically responsible for this until I come to a shortlist of, let us say, five to 10 candidates. After I shortlisted them, I go through the CVs with the department head. So, if it is a sales agent, I go through it with a sales manager. If it is an accountant position, I go with it with the accountant manager, and then we select who we want to see. And usually, we see them all. If the first batch of interviews is not successful, and then we go through the second batch, because you know, I would rate the CVs that I have received. So, let us say I have I shortlisted to 50. So, I will rate them, 1,2,3,4 and 5, all the way to 50. So, the first batch is 1 to 10. That is what I share with their manager, and we see them if they are not successful, then we go for the next batch. [Miraj, HR manager, medium organisation, recruiting for accountant]

The following employer elaborated on how she used a ranking technique to sort out job applicants and provides detail on what is included in the ranking process. This relatively widespread technique across large- and medium-sized employers (nine employers described this process in detail) matches the technique implemented in the factorial survey experiment of this study to elicit employers' hiring decisions:

> We screen the CVs; we do a technique called ranking. So, we have like an Excel sheet, we put the requirement that's known in the job description. The most important things that are required like, for

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example, the education background, the number of years of experience, the basic things that are required in the job description, and then we rank the CVs based on the points achieved. So, the highest number, like we pick five or 10, we call them for an initial interview by phone. For example, from those 10 we pick the best five, we call them for face-to-face interviews. [Sameera, HR manager, large organisation, recruiting for accountant position]

However, one medium-sized employer did not take all applications through a detailed selection process, instead using fewer filters and lower, i.e. minimal, thresholds; but if the pool remains large, he uses GPA as a higher threshold, which they find more efficient because they receive thousands of applications, as illustrated in the following quote:

When it comes to the graduates' market, we expect to receive plenty of applications, thousands of applications, and we cannot take them all through our detailed selection process. So, normally we filter them based on who is meeting the minimum requirements. So minimum requirements normally are the education certificate. They are Omanis and job-seekers that we will filter, that will shorten the list of the applicants then still we will have more than 1,000 then we will use the GPA as a cut off points. So, if we are planning to, invite, let's say 500 applicants, we will select the top 500 applicants using the grade as a filter tool. [Abdullah, HR manager, medium organisation, recruiting for mechanical engineer]

Whilst this interview extract is from a medium-sized employer it is something of an exception to the rule; overall the interview data suggest that the hiring practices of large-sized employers tend to be more comprehensive and standardised in terms of screening résumés than those of medium-sized employers. Large-sized organisations tend to have more financial support, which enables them to search intensively and use different recruitment strategies to attract candidates and test them in their assessment centre and check on referrals (see Marsden 1994; Marsden and Gorman 2001). This can

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be related to the lack of resources which affects medium-size employers' hiring practices, while large-sized employers tend to have access to more resources (Barber et al. 1999; Protsch 2017; Mori and Stroud 2021). Large-sized employers need to have more comprehensive hiring procedures to speed up the process of screening as the resources available to them (e.g. more channels to source job applicants) tend to generate large pools of applicants. Indeed, large-sized employers interviewed in this study reported that they received many fresh graduate applications. This may be due to a range of reasons, including the reputation of the employers among graduates, wage differences between large- and medium-sized employers, but perhaps, relative to the Omani labour market, it is due to the large number of graduates and limited number of vacancies which make graduates eager to apply for any vacancy (i.e. skills mismatch) when applying has little cost for the candidate. This is illustrated by the comments of the following employer who was hiring for mechanical engineer positions:

> Actually, out of the 200 CVs that I received, I'd say like, maybe a hundred of them are actually fresh graduates or someone who has like a completely different background, but people are just like applying online. [Salma, HR Generalist, large organisation, recruiting for mechanical engineer]

In addition to the screening of résumés a few employers, from large-sized organisations mainly, reported that they use assessment centres to screen job applicants, while medium-sized employers reported that they cannot afford such facilities due to the high cost. Large organisations can afford to purchase or subscribe to online assessment platforms for 'skills filtering', which tend to be expensive. The use of assessment centres helps employers to narrow down the pool of job applicants, by using the cut-off score from the assessment. Meanwhile, SMEs often complain that they find it difficult to compete with large organisations when it comes to recruiting; as a result they are often forced to take the less talented and have less robust processes (Mori and Stroud 2021).

6.2.3 Who Screens Job Applicants?

Recruitment and selection are not solely the responsibility of HR departments, but large-sized organisations tend to involve line managers and senior managers in helping to specify requirements; HR managers then write the job description based on recommendations from the line manager of the department requesting the vacancy. Furthermore, screening against the job description by an HR team followed by a second screening by the line manager of the required position is common practice across large employers in Oman, as the following HR manager explains:

> So, the second step is, of course, screening and shortlisting the candidates. So, we screen the candidates from an HR point of view according to the job description that we have for the, against the, specified position. And after that, we share it with the line manager, the business line manager who is going to have another or a second look to screen those CVs, whether he would have the potential that he's looking for or not. Once he shortlisted the candidates that required candidates let's say he shortlists three candidates for the position and then we go to the following step which is the interviews. [Mazin, HR manager, large organisation, recruiting for accountant]

The reasons for line managers in large-sized organisations being involved in the screening of résumés is that they are more familiar with the technical skills required for a job, as this HR officers states:

> I start the filtering process. But I will apply the criteria that the line manager write-in in the job description. If they ask for a fresh graduate, so I will apply that as a first filter. If it is experienced from for example zero to three years, then I will apply this filter so if we have candidates who have experienced of more than three-years or five then I will exclude them. Then I will send the list of candidates for shortlisted candidates so the line manager then he will do another shortlisting

because he knows the technical things. Then he will send back the list to me. [Lujain, HR staff, large organisation, recruiting for software developer]

Moreover, this sharing of the hiring decision between HR departments and line managers within large-sized organisations can be explained by the monitoring and scrutiny of the recruitment process:

We have a system in place called IRAK [an online recruitment platform]. It's a recruitment system, and that recruitment system is auditable. And the reason we emphasise that people apply through the system is that if for example, internal auditors come to audit us, we have evidence of, from what time or when the individual applied and if state auditors as well from the government, come to audit us, and they've done that as well, they can check from what time the person has applied, when did we shortlist the applications, and you know, then we show the whole process of what we do. [Assad, HR manager, large organisation, recruiting for mechanical engineer].

Here, it is evident that internal and/or external bodies create parameters for sorting job applicant résumés, which as the employer above notes is to minimize bias and ensure that recruitment policy in the organisation is followed (and accords with Omanisation policy directives) (see Section 6.4 for further discussion).

6.2.4 Summary

This section indicates that, despite the differences in the recruitment and selection process between large and medium employers, there are common practices among them, such as reliance on specific job description criteria. Moreover, the resources available to large-sized employers compared to medium-sized employers enable them to generate a large pool of candidates resulting in the need to apply more filters to sort out the applicants. Overarching these differences and similarities at organisational level, I find that employers' hiring decisions are also subject to pressures from the external environment, such as government and auditors, to meet the requirements of

Omanisation (see Section 6.4 for further discussion). The following sections discuss in further detail the specific factors that employers consider during the hiring process and the rationales behind them, beginning with the role of education.

6.3 The Role of Education in the Hiring Process

6.3.1 Introduction

This section explores employers' perceptions of the role of educational characteristics (i.e. field of study, level of education, rank of university, GPA) in hiring decisions. Several studies investigate the value of educational credentials in labour market outcomes in different contexts (Di Stasio 2014; Di Stasio and Van De Werfhorst 2016; Fossati et al. 2020; Wiers-Jenssen et al. 2020; Protsch 2021). Yet, these studies do not look at the value of educational credentials within the specific context of a rentier state, and Oman as a developing nation aiming to diversify its economy. The section starts with an overview of the characteristics that Omani employers use to screen job applicants' résumés and provides an overview of the signals used to check those characteristics, which is then followed by a detailed analysis of each educational characteristic. The characteristics obtained from the interview data are almost identical to those employed in the factorial survey, with some exceptions such as Omanisation and favouritism (based on social capital, which will be explored in detail in the following sections).

6.3.2 What Characteristics of Résumés are Important?

I asked employers about the most important criterion with which to screen job applicants and the reason for its use. At the beginning of the interview process, I aimed to not impose any characteristics, but to let employers identify the most important aspects from their point of view. I then asked them to justify their choices. Subsequently, I asked them to discuss other relevant characteristics that I had identified from the literature. Employers were not presented with a list from which to choose, as occurred in the factorial survey experiment, because I wanted to get their reflections on what they considered the most important criterion to sort job applicants

in a 'organic' way. From this, I analysed responses to identify key criteria used at the screening stage and ranked them in terms of their importance by occupation type (e.g. mechanical engineer, accountant, software developer) and size of organisation (medium or large) to investigate if any distinctive patterns of criteria emerged. Regarding educational attributes[26], the interview data suggest that employers use education characteristics (e.g. relevant field of study, GPA, level of education, and university reputation), each of which is described and critically analysed in turn to select from a pool of job applicants. These factors varied between large- and medium--sized employers and by occupation (as academic considerations are, for example, somewhat less important for software developers), where professional certificates [27] are more relevant (experience is relatively more important for mechanical engineering). The following subsections discuss these factors in detail.

6.3.3 Job Specific Skills: Field of Study and Professional Certification

When employers were asked about the first filter they apply to shortlist résumés of job applicants, the majority (24 out of 29) commented that they use educational qualifications as a first filter. The term 'qualification' was used to refer to level of education and field of study, which will be discussed in detail in the sub-sections below. Professional certificates are a relatively common filter used by employers to screen out candidates for accountant and software developer jobs (these are used by three out of nine employers in the IT sector and four out of 10 in banking sector).

The interview data indicated that Omani employers consider having a relevant degree and experience as crucial to hire applicants in the three occupations to inform employers about the skills and knowledge acquired in educational institutions. This is in line with the result of the factorial survey experiment, as it showed that a relevant degree and experience are the deciding factors in shortlisting job applicants' résumés. Hence, employers use such factors to predict the adequacy of the knowledge and skills of job applicants to meet the requirements of the position, which is quite typical of

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[26] Other factors that the employers use to screen job applicants, such as social and demographic factors, will be discussed in sections 6.4, 6.5, and 6.6.
[27] For example, Association of Chartered Certified Accountants (the ACCA), is a highly respected professional qualification for accountants.

work focused on the relationship between field of study and labour market outcomes (Grotkowska 2011; Ferguson and Hasan 2013; Leung 2014; Humburg and van der Velden 2015; Merluzzi and Phillips 2016; Van Belle et al. 2018).

The employers interviewed rely on the relevant field of study because they view education as a contributor to the skills and knowledge of job applicants to meet job requirements, as explained:

> Because the education contributes to the knowledge of the candidate. Still, we need to dig deep on his or her ability, mental and personal abilities. But we need to make sure that the knowledge base has been already checked through the education. So, people who are getting relevant, who have studied in a relevant specialisation, for sure they will get a higher chance. [Abdullah, HR manager, medium organisation, recruiting for mechanical engineer]

Given that this thesis focuses on high-skill occupations, it is expected that employers might rely on relevant qualifications. Although the relevant field of study is likely to weigh heavily in employers' screening practices due to the focus on the technical occupations in this study, there are some exceptions where employers mentioned that they recruit candidates with a broader discipline for accountant and software developer positions (but not for mechanical engineers) if they are science or engineering graduates. The reason for this could be that accountants and software developer positions are considered more 'generic' if graduates have science, technology, engineering, and maths (STEM) skills. This employer from the banking sector notes that:

> If I have a personal banker, we have actually interviewed some people with the engineering background, and many graduates who graduated from abroad, engineering and you know, they have been looking for jobs and they have applied and we have interviewed them and we found them very high calibre of individuals, so why not if they are willing to do the job and they have a good understanding of the job and they are

willing to start their career in the banking sector and they understand … that they want to take this job as a long term, not the short term. [Iman, HR staff, large organisation, recruiting for accountant].

A further reason to explain this heterogeneous impact of field of study between the three occupations comes from successful personal experiences of employers with hiring graduates for IT job from elsewhere e.g. agricultural engineering background as this employer notes:

I had one of the resources, who's an agricultural engineer. He's the best. He's actually leading the Security Division in our organization. He's a top-notch guy. He is actually part of so many organizations like ethical hacking or organizations worldwide and he's so smart. He's a genius guy. And again, maybe because of the education system, he comes from a country where he only got like Agricultural Engineering, but his interest, his thinking is more of . . . IT. [Monther, IT manager, medium organisation, recruiting for software developer]

Relevant field of study is not a key determinant of recruitment for the above two employers who they accepted candidates without a 'matched' field of study, provided that applicants committed to a long-term contract so that employers will want to invest in training them, as others have also noted (Green and McIntosh 2007; Ortiz and Kucel 2008). The skills required to perform such roles can be found in a wide range of disciplines in science, technology, engineering, and mathematics (STEM) and in general, such work requires a broad set of skills in addition to subject knowledge.

Furthermore, the field of study is less important for employers who aimed at recruiting candidates for future leadership positions and for a long-term focus of their business growth. Some employers have paths of progression for new job applicants to climb the ladder in the organisation and be prepared to take managerial positions. They then consider the leadership potential, which was a widespread view among employers in the banking sector.

Interviewees also noted that having professional certificates in relevant fields such as Association of Chartered Certified Accountants (the ACCA) qualification for accountants, is an added value to job applicants because these certificates give applicants skills that they can plug into the workplace directly as these two employers indicate:

> We consider these certificates as additional skills and an advantage for the candidate, and it gives the candidate an additional skill to help the company to solve certain problems. This gives you an indication that the candidate is willing to learn, and he is following up on the latest advancement in technology as you know in IT every day there is a new thing coming. [Qasim, CEO, medium organisation, recruiting for software developer]

> Because the bachelor's degree will give you all the knowledge that you need in different disciplines and there will be a few semesters where they will go deeply in that I mean into the specialisation; however, the professional certificate will give you the full plate flavour of that of the specialisation itself. It will be easy to train, they will understand much better the concepts and they can cope with the process faster. [Sami, HR manager, large organisation, recruiting for accountant]

From the employers' perspectives, it is evident that they respond to having more exposure to a job-relevant field of study as providing sufficient information about job applicants' skills and knowledge. However, employers also prefer candidates who have experience and professional certificates in addition to a relevant field of study, as they are associated with work-readiness (see Chapter 7 for a detailed discussion).

6.3.4 Level of Education

Findings from the factorial survey experiment and interview data indicate that employers use level of education as a determining factor in the screening of job applicants' résumés. When employers were asked in the interviews about the minimum level of education required from job applicants to apply for positions (i.e. mechanical

engineers or accountants or software developers) at their organisations and the reason, twenty-one employers considered a bachelor's degree as a minimum requirement to accept job applicants. Both medium and large employers interviewed reported that they target mainly bachelors' graduates. However, there was some preference for diploma holders among SMEs and master's degree holders for the three occupations were of interest across all employers. However, the employment rate of postgraduates in the private sector in Oman remains relatively low, when compared to undergraduates, as firms tended to avoid paying the higher premium/wages for jobs that can be executed by undergraduates (Ministry of Higher Education Research and Innovation 2015). Indeed, lower levels of education were preferred by some employers: one employer from the IT sector accepted only applicants with a diploma and another from the banking sector used the threshold of higher diploma holders and above, with both aiming to avoid paying higher wages. However, overall, those holding a bachelor's degree (for the most part in the relevant field) was the main preference across those interviewed (as it was from the factorial survey data), with the rationale for this preference further explained in what follows.

The employers linked their overall preference for bachelor's holders over diploma holders because the former are viewed to be much easier to train than the latter. Employers, therefore, place the lower trainable candidate at the bottom of the queue of the pool of job applicants as these large-sized employers articulated:

> I feel the higher education is the better trainability of the person and I'm seeing it in day-to-day life where training a batch, batch of bachelor's is much easier than training a batch of people who hold a diploma. [Binu, HR manager, large organisation, recruiting for accountant]

This is consistent with the queue theory (Thurow 1975) argument that employees acquire job-relevant skills by participation and involvement in on-the-job training. Even with matched education and experience candidates need to learn on the job, and therefore employers care about trainability. Employers were strongly of the view that

lower level of educational qualifications signals that the candidate may be less trainable or willing to learn. Candidates with a higher level of education signal to employers that they are more trainable and willing to learn as this employer commented:

> They have been exposed to a higher number of years in study and their mentality is ready to be trained more and to be exposed higher. However, with a diploma usually you want them for a specific job that is very difficult for them to grow and if they will grow, they will be only at the supervisory operational level. [Sami, HR manager, large organisation, recruiting for accountant]

For software developers, employers prefer to hire fast learners who will be easy to train as software changes quickly over time and there is a need to grasp such developments in the field:

> Basically, what happens is the level of interest he's giving for his curriculum. For example, in the software industry, if you see every year there is a change happening. So, if a person he is taught at diploma level and he is not much interested to learn the new things in software, it becomes a little bit difficult for him to continue, because next year, he has to learn something new. If he's not having a habit of continuous education, he'll always end up struggling like even if I'm using nowadays Oracle 12, tomorrow it'll be 18, after that it will be 20, something like that. If he's not ready to learn that one, it will be difficult. [Sebastian, operational manager, large organisation, recruiting for software developer]

Trainability, however, was not always the reason that bachelor holders were preferred. Some employers associated degree holders with greater possession of certain skills and attitudes, which would be of benefit to the business, such as initiative and capacity to cope with challenges. Employers added that education is a signal of accepting and coping with new challenges, as this employer explains:

For the reason that somebody who has gone through a bachelor's program must have done more studies in terms of theoretical knowledge maybe practical knowledge at the university more than somebody who has done just done a diploma level. So, the assurance that somebody with a degree must have gone through a challenging process, and maybe there's a project that he must have done at the end of the year, then that gives you confidence that this person will be able to cope with the challenges. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

This employer elaborates more on the value of having a bachelor's degree as it shows commitment and exposed candidates to more English language which is essential in the workplace as it is considered a second language in Oman (as well as being the lingua franca of trade and commerce) whereas Arabic is the first language:

To start with, in most of the cases, those who finished their bachelor's degree, they went through a longer period of education which has shown maybe higher commitment compared to diploma […] and secondary school leavers. Also, the level of their English language, most of the cases it's better than the other group. And because most, not most all of our development programs are in English, it's much easier to develop someone who is better in English. [Abdullah, HR manager, medium organisation, recruiting for mechanical engineer]

This employer from a large organisation justified using academic qualifications as a screening criterion as he need to eliminate the large number of résumés by selecting bachelor's holders over diploma holders as he sees them as initiators:

Sometimes people will come, and they said that education or academic qualifications are not important, as much as the competent people but for me I received thousands of CVs. I have to keep criteria to filter them. So, I look into the academic qualification. And I know for a fact, if you compare diploma holders with the bachelor holders, you'll see

the difference in their commitment, one, and two you will see the difference in, you know, in initiating, you know, usually they [diploma holders] are executers, but bachelor's degree [holders] are initiators. So, they take the lead by default, not in all cases, but I'm talking about in general. [Bashar, HR staff, large organisation, recruiting for mechanical engineer]

In general, employers associated bachelor's and master's graduates with trainability and possession of soft and social skills to cope with the work environment.

Qualifications did not offer employers sufficient information about skills, in particular soft skills. Employers mentioned that the technical skills can be assessed through educational qualifications (Grugulis et al. 2004). Some large organisations reported that they assess hard skills through a wider set of sources including qualification transcript and psychometric, aptitude and ability tests:

We asked for the marks of each subject. It's a full transcript we asked for... also when you do the ability test, it is called a numerical verbal abstract version and you can already see how this person has scored in the numerical side ... we do an aptitude test for everyone that gives you in terms of how strong they are in the numerical ability, verbal ability and abstract thinking. [Binu, HR manager, large organisation, recruiting for accountant]

However, the importance of soft skills in enhancing graduate employability has increased over the last two decades (Grugulis and Vincent 2009; Deming 2017a; Deming 2017b; Succi and Canovi 2020). Most of employers - especially of accountants and mechanical engineers - consider soft and social skills as desirable. Interviewees reported that they do not use such skills as formal screening criteria early in the recruitment process, especially during screening résumés, because they prefer to assess such skills in later stages of the hiring process where they can use behavioural interview forms or a range of attitude tests. Soft and social skills are less important for IT employers compared to technical skills. In general employers mentioned repeatedly in

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the interviews the two main skills and attributes they prefer: (i) communication skills and (ii) attitude. The following employer placed a high value on communication skills:

> When it comes to teamwork, communication skills, these are what we think that they are very crucial for any candidate to stay alive in the workplace. [Abdullah, HR manager, medium organisation, recruiting for mechanical engineer]

In addition to the above medium-sized employer considering communication skills as essential in his workplace, the following employer shared his concerns regarding the importance of work attitudes in his hiring decisions:

> Attitude and behaviour are very, very important. Very important for me as a recruiter . . . and why I tell you why it takes a long time to shape the behaviour or the attitude. It's like a built-in human being, or otherwise the technical thing, you can build on it. You can learn it, you can build on it in easy, just in a short time. [Adil, HR manager, medium organisation, recruiting for accountant]

Thus, even though the majority of employers acknowledge the value of soft and social skills, SMEs do not use these as screening criteria in the initial stages of hiring, partly due to resource limitations, whereas large employers mentioned that they conduct assessment tests and have assessment centres. SMEs mostly reported that they use information from résumés and interviews as this employer mentioned:

> His CV gives an indication [of soft skills], but we cannot depend on the CV a hundred per cent, but during the interview, we have a team that someone is looking for [assessing] the behaviour or someone is looking at [assessing] the qualifications. So, we set our questions to get all the things we need from the candidate. [Jabir, HR manager, medium organisation, recruiting for mechanical engineers]

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6.3.5 The Role of Experience in the Hiring Process

The second most frequent filter is years of experience. This was used by 13 employers out of 29. Again, there were some differences by occupation. Out of those 13 employers, seven were recruiting for mechanical engineers, three for accountants and three for software developers. As such, experience emerged as a marginally more important criterion for recruiting mechanical engineers. An employer from a large organisation mentioned that the reason for this was that it might help to avoid expensive mistakes when dealing with machines, as this might have significant costs (e.g. fixing machinery broken by inexperienced workers) and is also a safety issue. Contextual factors related to the sector are important in shaping the value of experience vis-à-vis credentials:

> Without experience we do not hire for the technical [positions] because this is a very safety concern there. So, until they have industry experience or similar types of experience, we cannot have them. [John, HR staff, large organisation, recruiting for mechanical engineers]

The following employer narrows down the pool of job applicants by focusing on the technical experience of dealing with a specific engine to avoid training costs. The company is working on funded projects from the government, so it is necessary to plan to complete the project on time. Hence, they prioritise graduates with industrial experience to save time and training costs:

> So, when we are looking at the CV, we are concentrating on the type of engine that that he is familiar with and working with. [Younus, HR manager, medium organisation, recruiting for mechanical engineers]

It is important to mention that four large employers did not consider applicants without experience even degree holders for entry level-positions. One employer who hired mechanical engineers stated that the candidate should have a degree with two to three years of experience and three employers who hired for accountants said that they consider candidates with a diploma, if they have three to four years of experience. In

this respect, industrial experience might be considered by some employers as a replacement for higher levels of educational qualifications or a complement to it. Certainly, employers perceive education and experience as complementing each other, as others have also noted (van Smoorenburg and van der Velden 2000; Weiss et al. 2014). Kulkarni et al. (2015), for example, found that recruiters were willing to interview and hire applicants with less than the required education if they had sufficient working experience. The following HR manager from a medium-sized Omani organisation justified the importance of experience in relation to qualifications and trainability:

> So, you have a diploma graduate and a bachelor's degree graduate, they could be on the same level with, maybe a bachelor's being easier to train. But if you have a diploma graduate with some experience, then they will be equal.

> *(. . .)* Because I totally believe what you learn in college is a wealth of knowledge and if you don't have that extra knowledge, you need to at least be compensated with some years of experience. [Miraj, HR manager, medium organisation, recruiting for accountant]

In general, employers see experience as preferable for the three occupations, but it is more important for mechanical engineers, and employers use it as a screening criterion in addition to the other factors mentioned above.

6.3.6 The Role of Academic Performance in Initial Hiring Screening Decisions

Previous studies found that grades serve as a screening criterion among employers in England (Di Stasio and Van De Werfhorst 2016), in Italy (Di Stasio 2014) in the US, (McKinney et al. 2003) in Norway (Kittelsen Røberg and Helland 2017) and in Germany (Protsch and Solga 2015). Queue theory argues that employers use grades as a screening criterion because they can derive information about candidates' readiness to learn new materials, and their effort and motivation to succeed. Candidates with higher grades are perceived as more trainable and as a better fit (Brown and Campion 1994; Thoms

et al. 1999). In general, it can be expected that good grades should translate into labour market advantage in the transition from education to work.

When I asked employers whether they use GPA as a filter when screening job applicants' résumés and the reason, I found that just over half of employers reported using GPA as a filter criterion to sort out job applicants. They set a GPA threshold that a candidate was supposed to meet in order to pass the résumé screening stage. Employers who considered GPA in their initial hiring screening decisions argued that GPA is associated with hard work, productivity, and responsibility and is a low-cost filter especially with a large pool of applicants:

> Like you benefit the company because his productivity will be higher, like, if I enrol her or him like a master's or any certification [training] that the company needs [Salma, HR Generalist, large organisation, recruiting for mechanical engineer]

> It shows that he has a sense of responsibility. If he's taking care about his education well, then he will take care about his job. [Younus, HR manager, medium-sized organisation, recruiting for mechanical engineer].

> Now because we feel that that somebody with a 2.5 GPA must have worked very hard at university or college and hopefully that will translate into the workplace as well. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

The above employers associated GPA with productivity and hard work. This finding is congruent with previous empirical studies that found a positive link between grade and entry to the labour market (Bernardi 2003; Kogan et al. 2011; Matkovič 2011).

GPA, for some employers, is also used because it is a low-cost way to reduce the size of the pool, as mentioned by this employer:

> The GPA is a sort of passport to be invited for the ability test. It is done automatically by the system normally because we know that we will

filter them by GPA, we ask them to enter the GPA. So, then we can extract a report which is an Excel report in an Excel spreadsheet, and we can filter them easily. [Abdullah, HR manager, medium organisation, recruiting for mechanical engineer]

The following quotes suggest that a threshold around GPA 2.5 is commonly used rather than a fine-grained indicator as is often assumed in the literature. Moreover, the GPA is used in accordance with supply and demand factors, as is likely to happen in relation to other criteria too:

We start ranking them by the GPA, using the highest, … then we can invite all of those who meet the minimum requirements -like say bachelor's degree and 2.5. Well, that guy, he could be a theory guy and not a practical guy. Sometimes, but that's not always the scenario, you need to find out, interview the candidate, that doesn't mean that if he has a high GPA, then he is the right candidate. Sometimes, I mean, it depends. Again, for an accountant position, you may find people who have a low GPA, and they are much better. [Sami, HR manager, large organisation, recruiting for accountant]

There are some standards which people will go through and people ideally, should have probably had a GPA score of three, but three will be very high because of the demand versus supply equation. If you have high demand and low supply, even if you put the three, I will not get people, we might not hire people, so I don't want the business to suffer. So currently, as a bank, we decided for a long time back that we would like to have 2.5 as a cut off. [. . .] However, in my experience of people who have more than three, they have better learnability compared to others. [Binu, HR manager, large organisation, recruiting for accountant]

Employers thus raise or lower the GPA based on the number of job applicants or *"if the vacancy is required to be filled immediately"* [Humood, IT manager, medium-sized

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organisation, recruiting for a software developer position]. Similarly, McKinney et al. (2003) found that the use of GPA rose as the applicant pool size increased.

However, there were also important differences by sector regarding the importance of GPA, as some employers from the IT sector did not consider GPA in their initial hiring screening decisions, because they claimed that they had low trust in Oman's educational institutions:

> See if I'm gonna make the decision on the GPA, I will tell you that will not be a fair [. . .] some of the colleges have a connection with the person, that would give him a high [grade]. Some of the candidates have a good relationship with the teacher. So, [the teacher] give[s] him an even higher grade and it's happened, I mean, we study, and we knew, we saw that one and our level, our group, GPA, I think we shouldn't focus on that. [Ahmed, HR manager, large organisation, recruiting for software developer]

> From what I have seen, I think we should not look at the GPA as we used to look at it or we used to give it high consideration. Sometimes, we have graduates from Sultan Qaboos University and we can say that the GPA reflects their level of education. On the other hand, you find candidates from private universities in Oman just know the name of the major they have studied but they don't know what the content was, and some Asian countries and sometimes fake degrees, and we don't trust those qualifications as a major criterion or a deciding factor. [Qasim, CEO, medium organisation, recruiting for software developer]

Some employers reported GPA to be a too restrictive measure of the potential contribution of candidates to the company and it is not always associated with ability to learn. This employer from the IT sector explains what is more important:

> From our experience, GPA is not important because sometimes you find candidates who have a [high] GPA but they are not good at work and some candidates who have a low GPA and they are doing well in work

and that depends on the communication skills, attitude, behaviour, personal skills. We think these are more important than the GPA. We need a candidate to have the ability and willingness to learn and so for many graduates, we focus mainly on the communication skills because we consider it as an essential skill even if a candidate has knowledge of his field, but his communication skills are poor then his work will not be that good [Qasim, CEO, medium organisation, recruiting for software developer]

Retention is another factor why some employers did not consider candidates with a high GPA in some sectors. As this employer from the banking sector who recruits for accountants explained:

People with a high GPA, their expectation will be very high. So, to retain them within the organisation depends on the organisation [. . .] It's not a matter of selection but also of retention of them. [Sami, HR manager, large organisation, recruiting for accountant]

The banking sector is very competitive in Oman and some banks have difficulties retaining their employees. This idea of loyalty was also mentioned in the same sector by another employer who preferred to recruit fresh graduates and train them from the beginning without making GPA a filter. The thinking is that they might be loyal to the bank for the opportunity given to them to access the labour market and as the organisation that hired them first. As Iman from the banking sector commented:

So, what we want to do is actually recruit people with a degree. So, this will be their first job. So, their loyalty will be more to [the] bank. [Iman, HR staff, large organisation, recruiting for accountant].

These findings draw our attention to the importance of considering the complexity of the recruitment and selection process and providing more understanding and greater clarification to the findings of the factorial survey experiment. The relationship between GPA and hiring decision outcomes

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diminishes when other candidates' attributes, such as attitude, are taken into account:

> As an HR person, I do not go for GPA. It's very important for me to see the attitude and behaviour because knowledge can be gained but behaviour can't be changed . . . if we go and judge based on the GPA, I think it's unfair because sometimes people do not excel in their academic background. [Sameera, HR manager, large organisation, recruiting for accountant]

Employers used different GPA thresholds to promote gender diversity or other characteristics in their workforce. This employer used differential GPAs and adjusted the entry mechanism as a way to find a balance between the number of males and females in her organisation as she claims, from her experience, that female graduates who applied to her organisation had higher GPAs than males:

> Even in the market at the moment, you have more females than men graduating. . . . more females will apply than males and more females will have higher GPAs than men. So if you want to balance it sometimes also you have to take things like that into consideration meaning, like, for example, I have to raise the GPA for the female to a certain level but then it's less for the male because I want for example, if I say I want to send 100 people to assessment, then basically I want 50 males and 50 females, I don't want to send 80 females and 20 males, because . . . I'll end up having one male maybe or two males out of 18 which is not a good diversity . . . we want diversity. [Iman, HR staff, large organisation, recruiting for accountant]

Overall, GPA appears to be just one of several recruiting screening criteria and is not often the primary selection criterion, but instead is used with a combination of other factors to meet employers' needs. Moreover, the importance of a high GPA varies across occupations and sectors and sometimes across groups of candidates, with GPA often used as a threshold and its importance is not constant across employers. This is

consistent with Protsch and Solga (2015) who argue that employers value GPA along with other skills and apply thresholds instead of a fine-grained linear ranking of applicants.

6.3.7 The Role of Reputation of Educational Institutions in the Résumé Screening Process

Employers were asked to indicate whether they prefer job applicants who graduated from leading or non-leading universities and the reason. Just over half the employers consider leading universities as desirable, but they reported that it is not a formal screening criterion. They might consider the ranking of the institution in the later stages of the hiring process (i.e. interviews) if the pool is very competitive. This finding supports evidence from the factorial survey experiment and is also consistent with Souto-Otero and Enders' (2017) research, where employers in the private sector were found to regard the ranking of universities as less important than is often claimed, such as in the research of others (Brewer et al. 1999; Chevalier and Conlon 2003; Klein 2021). Coles et al. (2013), for example, argue that there is a link between the quality of candidates' educational institutions and their employment prospects. However, Rivera (2011) found that the prestige of the university is more important than the content of education for elite employers in the US.

In part, this may be related to the fact that the private sector is not the first choice for Omani graduates as they prefer to work in the public sector which offers better job security and higher wages (Al-Lamki 1998; Ministry of Higher Education Research and Innovation 2015; Ministry of Higher Education Research and Innovation 2017). Another point is that there is no national ranking for higher education institutions in Oman (only the Sultan Qaboos University is listed in international ranking systems such as QS ranking (ranked 368) and Shanghai ranking (901-1000) and is ranked at number 801–1000 in The Times Higher Education). Morley and Aynsley (2007) found that UK employers placed a high value on leading universities and use it as a signal of job candidates' potential productivity. They reported that the UK employers use League Tables to sort out job candidates. The absence of such ranking tables is one reason why employers in Oman

do not consider it in their ranking as this employer reported that they do not consider such criteria in their screening, even though it might be considered in the future for their recruitment, albeit not at the first stage of screening but at a later stage:

> . . . To be honest, we don't go for that one. Whoever applies goes through the assessment, and those finally selected should really prove themselves, and then we can find out who's coming from where. Apart from that, yes, I like this point, maybe we can look at it even from our point of view. [Mazin, HR manager, large organisation, recruiting for accountant]

Some employers nevertheless provided arguments for hiring graduates from leading or non-leading universities. This large employer from the oil and gas sector perceived that leading university graduates are more trusted due to the quality of education and argues that job applicants who studied at leading universities have gone through scrutinised programs while non-leading universities have lower quality content:

> Leading universities have got a name, you know, attached to them, and therefore, you tend to believe that their programs are guaranteed, as these universities are scrutinised by the authorities in their home countries. Now, there are plenty of non-leading universities where the pass mark is easy to get … the scrutiny that is going on in those universities is not as strict as in a leading university. The leading university will give you a candidate who has gone through challenges within the university system, and the system is scrutinized properly. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

Such employers assume that the signalling value of leading universities is clearer compared to non-leading universities, since the competition to enter such universities is fierce, and candidates have already been scrutinized for their pre-existing characteristics before being admitted to the university (Bills 2003; Jackson et al. 2005; Jackson 2006). Another reason is related to the own experience of employers in such

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prestigious universities. Rivera (2011, p. 81) argues that "evaluators used educational prestige in a way that resonated with and validated their own educational trajectories". Almost 61 per cent of employers obtained their highest qualification from outside Oman, which means they may have a more informed understanding and be able to better compare between foreign universities.

This employer from the IT sector associated leading university graduates as having better exposure to skills and knowledge because these universities have a quality curriculum and can afford to buy the latest software in the field to equip their student with up-to-date technologies, while non-leading universities cannot afford such investments:

> A leading university because of the curriculum, I think the leading universities … try to give the latest in the market, but non leading mostly it is because they don't have the financial backing, … they're not at that level … They don't want to excel to that level. They are just trying to maintain their market … You have to make the latest accreditation [. . .]. So, they don't want to invest, but the leading universities always do, so we prefer that. [Sebastian, operational manager, large organisation, recruiting for software developer]

This understanding is different from that of Rivera (2011) where in the context of the US, the emphasis is on getting into elite universities and extra-curricular activities, rather than the curriculum. Brown and Scase (1994) assert that employers consider not only 'capability' but also 'acceptability' when making selection decisions. For example, the access to prestigious universities is associated with the social background (with particular forms of social and cultural capital) with those from higher socio-economic groups thought (and evidenced to be) more likely to attend such universities (see Brown and Scase 1994). This outcome has better employment chances for such graduates, reinforced by employers who sort job applicants based on the reputation of educational institutions.

Some employers reflected on the relationship between university prestige and grade inflation (i.e. GPA not reflecting their skills):

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I prefer the leading universities because the reputation of some universities is not that good, and their graduates are not good. Sometimes you face candidates with high GPA but in the interview, they do not answer, and they have a problem in communicating in English. On the other hand, you will interview another candidate who had a lower GPA, but he performed very well in the interview. [Majid, HR staff, large organisation, recruiting for software developer]

Yet, a wide range of reasons emerged from the interviews concerning the reason that employers chose not to make use of the reputation of educational institutions in their screening criteria. Even though this employer acknowledged the quality of graduates from leading universities, he did not use it as a screening criterion:

Everything has its price, to be honest, like, sometimes a leading university will give you better quality, a better understanding. Again, it's the same thing. but it's not really a criterion. [Monther, IT manager, medium organisation, recruiting for software developer]

The reason why it is not used in the initial stage of screening résumés is cited by this employer:

Because we do not want to … make our candidate pool … we want to keep it very open. If I talk about only hiring people from specific universities, I may receive only very few applications, but when I keep the pool open, I receive a lot of applications, which gives me a chance to choose the best from all of them. I mean, I can study in a very excellent college but somebody else who can't study . . . I cannot do this kind of discrimination. So, we are very open to any university, any college [Redha, Sales and Marketing manager, medium organisation, recruiting for software developer]

Overall, large employers for the three occupations value the ranking of universities more than medium-sized employers, as they see these universities as having higher quality teaching, and better curriculum and staff. However, graduation from top

universities is not a central screening criterion at the initial stage of the recruitment and selection process.

6.4 The Role of Internship in Employers' Recruitment Decisions

Traditionally, internships are expected to enhance employment prospects (e.g. Mincer 1958; Stiglitz 1975). According to HCT (Mincer 1958; Becker 1962), job seekers who are involved in an internship will acquire additional knowledge, skills, and competencies that can bridge the gap between theory and practice and enhance productivity. According to screening theory, employers identify hidden productivity in job candidates using signals like an internship and experience (Stiglitz 1975). As signalling theory posits, employers make hiring decisions based on an uncertain estimation of a candidate's productivity, and job seekers use internships to signal their abilities which may result in improved job opportunities (Akerlof 1970; Spence 1973; Schnedler 2004). Social capital theory (Coleman 1988) also predicts that job candidates can benefit from internships to connect with potential employers which might lead to obtain a permanent job (Granovetter 1995).

However, the literature on the role of internship in enhancing employment opportunities has shown mixed and inconclusive results. Some studies found that job candidates with internship experience had an advantage in getting hired (Knouse et al. 1999; Knouse and Fontenot 2008; Van Mol 2017), but other studies found that internships had no impact in aiding employment opportunities for interns (Lam and Ching 2007). Moreover, little research has examined empirically whether a candidate who has undertaken an internship in an organisation is more likely to get a job in that organisation (Cook et al. 2015). Hence, the focus in this section is on exploring the extent to which employers consider internships in their hiring decisions and why. The aim is to contribute a better understanding to the place of internships in the decision-making process of employers, when screening job applicants' résumés in Oman. The question is whether a job candidate with internship experience (on their résumé) at the employer's premises has an advantage over candidates who did an internship at a different organisation, or not.

This study finds that the majority of employers (21 of 29) prefer to hire candidates who did an internship at their organisation. No difference was found between the three occupations and firm size. It is evident that internship significantly enhanced the chances of obtaining an entry-level position at this employer's organisation, where it was claimed that they hire two-thirds of the interns they recruit:

> There are many chances for candidates who do internships at our company. They get priority if they perform well in our projects because we monitor them, we see their performance, and we have reports from their supervisors. Almost 70% who did an internship at our company was recruited in our company after they had completed their internships which is a very high percentage. [Majid, HR staff, large organisation, recruiting for software developer]

Moreover, some employers not only looked on former interns more favourably when making recruitment decisions, but also reach out to former and current interns to let them know about their vacancies, a strategy that could not be captured during the factorial survey but that emerged in interviews at least with larger organisations:

> . . . We track them [interns], monitor them, and at the end of the internship, they come and do a presentation on what they have learned, and then they go on, and we give them certificates. Once we have openings, we actually even write to them asking whether they would like to apply or not … It's also a channel for us for recruitment. [Binu, HR manager, large organisation, recruiting for accountant]

Therefore, the question is why employers prefer to hire interns. According to Brown and Souto-Otero (2020), access to internships help interns to show employers their ability to perform in the job and convince employers of their quality. Daniels and Brooker (2014) argue that an internship plays a role in shaping graduates' job-readiness, whereas in other studies employers claimed that an internship might help to improve the intern's job skills (Michael Knemeyer and Murphy 2002; Beggs et al. 2008; Swanson and Tomkovick 2011). Employers mentioned that they can directly assess interns' skills

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and attitudes:

> Within the internship, we do an assessment. We assess their
> professional behaviour, which is punctuality, commitment,
> communication skills, how they communicate with other people and
> their interactivity [Shakir, HR manager, large organisation, recruiting
> for accountant]

Another employer elaborated on why he hired some of the interns:

> . . . and at least six people have worked with me as interns. Most of
> them got hired because we have seen the person, we have seen them
> in action for two months. So, we know the commitment of the person,
> or the quality of work they are doing. Because, as I mentioned, if we
> have people working with us, as interns, we get an opportunity to
> understand them better in terms of their attitude in terms of the
> behaviour, in terms of their skills, in terms of whether what is written
> the CV is right or not, how they're able to articulate things and come
> back to us. How do they behave in the department? That gives a huge
> input towards taking hiring decision. [Binu, HR manager, large
> organisation, recruiting for accountant]

This employer was not only monitoring the skills of interns but claimed that internship
was useful to monitor candidates' behaviour and attitudes, as others have noted,
Zopiatis (2007), for instance, who found that employers from Cyprus value attitudes
and monitor how interns behave.

The fit with the organisation was also a consideration. An employer from the
engineering sector explained why candidates who had an internship at their
organisation were given preference over their counterparts who did an internship at
another organisation. This was because the job applicant will be able to fit in easily as
s/he was trained by them:

> Well, it will give them you know, preference because, we know these persons. We have worked with this individual; this individual has been trained by us. So, it is more likely that this person will be able to fit in easily, even though we don't specifically look at it as one of the primary criteria. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

Part of this relates to the development of company-specific skills -rather than abstract skills. As Coco (2000, p.41) pointed out "There is not a sole criterion such as grades, job experience, or major that companies seek in their internship candidates. Interns are usually selected based on the specific skills that can address the organizations' specific needs and leadership potential".

Overall, the findings correspond with those of other studies that have found that internships enhance the employability of job applicants and help job candidates to get hired immediately (Callanan and Benzing 2004; Gault et al. 2010; Cook et al. 2015; Nunley et al. 2016; Wierschem and Mediavilla 2018; Bittmann and Zorn 2020).

The next section will explore the role of social networks in employers' recruitment decisions.

6.5 Social Networks and Recruitment Channels

This section discusses the role of referrals as a form of social capital and social media platforms in employers' hiring decisions.

6.5.1 The Role of Referral in the Hiring Decision

As a result of Granovetter's work on social capital, researchers are encouraged to investigate the importance of social networks in labour market outcomes (see Lin 1999). Granovetter (1973; see also Granovetter 1995) argues that 'weak' ties such as acquaintances provide information about job opportunities more readily than 'strong' ties, such as close friends. Regarding employment outcomes, some literature shows that employers prefer to hire job applicants who have connections and existing ties such as friends or family members in the firm, and who are referred by existing

employees (Fernandez and Weinberg 1997; Marmaros and Sacerdote 2002; Bayer et al. 2008; Fernandez and Galperin 2014) as referrals might help employers to screen for unobservable attributes such as attitude and communication skills (Barr et al. 2019). But other studies have found no effect of referrals on employment outcome (Pistaferri 1999; Mouw 2003; Bentolila et al. 2010) or only mixed results (Marsden and Gorman 2001; Loury 2006; Di Stasio and Gërxhani 2015). I was interested in exploring to what extent referrals, as a form of social capital, are used in the recruitment of fresh graduates in Oman, and what type of referrals are common and to what extent referrals affect employers' initial hiring screening decisions.

The interview data suggested that in most cases, referrals do not enhance fresh graduate job applicants' chances to get hired across the three occupations. Just, four medium-sized organisations relied on referrals to hire graduates for entry level jobs. By contrast, the factorial survey data revealed that employers prefer to hire through referrals from educational institutions compared to no referrals. Comparing different waves of the Oman's Graduate Survey (Oman Ministry of Higher Education Research and Innovation 2015; 2017; 2019), reveals that the percentage of graduates who succeeded in finding a job through referrals has gradually increased, reaching 7.7% in the 2015 survey, rising to 9.7% for the 2017 survey, and reaching 10.8% in the 2019 survey (Ministry of Higher Education Research and Innovation 2019). This informs us that social capital in the form of direct referrals, while still weak, is growing in the Omani context.

The majority of employers (25 out of 29) reported preferring not to recruit through referrals. This employer from a large organisation in the oil and gas sector claimed that she avoided using referrals:

> I don't allow it. I'm very strict. I would like to be very clear and very proudly say that in my company or where I work, we don't accept [referrals] for friends and relatives. If someone tells me this person, you know, he wants to apply, he should come through the proper channels. [Rasha, HR manager, medium organisation, recruiting for mechanical engineer]

This behaviour of avoiding using referrals was justified by another employer from the IT sector, who did not consider referrals from friends and relatives because they were afraid this might be considered as nepotism (see Section 2.4):

> We don't have [referrals]. They might consider it as nepotism, but we give priority to the candidates who did internships at our company because they know the company, the system and the staff here. [Lujain, HR staff, large organisation, recruiting for software developer]

This employer claimed that he was trying to reduce nepotism in hiring:

> We are trying to reduce this [nepotism] to the minimum, but sometimes, you cannot because, see, we are living in a society where relations are very important. For example, if one of the board members, one of his friends or known person called him and says, 'please hire this guy for me' and he has the requirements, but there is no vacancy. So, we are forced to hire him. [Younus, HR manager, medium organisation, recruiting for mechanical engineer].

The concept of favouritism or nepotism is widely discussed in the literature (Kramarz and Skans 2014; Hoffman 2017; Horak 2018). From the above extracts, it seems that some candidates might be given preferential treatment over their counterparts without regard to their qualifications or whether they meet entry requirements. As the above employer stated, the obligation to society remains a hurdle in their hiring decisions (Oyserman et al. 1998) and forces employers to take hiring decisions beyond their specified hiring criteria (Begley et al. 2010; Chen et al. 2017).

As noted above, the interview data also suggested that only 4 employers out of 29 from medium-sized organisations preferred to use referrals, because they reduce recruiting costs and limit uncertainty about unobservable characteristics such as productivity and motivation, and referrals might give signals to employers that this candidate might be the right candidate:

They always say, like, referrals are the best hires. I think because the one who within the organisation or the someone who knows you, he will at least understand what your requirement is, not only from a technical perspective, but even from a management style perspective [Monther, IT manager, medium organisation, recruiting for software developer]

If I know somebody who's been referred by my friend, a lot of preference for them. My first option would be my friends because they know that person. They are credible. [Matheo, HR Consultant, medium organisation, recruiting for mechanical engineer]

if this referral comes from an employee that he is good, and we are satisfied with his performance yes, we take this referral into consideration. [Qasim, CEO, medium organisation, recruiting for software developer]

This finding suggests that just a few employers from medium-sized organisations use referrals to reduce uncertainty about job applicants' hard-to-observe attributes, which is consistent with previous studies in different contexts (Fernandez et al. 2000; Burks et al. 2015). Medium-sized employers are more reliant on referrals because they might have fewer resources to identify the best candidate whereas large-sized employers might have more standardised and rigid procedures as they have more resources.

6.5.2 The Role of Social Media Platforms in Hiring

The previous section explored the role of referral in hiring. This section examines whether employers utilize social media platforms in their recruitment processes to find and screen job candidates, a topic that emerged during the interviews. This study found that LinkedIn is the most common channel among employers to source and recruit potential candidates. Social media platforms such as LinkedIn have become increasingly common for collecting information about potential candidates during the initial process of hiring (Zide et al. 2014). All 29 employers mentioned that they use LinkedIn most frequently to search for job applicants. This aligns with the Employer Survey conducted by the Ministry of Higher Education Research and Innovation (2016) which found that

LinkedIn is the most popular social media platform for recruitment compared to Twitter, Facebook and other social media platforms. The following employer mentioned why he prefers to rely on LinkedIn:

> Because we know that most of the candidates have accounts in LinkedIn and it is very popular worldwide. And sometimes if we put ads on our website, we don't get many candidates but if we advertise on LinkedIn, we get many candidates because our site is not popular, but LinkedIn is very popular. [Majid, HR staff, large organisation, recruiting for software developer]

These findings contradict the Graduates Survey (Ministry of Higher Education Research and Innovation 2015) and Employer Survey (Ministry of Higher Education Research and Innovation 2016) where they found that government institutions (e.g. the Ministry of Labour) and newspapers are the most popular channels for recruiting fresh graduates (See Table 6.1).

Table 6.1 Recruitment channels of private sector firms in Oman

Number	Recruitment Channels	Number of firms	Percentage %
1	Government bodies (Ministry of Manpower)	179	43%
2	Newspaper ads	179	43%
3	Referral from trusted companies and sources	157	37.7%
4	The company's website	138	33.2%
5	Recruitment agencies	90	21.6%
6	Social media websites (e.g. Facebook, LinkedIn)	80	19.2%
7	Job fairs	73	17.5%
8	Career guidance offices at universities	42	10.1%
9	Others	39	9.4 %

Source: Employer Survey 2016

Employers prefer social media platforms due to their ease of use, low cost, and 'to avoid the noise' as this employer from a large organisation commented:

> We advertise [on social media platforms], or we source it from our talent pool or whatever suitable sourcing methodology is fit for this position. Sometimes we want to avoid the noise. We have already an established talent pool that will take less time actually; we don't have to wait for the advertisement to be closed. We have, for example, 15 to 20 talents readily available that fit the requirement, and we can actually plan for the interview. [Omar, Head of talent development, large organisation, recruiting for accountant]

This employer considers LinkedIn as a good source for getting 'good candidates' that fit with the hiring criteria, as commented below:

> Good potential candidates can be found from LinkedIn when it comes to social media. Another source here in Oman, and it's picking up very quickly, is called Oman Careers. Oman Careers is an Instagram platform. It's widely known, and people actually get hired through it, especially fresh graduates. [Omar, Head of talent development, large organisation, recruiting for accountant]

It is also used to look for candidates' networks, as this employer noted:

> It gives you a very holistic picture of how good at networking they are. What they are doing, . . . I review their full profile whom they are connected to and what they've been doing, what kind of connections they have, you know. [Matheo, HR Consultant, medium organisation, recruiting for mechanical engineer]

In addition to being user-friendly and low-cost, LinkedIn is used because it can facilitate the use of filters related to training and skills: some interviewees reported looking for specific skills that candidates acquired through the LinkedIn learning platform.

It has some built-in AI (artificial intelligence) that actually makes it very easy for us to reach out to the desired candidates. We just focus on the skills required. And they have also a very, I find it really useful validation of what we call skills. If you have a LinkedIn account and you have a learning subscription up there, you can easily gain some competencies from these learning courses, and it will be added to your profile. So, it's easy for recruiters when they look for specific skills to find the result in the search result. [Omar, Head of talent development, large organisation, recruiting for accountant]

It seems that LinkedIn provides employers with more options to screen out job applicants through the use of a skills filter, as it makes screening easy and effective, as was the case of using GPA during the screening of job applicants' résumés.

6.6 Government Policies and Hiring Decisions

This section takes into account the policy context within which recruitment operates in Oman, to examine its importance. The Omani Government introduced labour nationalisation (Omanisation) in 1988 to tackle unemployment among Omani nationals and to reduce the number of expatriates in the private sector (Al-Lamki 1998). Companies are required to hire Omanis in certain jobs and to meet a certain percentage of Omanisation in some industries (see Chapter 2). The starting point for discussion during the interviews was to understand whether government policies such as Omanisation may have an impact on employers' recruitment and selection processes. A further purpose was to understand why employers preferred to hire Omanis over expatriates as shown through the factorial survey results (see Chapter 5).

Four factors - social responsibility, investment, cost, and policy aims – emerged as relevant in discussions around nationality and recruitment in Oman. Interview data suggest that there are different perceptions among Omani employers regarding the role of Omanisation in their hiring decisions. Large employers consider Omanisation as a long-term investment and social responsibility:

We feel that when we take Omanis, we're taking the Omanis for [the] long term and therefore let the Omanis go through the learning curve . . . We feel like we have a social responsibility to make sure that we do give opportunities to our Omanis. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

If we assess costs [in] the long run, for example, for five years, we will be paying a lot more in terms of tickets, labour clearance, visa renewals, and medical insurance, which is shared between some other expenses that [are] paid for non-Omanis. It is more economical to hire Omanis. [Omar, Head of talent development, large organisation, recruiting for accountant]

Omanis are thus hired to limit costs but also because of lower regulatory requirements:

When you are hiring expatriates, you are dealing with different stakeholders, you are dealing with the Ministry of Manpower … So, this is for the expatriates. Omanis - much easier, when you're hiring Omanis. [Adil, HR manager, medium organisation, recruiting for accountant]

Some large employers also held a contrary view believing that the Omanisation policy adds an obstacle to their hiring practices, as they are forced to hire Omanis in certain jobs. As this employer from large organisation claimed:

So, before, it used to be maybe all of them expats, but now at least there is enforcement to have more Omanis and even in those contracts as well as trying to have more projects to accommodate Omanis. So, yes, there are some regulations which affect our decision. [Mazin, HR manager, large organisation, recruiting for accountant]

Some large employers face challenges with Omanisation, as this employer preferred to hire on a short contract while Omanis prefer to have a permanent contract:

. . . It's a big pressure from the manpower and the government to hire Omanis, especially in the oil and gas industry, sometimes the company needs to hire someone for like six months to do that job. Omanis always prefer to have a permanent job, a permanent contract. But hiring expats in that case would be easier. They can easily accept a six-month contract or one-year contract, so they are more flexible with that. [Salma, HR Generalist, large organisation, recruiting for mechanical engineer]

Employers' hiring decisions are also, on occasions, affected by direct pressure from the Ministry of Manpower to recruit Omanis, as this employer from the oil and gas sector commented:

Yes, sometimes we receive CVs from the Ministry of Manpower, and they force us to recruit candidates even if they are not qualified, but they told us, 'You have to recruit them', so this will make our situation worse, and it will affect also the reputation of the company, but we sometimes have to accept or we don't have a choice to reject them actually. [Amana, HR manager, large organisation, recruiting for mechanical engineer]

Finally, some employers mentioned that Omanisation is not a key factor in their hiring decisions, as they had already complied with the minimum percentage of Omanisation, and are free, at the moment, to consider nationals or expats for their openings:

Well, we don't have problems with Omanisation if we meet the minimum requirement or the percentage which is 35%. [Amana, HR manager, large organisation, recruiting for mechanical engineer]

In fact, all employers in the banking and finance sector acknowledged that they met the minimum requirement of Omanisation which is 90 per cent. This is in line with previous studies that indicated Omanisation was met in the banking sector (Al-Lamki 2005) and with the official data from the Central Bank of Oman which is responsible for

monitoring the level of Omanisation in the banking industry (Oman Observer 2019). Some employers in other sectors expressed a clear preference for Omanis:

> We have maintained the Omanisation percentage, and we prefer to hire locals and we prefer to train them. So, it has not affected us, as I mentioned . . . I'm in a good position when we talk about meeting the manpower requirements. [Redha, Sales and Marketing manager, medium organisation, recruiting for software developer]

There are, moreover, exemptions from this high percentage of Omanisation in certain parts of Oman to encourage firms to start businesses in new development areas outside the capital city, Muscat, as this employer mentioned that they are required to comply with 10% rather than the supposed percentage for the banking sector which is 90%:

> . . . What matters is that we comply with the labour law … they have what we call a minimum percentage of Omanisation that they have to meet, which is 10%. This is to encourage people to come actually and work … in this part of Oman. [Omar, Head of talent development, large organisation, recruiting for accountant]

Overall, although there are some divergent views among the employers regarding the impact of Omanisation on their recruitment and selection process, but there are also some shared concerns.

6.7 Conclusion

This chapter analysed from the interview data what factors employers consider when screening résumés and the reasons for their decisions. It began by presenting the key patterns that emerged from the interview data regarding educational background, and then factors associated with social capital. A wide range of factors and reasons emerged from the interviews as to why employers chose to make use of the characteristics in job applicants' résumés in their screening criteria. Employers are generally acknowledged the value of some educational background characteristics in their hiring decisions (e.g. field of study, bachelor's degree, GPA, rank of university) and relevant experience or internship. These findings contribute to answering the overarching

research question by revealing what employers look for when hiring job applicants for the three occupations.

The chapter showed that the results between the factorial survey and interviews were generally consistent, but also revealed some differences. The main difference is that employers in the interviews reported to prefer professional certificates in addition to having a degree. From the factorial survey data, employers for mechanical engineers rely on experience and internships whereas employers for accountants and software developers rely on relevant experience only. However, the interview data indicated that employers for mechanical engineers rely heavily on experience compared to the employers for the other two positions. There was no preference for Omani candidates or those who were referred by educational institutions or existing employees.

The chapter considered how employers' perceptions of what constituted essential criteria in the initial stage of screening varied according to the size of the organisation. There were variations in recruitment and selection practices between medium- and large-sized employers. The resources available to large-sized employers compared to medium-sized employers enable them to generate a large pool of candidates resulting in the need to apply more filters to sort out job applicants.

This chapter highlighted the importance of social media platforms (i.e. LinkedIn) as a key source for recruiting and selection and discussed the reasons why employers prefer to use them as they are inexpensive, friendly use and popular among employers and job seekers.

Overall, employers mentioned several reasons why they rely on a combination of educational attributes. In terms of relevant field of study, employers reported that value relevant field of study because they view education as a contributor to the skills and knowledge of job applicants to meet the job requirement. Furthermore, employers use education level (i.e. bachelor's degree in this study) as they perceive candidates with degrees are more trainable compared to diploma holders and this could help to save training costs. However, they do not prefer to hire master's graduates to avoid paying higher wages which could cost more than the training budget for bachelor's

graduates and they also perceive that such jobs can be executed by bachelor's graduates. Employers use a high GPA as a screening criterion because they believe that a high GPA is associated with hard work, productivity, and responsibility and is a low-cost filter, especially with a large pool of applicants. Employers associated leading university graduates with a better exposure to the subject skills and knowledge because, they believe that these universities have a quality curriculum and can afford to buy the latest software in the field to equip their students with up-to-date technologies, while non-leading universities cannot afford such investments. Employers prefer to hire job applicants who have relevant experience and internships because they value the practical knowledge and can monitor the interns' skills and attitude.

Chapter 7 Discussion

7.1 Introduction

The purpose of this chapter is to connect the findings from the factorial survey and employer interviews and the literature to address the research questions that drive the study (see Chapter 5 and Chapter 6). In this way the main contributions of the research are drawn out and discussed. In particular, the objective of the chapter is to discuss and assess the findings of the study against extant what is current understandings of recruitment practices. This chapter discusses in more depth the central findings of the thesis and addresses the overarching question "To what extent employers' hiring decisions - in a rentier and developing state - attach value to job applicants' characteristics when recruiting for mechanical engineers, accountants and software developers and why" and the following associated research questions:

Question 1: To what extent do employers attach value to particular educational attributes when screening job-applicant résumés, and why?

Question 2: To what extent, if at all, is an applicant's social capital a factor in employers' screening of résumés, and why?

Question 3: In what ways do employers' assessment of applicants vary across occupational (mechanical engineers, accountants and software developers) and organisational contexts? And why?

The thesis investigated employers' hiring decisions through the consideration of a wider range of educational attributes than does most extant literature i.e. field of study, level of education, GPA, place, and rank of university, as well as other characteristics such as use of referrals, experience and internship and extra-curricular activities, using a factorial survey design which allowed simultaneous consideration of multiple theoretically important factors. These data were supplemented by interviews, which helped to explore the rationale behind employers' hiring decisions in the Omani labour

market, allowing triangulation of results and extending the research beyond most factorial survey studies yet undertaken in this area.

This thesis went beyond studying the role of education through a narrow examination of the effects of years of education to examine a wider set of other educational attributes and facets to understand their role influencing employers' hiring decisions. This addresses a gap in the literature on the relationship between education and labour market outcomes, which often uses levels or years of education as the only educational factor to explain this complex relationship and neglect other educational attributes (Müller and Gangl 2003; Bills et al. 2017; Brown et al. 2020). Neglecting these characteristics may lead to misinterpretation of the role of education in labour market outcomes (Van der Velden and Wolbers 2007; Brown et al. 2020). In addition, despite significant research on the supply side of the labour market, little research has yet been conducted to any significant extent on the demand side, in particular the role of employers' hiring decisions in labour market outcomes.(Bills et al. 2017; Rivera 2020; Protsch 2021). The thesis also explored the role of social capital in recruitment and selection processes in Oman. The role of several educational attributes (e.g. field of study, level of education, GPA, place and rank of university) were discussed as well as other characteristics (e.g. experience and internship, referrals, extra-curricular activities) on employers' recruitment and selection practices for three graduate jobs: mechanical engineer, software developer, and accountant. Examination of different educational attributes, other social and demographic characteristics and different occupations shows that existing theories on the relationship between education and work do not adequately capture the diversity and complexity, conditions and challenges of employers' hiring decisions for different types of graduate jobs. The chapter then discusses the implications of these findings for understanding this relationship and considers whether alternative approaches or a combination of approaches might facilitate a deeper understanding of this relationship.

The chapter is arranged as follows. Section 7.2 provides a critical discussion of the association between prominent theories (human capital theory, sorting theories, and queue theory) on the role of educational attributes in producing labour market

outcomes. Section 7.3 discusses the role of experience in employers' hiring decisions. Section 7.4 discusses the role of social capital in employers' hiring decisions. Section 7.5 concludes with a critical discussion of the role of occupational and organisational contexts and the Omanisation policy in employers' hiring decisions. The conclusion is presented in Section 7.6.

7.2 The Relationship between Educational Attributes and Employers' Hiring Decisions

This section discusses the key findings on the role of educational attributes in employers' hiring decisions (to address research Question 1: to what extent do employers attach value to particular educational attributes when screening job-applicant résumés, and why?), before it explains the findings in relation to extant theories on the relationship between education and labour market outcomes: human capital theory (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974), signalling and screening theories that Weiss (1995) collectively termed *sorting theories*, and queue theory (Thurow 1975). The discussion of the relevant theories in this section is centred around the role of educational attributes in recruitment and selection. Hence, a key contribution of this thesis is to provide a critical understanding of the theories that attempt to explain, often in too general ways, the relationship between education, the labour market and hiring decisions.

It is evident that the transition process of graduates from education to employment is complex (Breaugh and Starke 2000; Galperin et al. 2020). This is a process influenced by the characteristics of the education system and labour market conditions which requires in-depth analysis and interpretation (Müller 2005; Lauder and Mayhew 2020). In other words, the transition from graduation to employment is informed by a combination of factors related to the characteristics of the education system from which graduates emerge; and the labour market conditions they face – factors considered in understanding recruitment processes in this research which will be discussed in a forthcoming section (i.e. 7.5). This thesis focused on the Omani context, a rentier state that has been subject to little research in the area of the links between education and work.

Overall findings from both the factorial survey and the interview data suggest that employers valued a wide range of educational attributes (relevant field of study, level of study, GPA performance, university reputation, professional certificates[28]) during the screening of job applicants' résumés for the positions of mechanical engineer, accountant, and software developer. The study also revealed the importance of the occupational and organisational context: there were significant differences in decision-making between the three occupations and according to company size (see Chapters 5 and 6).

The impact of education on employers' hiring decisions is an empirical question (Bills 2003) and how it is studied empirically has consequences for theory appraisal. The mixed-method approach of the factorial survey experiment and interviews allowed for an empirical and detailed examination of the role of various educational characteristics in recruitment (discussed in Chapter 4). I used the factorial survey to experimentally examine: i) the importance of a range of educational attributes and other factors simultaneously using two different dependent variables (hiring probability and trainability), and; ii) to examine the role of organisational, occupational, and recruiters' characteristics (which will be discussed in forthcoming sections). What is evident from the data is the prominence of a wider range of educational attributes than years of education, typically used to examine HCT arguments. This suggests that, when analysing the impact of education on labour market outcomes, a wider set of educational attributes needs to be explored (Di Stasio and Van De Werfhorst 2016; Brown and Souto-Otero 2020; Fossati et al. 2020; Wiers-Jenssen et al. 2020; Souto-Otero and Białowolski 2021). Second, the interview data helped to triangulate the factorial survey results and generate an in-depth understanding of what factors (of educational attributes) are important in the recruitment process and why.

Overall, this thesis argues that no single theory adequately explains the complex relationship between education and labour market outcomes. The thesis argues that the role of education is different in different contexts (occupational, organisational,

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[28] Liu et al. (2022) found that employers in Taiwan value professional certificates in the hospitability sector and such certificates increase the hiring chances of job applicants.

national) with theories offering differing and more or less convincing explanations depending on what it is we are looking at. This finding contributes to ongoing debates that ask for commentators to revisit and investigate dominant theories in different contexts to provide more convincing explanations of the role of education. As Souto-Otero and Białowolski (2021, p. 16) argue "available theories narrate partial stories on what matters in recruitment, and we need integrative approaches that provide a better account of the factors that matter, where and when". We draw on a range of factors of where and when, not least the Omani context i.e. the rentier state context (see Section 7.6). Further, Tholen (2020) found that "rather than functioning as direct signs of work skills and knowledge, signals of trainability or as instruments of social closure" higher education credentials serve multiple roles within the three different occupations that he examined: laboratory scientists, software engineers and press officers (Tholen 2020, p.283). In this thesis, I examine the role that higher education plays in the Omani context across three occupations.

Before discussing the role of educational attributes in relation to the theories, the following section briefly revisits the way the relationship between education and labour market outcomes is viewed through the lens of human capital theory, sorting theories and queue theory. I offer a selective summary of the discussions presented in Chapter 3 as a platform for the critique that follows.

7.2.1 Theory Recapitulation

As discussed in Chapter 3, investment in education can be seen to enhance an individual's human capital by gaining skills and knowledge during schooling, as well as acquiring qualifications or credentials. In most empirical work undertaken under human capital theory, 'education' is principally measured by the years of schooling and work experience. The theory proposes that an increase in the number of years of schooling leads to an increase in skills and thereby individual marginal productivity (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974). Thus, the theory posits that employers reward job applicants who invest more in their education.

In contrast to human capital, *sorting theories* view education as a signal individuals use to indicate their potential productivity to employers through obtaining qualifications (Arrow 1973a; Spence 1973; Spence 1974; Stiglitz 1975). *Sorting theories* (Arrow 1973a; Spence 1973; Spence 1974; Stiglitz 1975) conceptualised hiring as an investment under conditions of uncertainty, as employers make hiring decisions with limited knowledge about candidates. Their decisions are based on information available to them from a range of observable characteristics such as gender or age and from applicants' educational background. Arrow (1973a, p.194) argues that "higher education serves as a screening device, in that it sorts out individuals of differing abilities, thereby conveying information to the purchasers of labor [employers]". He argues that education acts as a double filter, as job applicants had already been screened during the admitting process to university and in getting the degree or failing to do so. Employers thus use education-related information to infer the potential productivity of job candidates and enables them to distinguish potentially productive job candidates and screen them based on their abilities by labelling them as potentially less or more able. In sum, human capital theory states that, through education, graduates develop competencies, which make them more productive and more attractive to employers during the hiring process, whereas *sorting theories* view the education system as having already selected the best students based on their performance during schooling (and further and higher education), so that education signals candidates' potential productivity to employers. *Sorting theories* attribute the value of education to its capability to reduce uncertainty in employers' hiring decisions by identifying highly productive and able individuals.

Further, according to queue theory, candidates compete with each other for vacancies "based on their relative costs of being trained to fill whatever job is being considered" (Thurow 1975, p. 75). Thurow (1975) argued that job applicants acquire specific job-relevant skills through on-the-job training rather than through education. However, queue theory considers education as one of the most important characteristics controlled by candidates and available to employers at the time of hiring (Thurow 1975). Thurow (1975) argued that employers are unaware and uncertain about the

potential productivity of job applicants at the time of hiring and try to save on training costs. Thus, candidates who obtained education credentials provide employers with information about their ability to learn and acquire new skills which enables them to place and rank candidates in labour queue (Thurow 1972), according to their estimates of the training costs that each candidate would require. Thus, education is seen to indicate trainability and provide employers with a rational tool to rank job applicants in a queue to reduce training costs. As such higher education might enable individuals to move forward in the labour queue (Thurow 1975).

Before discussing how the main findings of this study relate to the above theories, I summarise which the factors used to test these theories and whether they are confirmed or not (see Table 7.1).

Table 7.1 Theories of relationship between education and labour market outcomes

Theory	The Role of Education	Educational attributes
Human Capital Theory	Education contributes by adding to the potential productivity of job applicants	Level of study (years of education), Field of study, Professional certificates
Sorting Theories	Education contributes by allowing job candidates through qualifications to signal their potential productivity and thus enable employers to distinguish productive/able job applicants	Level of study, GPA, Place and rank of university
Queue Theory	The acquisition of job-relevant skills does not occur in schools, but through on-the-job training. Education enables employers to infer trainability and low training costs	Level of study, GPA, Place and rank of university

As depicted in Table 7.1, for human capital theory, I use level of study, field of study and professional certificates that inform employers about the skills and knowledge acquired during university from a human capital perspective. For sorting theories, I use GPA, level of study and place and rank of university and for queue theory I use level of study, GPA and place and rank of university. It is argued that GPA and education level inform employers about working attitudes, and are interpreted by employers as signals for unobservable traits that enhance trainability (Faia 1981; Solga and Kohlrausch 2013; Di Stasio 2014; Protsch and Solga 2015) (see Chapter 4 for more discussion). There is, however, no univocal relationship between attributes and theories. For example, although grades are often used as a relevant indicator to study queue theories, they can also be related to human capital, as students with higher grades could be seen to have acquired greater knowledge and skills in a subject that may be relevant in the performance of a job role. In what follows I will elaborate on this further and discuss the role of educational attributes in hiring decisions with reference to the above theories.

7.2.2 Educational Attributes and Hiring Decisions: Reflections on Theory

To provide further explanation of the above, I begin by focusing on employers' screening criteria.

Level of education is the most widely used indicator to measure the importance of education in the labour market in canonical human capital analyses. Human capital predictions and those of other theories on the relation between education and the labour market analysed in this thesis are similar: higher levels of education are expected to make candidates more employable. *Level of education* could take three values in the factorial survey experiment (diploma, bachelor's, master's qualifications). An important finding that contradicts all the theories examined is that employers in both the factorial survey experiment and the interviews preferred to hire graduates who hold a bachelor's degree over a diploma, expected in all theories, but also that they prefer graduates with bachelor's degrees to those with a master's degree, which was not expected according to these theories. Humburg and van der Velden (2015) found this preference in the UK. Specifically, when I asked employers about the

minimum level of education required in their organisations for the three occupations, the majority favoured recruiting those with a bachelor's degree.

A central question concerns the reasons for this preference. The interview data suggested that the main reason was to avoid paying higher wages, which candidates with a master's degree would command due to wage regulations in Oman (discussed in Chapter 2), as well as the expectations regarding the nature of the junior level of work that I was researching. This is consistent with Bills (1992) who found that employers are not willing to pay extra wages for over-qualified applicants for the job. As an employer recruiting for a software developer reported, master's graduates would be over-qualified for the job for which he was recruiting:

> The minimum should be diploma and above and, bachelor's but not master's because of the salary and you cannot put him as a software engineer. (Idris, IT manager, large organisation, hiring for software developer)

These findings contradict notions of human capital theory, which state that the number of years of schooling increases productivity and enhances job chances, as well as aspects of sorting and queue theories. The Omani employers in my sample consider the nature of the job and associated rewards (i.e. wages) and the implications of these for the applicant (motivation, commitment, retention), which is not an element human capital theory reflects upon. Indeed, as evidenced above, investment in master's level degrees seems not to increase job chances amongst the employers who participated in the study, nor for the entry level positions about which I enquired. In her critique of human capital, Alison Wolf (2004, p. 320) argues that the 'routine' association between years of education and productivity does not explain the reality of the relationship between education and the labour market. Indeed, human capital and its relationship with marginal productivity seems weak from the perspective of employers in Oman, and not to operate in a linear way: certainly master's-level candidates' potential for enhanced productivity is not regarded by employers as correlating with the wage they might demand for the position offered.

Looking at other education-related characteristics, it is widely acknowledged in the literature that employers consider a relevant *field of study* as an important screening criterion. (Heijke et al. 2003; Humburg and van der Velden 2015; Di Stasio and Van De Werfhorst 2016). However, I found considerable variation among the three occupations, examined, as discussed in Section 7.5. In addition to the field of study, employers recruiting accountants and software developers prefer to hire candidates who have undertaken various forms of non-academic education (contrary to the focus of sorting and queue theories) and have obtained *professional certificates*, which inform employers about the specialised knowledge and skills held by candidates. Hence, when many candidates are educated to a specific level (e.g. graduates), field of study and also professional certificates provide an additional means for selection in the labour market (Farashah et al. 2019) and this is the case in Oman where the supply of IT and business graduates exceeds demand (Ministry of Higher Education Research and Innovation 2015). Interview data suggest that employers justified their reliance on field of study and professional certificates to screen job applicants because they see education as a contributor to the productive skills and knowledge of job applicants, which supports notions of human capital investment (Mincer 1958; Schultz 1961; Becker 1964; Mincer 1974): i.e. specialisation in the job-relevant field of study as an important part of subject-specific skills, knowledge and human capital.

Bontis et al. (2007, p. 791) argue that "professional certificates administered by international software firms are considered to be proxies of human capital proficiency in this industry." However, the employer interviews revealed that this is not the only reason that employers valued these certificates. Employers consider professional certificates as an indicator of job candidates' willingness to learn, which supports queue theory i.e. candidates had an understanding of the related concepts in the field of study, which makes them easy to train (see also, Glebbeek and Waslander (2018) who associate fields of study with human capital productivity and the capacity for future trainability). For example, this employer explains why he values professional certificates:

> Because the bachelor's degree will give you all the knowledge that you need in different disciplines and there will be a few semesters where they will go deeply in that I mean into the specialisation; however, the professional certificate will give you the full plate flavour of that of the specialisation itself. It will be easy to train, they will understand much better the concepts and they can cope with the process faster. [Sami, HR manager, large organisation, recruiting for accountant]

Moreover, taking into account contextual and institutional factors such as job type, firm size and education system, I show in Section 7.5 that human capital theory does not adequately explain the relationship between field of study and employer decisions (Klees 2016; Brown et al. 2020).

A further education attribute that employers use by screen job applicants' résumés is grades or GPA. GPA is often used as an indicator associated with queue theory, as a high GPA is seen to be associated with trainability (Di Stasio 2014). Kuncel et al. (2004) argue that employers use GPA as a key predictor of successful transition from education to the labour market. The results of the factorial survey indicated that candidates with a high GPA had an advantage in hiring decisions and were considered more trainable. However, there are differences between the three occupations (see Section 7.5.4 for discussion). The interview data suggested that over half the employers use GPA as a screening criterion, which is consistent with other studies in different contexts that found that employers reward GPA (Bernardi 2003; Kogan et al. 2011; Matkovič 2011).

It is important to understand the reasons that employers use GPA in their hiring decisions and how it relates to other educational characteristics, such as field of study, which can shed light on the relative importance of specific human capital or a more generic ability to learn at the time of recruitment. Employers in Oman perceived GPA as an indicator of an individual's capacity for learning new things and the ability to train fast, which is in line with queue theory. Table 7.2 shows that employers prioritise applicants with a high GPA but an unmatched field of study over applicants with a low GPA and a relevant field study. This contradicts the argument that having a match in the field of study and low GPA means that one has acquired a high level of specific

human capital that will compensate for lower levels of trainability. Candidates with a higher GPA are perceived as more trainable and as a more viable option for hiring than candidates who have a greater field match (human capital in a relevant domain) but may be seen as more difficult to train (Brown and Campion 1994; Breen et al. 1995; Thoms et al. 1999; Di Stasio 2014). In other words, employers prefer trainability because work-based skills are more important than skills acquired in formal education. This finding provides support for queue and sorting theories and questions HCT and the importance of skills development in education. Some Omani employers see candidates with a high GPA as possessing characteristics of hard work, responsibility and motivation to succeed, which is in line with sorting theories and associated studies (Kittelsen Røberg and Helland 2017; Piopiunik et al. 2020).

Table 7.2 Interaction effect between field of study and GPA

	Hiring	Trainability
Reference category: **Related discipline X high grade**		
Nonrelated discipline X high grade	-4.250** (1.487)	-4.912*** (1.436)
Related discipline X low grade	-7.791*** (1.731)	-9.297*** (1.669)
Nonrelated discipline X low grade	-10.26*** (1.476)	-10.88*** (1.424)
Constant	47.02*** (1.727)	51.04*** (1.729)
Vignettes	2238	2241
Respondents	190	190
Standard errors in parentheses *** p<0.05, ** p<0.01, *** p<0.001**		

Source: Factorial survey data

In terms of *reputation of educational institutions*, the factorial survey showed that employers seem to prefer to hire graduates from leading universities either from Oman or abroad compared to graduates from non-leading universities in Oman, both for hiring and trainability, but not compared to non-leading universities abroad. Interview data showed that this is far from a universal pattern: just over half the employers consider

leading universities as desirable and reported that it is not a formal screening criterion. These findings complement previous studies that explicitly focused on elite employers' hiring practices in different Anglo-Saxon contexts (Jackson 2009; Brown et al. 2011; Rivera 2011; Gaddis 2015). This thesis, moreover, identified the role of leading universities in both facilitating access *and* being an obstacle to employment opportunities. Some employers mentioned that leading universities equip graduates with higher level skills and knowledge because the quality of the curriculum is better and resources are greater than in 'lesser' institutions i.e. elite universities can afford to buy the latest software in the field to equip their students with up-to-date technologies. This can be related to HCT as employers expect graduates from top universities to be better educated and have acquired higher skill levels. Therefore employers value the quality of candidates because they have higher human capital investments (Jackson 2014; Drydakis 2015). This is in line with Gerber and Cheung's (2008, p.301) argument that "(h)igh-quality institutions may impart cognitive and/or noncognitive skills more efficiently, thereby increasing the rate of productivity returns to an additional quantitative unit of schooling in such institutions. The greater efficiency could be related to institutional inputs such as the quality of professors and resources invested per student and/or to peer effects, whereby students at a more selective school are surrounded by students with higher average ability than students at less selective schools".

Another explanation is that, in line with Arrow (1973a), employers rely on the ranking of a university arguing that higher education acts as a double filter as candidates have already been screened before being admitted to the university and after graduating from it. Being admitted to leading universities as the admission criteria offers prominent and stricter signals of ability to employers (Hoekstra 2009). This argument found support in the interview data, where employers explained their perceptions on hiring graduates from leading universities, in which they perceived that graduates of leading universities are more trusted due to the quality of the curriculum and staff. What is argued is that job applicants who studied at leading universities have gone

through scrutinised programs, while non-leading universities have lower quality content:

> Leading universities have got a name, you know, attached to them, and therefore, you tend to believe that their programs are guaranteed, as these universities are scrutinised by the authorities in their home countries. Now, there are plenty of non-leading universities where the pass mark is easy to get . . . the scrutiny that is going on in those universities is not as strict as in a leading university. The leading university will give you a candidate who has gone through challenges within the university system, and the system is scrutinized properly. [Assad, HR manager, large organisation, recruiting for mechanical engineer]

Similarly, Morley and Aynsley (2007) found that employers in the UK believe that university admission criteria contributed to producing the highest quality graduates, and thus employers use league tables to screen out job applicants.

However, employers' narratives about leading universities also contradicted their hiring decisions when they were confronted with information on a candidate's GPA. To test whether employers' accounts in the interview data are in line with their hiring decisions in the factorial survey, I tested the interaction effect between GPA and reputation of university. Table 7.3 shows that when employers were confronted with an applicant who had graduated from a leading university with low GPA with another applicant who graduated from a non-leading university but with high GPA, they prefer to hire the latter and perceived her/him as more trainable and hireable. The reputation of a university is better explained in these circumstances by queue theory rather than sorting theories in the Omani context.

Table 7.3 Interaction effect between leading university and GPA

	Hiring	Trainability
Reference category: Non **leading** university X low GPA		
Leading university X low GPA	2.741 (1.432)	2.880* (1.384)
Non-**leading** university X high GPA	3.077*** (0.719)	3.662*** (0.696)
Leading university X high GPA	9.877*** (1.398)	9.794*** (1.351)
Constant	36.19*** (1.600)	39.23*** (1.606)
Vignettes	2238	2241
Respondents	190	190
Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001		

Source: Factorial Survey Data

It is evident from the interview data that employers' justifications for the use of the above educational attributes (i.e. field of study, bachelor's degree, GPA, leading university) as screening criteria did not indicate that they use them as a signal of productivity or a tool for assessing productivity alone, but that educational attributes become a multi-tool to assess trainability cost, potential productivity and individual attributes such as motivation (see Harvey 2000; Brown et al. 2004; Pollard et al. 2015).

To contribute to the testing of queue theory, I obtained a direct measure of candidates' expected *trainability* in the factorial survey. I could thus investigate whether trainability is a deciding factor in employers' assessment of job candidates' résumés (see Chapter Section 4.5.3). Di Stasio (2014) used a similar technique to differentiate between non-tertiary and tertiary job applicants in Italy. I employed this technique to test whether employers in Oman consider applicants who advanced in their education as more trainable. The results show that employers regard master's and bachelor's degree-holders as much easier to train than diploma-holders, but there was no difference in trainability between master's and bachelor's degree-holders (see Chapter Section 5.6.1). This questions the essence of queue theories that assumes that more

highly educated candidates are seen as more trainable, as well as the human capital argument that they are more hireable. As such, the results identified a threshold for trainability as well as 'hireability', rather than confirm a linear relationship between education level and trainability or hiring. As Bills (2016, p. 68) noted:

> we do know that employers do not simply work from the top to bottom of educational queues when hiring. Candidates deemed to be too highly educated for specific positions are often penalized (Bills 1992) and a vast array of licensure, certification, and other externally imposed criteria preclude employers from operating strictly according to the logic of a queue. Here again, we might begin by conceptualizing employer behaviour relative to more variegated hierarchies rather than to simple vertical queues.

It was evident from the interview data that the level of education signals a range of characteristics to different employers such as innate ability, personal traits, attitudes and willingness to learn. Employers use level of education as a signal of attitudes as well as skills (Murnane et al. 2000; Tyler 2003). Employers claimed that diploma-holders signal to them that candidates are not willing to learn while bachelor's and master's degree-holders signal ability to cope with challenges and positive attitudes towards learning, as well as indicating that they are better in English communications skills and commitment. This suggests that some caution needs to be applied when interpreting the results of studies that use years of education merely as an indicator of skills.

7.2.3 Summary of the Role of Education in Recruitment in Oman

The aim of this thesis is to offer a contribution to the debate on the dynamic between education and labour market outcomes. The specific focus of what is discussed above is the role of educational attributes in informing hiring decisions for employers across three sectors and occupations in Oman. The Omani context will be discussed in more detail later in this chapter, but it is evident that theories of education-labour market outcomes contribute in different ways to explaining hiring decisions in Oman.

From the evidence of the interview data and the factorial survey experiment, human capital theory begins to explain why education matters in the recruitment and selection

process and how and why employers rely on educational attributes, such as field of study and professional certificates. However, HCT falls short in explaining the role of contextual and institutional factors and in explaining why having a higher degree (e.g. master's) does not enhance job opportunities for Omani graduates compared to bachelor-holders. Sorting theories provide a different rationale on the role of education as a signal of potential productivity. It explains why employers use reputation of university and GPA as a sorting tool because such attributes signal to employers characteristics about job applicants, such as hard work, responsibility, and motivation. *Sorting theories*, however, do not adequately explain why graduating from a leading university with a low GPA does not enhance hiring chances and trainability for Omani graduates compared to a non-leading university and high GPA, and it has difficulties in explaining our findings with regard to level of education. Finally, queue theory provides an explanation as to why employers use education, i.e. GPA, as an indicator of trainability to avoid high training costs because they perceive candidates with a high GPA as more trainable.

In the next section, I discuss the role of experience and internships and types of non-formal skill development in employers' hiring decisions in relation to the above theories.

7.3 Experience and Related Theories

This section discusses the role of fresh graduates' experience in the recruitment process achieved through work-related experience or an internship inside or outside the organisation where the candidate seeks employment, and its relation to labour market outcome theories. Bills (1988b, p.87) argued that "perhaps we do live in a credential society, but educational credentials are not the only currency. Employers are in many cases not only willing, but eager to sacrifice some schooling for more direct indicators of the ability to perform a job". As discussed above, the role of educational qualifications is still important in employers' hiring decisions in the Omani labour market, but they are not the only indicator employers use in screening job applicants' résumés. Experience is one of the strongest indicators that employers in this study use to sort job applicants with much other research considering experience as a key

criterion in facilitating access to employment too (Robert and Saar 2012; Nunley et al. 2016; Silva et al. 2016; Clarke 2018; Silva et al. 2018).

What is important for this study is how employers interpreted the role of experience in their hiring decisions in relation to the above-mentioned theories. There are several possible explanations for why experience matters in employers' hiring decisions. One possible explanation of this positive association is provided by human capital theory where any work experience, regardless of its type, is considered to be a key source of productive skills – as it conveys skills and knowledge and employers therefore valued it during hiring (Mincer 1974). Another possible explanation comes from sorting theories proposing that graduates who managed to gain work experience during their studies might send a positive signal to employers that they are able to manage study and work. Furthermore, from the sorting theories perspective, work experience can be a relevant signal to employers of unobservable personal characteristics such as motivation and commitment if a job applicant has gained this experience from the same employer. However, according to queue theory, if employers take into account the academic performance (i.e. GPA), a candidate who has work experience and a high GPA, is more likely to be placed higher in the labour queue when compared to someone who has work experience but low GPA.

I found that employers rely on experience to screen the résumés of job applicants. The interview data suggested that employers conceptualised work experience in ways consistent with HCT: employers believe that in addition to the knowledge acquired during education, experience provides practical skills that enhance work productivity.

Furthermore, and as discussed in Chapter 6, the employers believe that if candidates' knowledge and skills are not adequate then experience can compensate:

> Because I totally believe what you learn in college is a wealth of knowledge and if you don't have that extra knowledge, you need to at least be compensating with some years of experience. *[Miraj, HR manager, medium organisation, recruiting for accountant]*

As such, employers perceived education and experience as a complement to each other as pathways for skill development (van Smoorenburg and van der Velden 2000; Weiss et al. 2014; Van Belle et al. 2020).

It is worth noting that there are differences between the three occupations, as employers value experience and internships more when hiring a mechanical engineer than an accountant or software developer (discussed in more detail in Section 7.5.). I assessed whether the effect of experience or field of study is stronger in shaping hiring decisions, to check how employers value different pathways to the development of skills in a relevant domain. Table 7.4 shows that employers gave greater weight to experience than to field of study. A mismatch in the field of study combined with experience resulted in a lower penalty than having a related discipline but no experience. This supports employers' claims in the interview data that experience complements education and influences job applicants' human capital, which is higher than an education field match. This questions the focus of human capital-related research on formal educational achievement.

Table 7.4 Interaction effect between field of study and experience

	Hiring	Trainability
Reference category: Related discipline X experience		
Nonrelated discipline X experience	-4.600*** (1.231)	-4.567*** (1.193)
Related discipline X no experience	-7.360*** (2.039)	-6.804*** (1.979)
Nonrelated discipline X no experience	-7.337*** (1.577)	-6.459*** (1.529)
Constant	45.04*** (1.605)	48.15*** (1.606)
Vignettes	2238	2241
Respondents	190	190
Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001		

Source: Factorial Survey Data

In fact, employers in this study believe that, if a job applicant has a lower education level (i.e. diploma), experience can compensate for this (see also Kulkarni et al. 2015).

Kulkarni et al. (2015) found that recruiters were willing to interview and hire applicants with less than the required education if they had sufficient work experience.

I tested the interaction between experience and education level, and the results are shown in Table 7.5. These data indicate that a candidate who has a lower education level (i.e. diploma) combined with experience has higher hiring chances than someone with a higher education level but without experience. This suggests that experience can compensate for a lower educational level. This is consistent with the results of the Omani Graduate Survey 2015, which found that postgraduate education is not a solution for graduate unemployment in Oman as the employment rate of postgraduates is not significantly higher than for undergraduates. This finding extends critiques of canonical applications of human capital theory, but also sorting and queue theory versions that emphasise the role of formal education for employment and downplay the role of experience as a form of human capital development. As Wolf (2011, p.34) notes, "(h)uman capital theory is often presented as though such capital is formed entirely in formal education and training, but... Becker's seminal work emphasises the extent to which skills are learned on the job".

Table 7.5 Interaction effect between education level and experience

	Hiring	Trainability
Reference category: Masters X no experience		
Diploma X experience	4.597* (1.941)	1.019 (1.879)
Bachelor X experience	6.966*** (1.941)	4.733* (1.878)
Masters X experience	7.773*** (1.998)	5.581** (1.936)
Diploma X no experience	2.117 (2.522)	-3.243 (2.443)
Bachelor X no experience	4.678 (2.518)	3.775 (2.440)
Constant	35.54*** (2.094)	41.36*** (2.067)
Vignettes	2238	2241
Respondents	190	190
Standard errors in parentheses *** p<0.05, ** p<0.01, *** p<0.001**		

Source: Factorial survey data

As such, it is argued that access to work experience has an impact on access to job opportunities. A point for concern is that access to relevant work experiences, is often based on privilege or social background (Tholen et al. 2013; Rivera 2015) or status of the institution attended. This leads to concern about equity and equality in accessing such opportunities. In Oman, Sultan Qaboos University (SQU), the University of Technology and Applied Science (UTAS) and the College of Banking and Financial Studies (CBFs) are considered the leading educational institutions. Some employers mentioned that they had links and cooperated with these institutions to get interns and they preferred to accept interns only from these educational institutions (see section 7.4 for detailed discussion about social capital). According to the Employer Survey (2016) conducted by the Ministry of Higher Education, Research and Innovation in Oman, 25% of employers indicated that there was some sort of collaboration only (i.e. training, employment, research and development) between them and HEIs. This indicates that the level of cooperation between employers and HEIs is low, which limited the access to internships and might promote nepotism (see Section 7.4).

The majority of employers in our study reported that there is no active collaboration between them and HEIs and some reported that it is mostly an ad-hoc engagement to recruit interns, when some would welcome something more formal. The following employer explains the difficulties in trying to connect with universities and colleges in Oman:

> We tried to but unfortunately, the colleges here aren't collaborating enough so we try to deal with the [college X] because we wanted to hire some graduates in marketing and graphic design, but that was not successful. We tried to even collaborate with some other colleges, but I felt like they treated the information they have as confidential, and they didn't want to share it with us. But I think that they need some awareness that we're trying to help you, actually, to hire your graduates. So that did not work successfully. We tried to go on a career fair in some of the colleges. But also, that was not as successful. So, for me, I've come to believe that the best way and the most successful way

it's just putting a job ad. [Miraj, HR manager, medium organisation, recruiting for accountant]

Overall, the findings are in line with other studies that find that work related experience and internships enhance the employability of job applicants and help job candidates to get hired (Callanan and Benzing 2004; Gault et al. 2010; Cook et al. 2015; Nunley et al. 2016; Wierschem and Mediavilla 2018; Bittmann and Zorn 2020). According to Brown and Souto-Otero (2020) access to internships helps interns to show employers their ability to perform in the job and convince employers of their quality. Daniels and Brooker (2014) argue that internships play a role in shaping graduates' job-readiness, whereas other studies find that employers claimed that internships might help to improve intern's job skills (Michael Knemeyer and Murphy 2002; Beggs et al. 2008; Swanson and Tomkovick 2011).

Furthermore, internships are also considered a source of early networking opportunities for candidates and employers (Alpert et al. 2009; Hergert 2009; Weible and McClure 2011). This will be discussed in more detail in the next section about the role of social capital in employers' hiring decisions.

7.4 Social Capital and Employers' Hiring Decisions

This section addresses the second research question of this thesis: To what extent, if at all, is an applicant's social capital a factor in employers' screening of résumés, and why? The role of social capital can be important in employers' hiring decisions. However, the analysis of the role of social capital in the recruitment and selection process in Oman revealed mixed results. Employers do not rely on referrals from existing employees, but they do on referrals from educational institutions, according to the factorial survey data, whereas interview data suggested that employers do not value either of these two types of referrals.

Regarding internships, social capital theory (Coleman 1988) also predicts that job candidates can benefit from internships to connect with potential employers that might lead to obtain a permanent job (Granovetter 1995). Internships are also considered a source of early networking opportunities for candidates and employers (Alpert et al.

2009; Hergert 2009; Weible and McClure 2011). Some employers I interviewed consider internships as a recruitment channel and reach out to former and current interns to let them know about vacancies:

> . . . We track them [interns], monitor them, and at the end of the internship, they come and do a presentation on what they have learned, and then they go on, and we give them certificates. Once we have openings, we actually even write to them asking whether they would like to apply or not … It's also a channel for us for recruitment. [Binu, HR manager, large organisation, recruiting for accountant]

This section builds on the work of Fernandez et al. (2000, p.1288) who argue "that a common organizational practice, the hiring of new workers via employee referrals, provides key insights into the notion of social capital. Employers who use such hiring methods are quintessential "social capitalists", viewing workers' social connections as resources in which they can invest to gain economic returns in the form of better hiring outcomes". Lin (2019) also argues that social capital is captured from embedded resources in social networks. This thesis aims to understand how referrals operate from the employers' point of view. It aims to provide key insights regarding the extent of and how employers leverage job applicants' referrals during the hiring process in Oman.

As discussed in Chapter 3, the relationship between referrals and labour market outcomes has been extensively analysed (e.g. Marsden and Gorman 2001; Topa 2011; Burks et al. 2015; Brown et al. 2016). However, studies have produced mixed results. Some scholars found a positive relationship (Fernandez and Weinberg 1997; Marmaros and Sacerdote 2002; Bayer et al. 2008; Fernandez and Galperin 2014) while others found a negative relationship (Pistaferri 1999; Mouw 2003; Bentolila et al. 2010). Other scholars found mixed results on the effect of referrals on employment outcomes (Marsden and Gorman 2001; Loury 2006). Fernandez and Castilla (2001, p. 485) suggested that social ties facilitate the chances of finding information about jobs, yet there is no conclusive evidence that it results in finding employment. The different array of findings could be attributed to differences in characteristics of job types,

organisation size, and context as well as the target population (e.g. employees, employers, graduates) and type of referrals (employee referrals, institutional referrals). This thesis makes a contribution to the literature on social capital and, in particular, the relationship between social networks and graduate labour market outcomes that aims to determine which type of social ties are most valuable in employers' hiring decisions. Barr et al. (2019, p.1268) claim that "some key questions related to the nature, transmission, and effect of referral information remain unexplored, including the impact of referrals on screening and self-selection during the hiring process."

Employers can rely on two different types of recruitment methods: formal and informal. Formal recruitment methods can include advertisement, recruitment agencies, and organisation website; informal recruitment methods can include referrals from current employees, friends, relatives, or acquaintances. It has been argued that employers prefer to rely on formal recruiting methods to have large and quality applicant pools whereas informal recruiting methods offered employers information about unobservable traits that cannot be measured directly through résumé. This gives a superior quality of information transmitted through formal recruiting methods and at a relatively low cost (Fernandez and Castilla 2001).

Lin (2001, p.13) proposes that if "social capital attempts to capture valued resources in social relations, network locations should facilitate, but not necessarily determine, access to better embedded resources". The role of social capital in the form of employee referrals in employers' hiring decisions is discussed in the literature in relation to the notions of *strong'* and *weak'* ties. According to Granovetter (1995), 'weak ties' are thus more valuable for employers in the hiring process than 'strong ties', since strong ties contain redundant information, while weak ties contain new information (see Chapter 3). What we know about the role of referrals in employment outcomes is largely based upon empirical studies that investigate referrals from existing employees, while the way that referrals from institutions improve labour market chances of graduates has received less attention (Tholen et al. 2013). Distinguishing between these types of referrals is crucial for understanding their effects on labour

market outcomes as much as the research that tends to focus on one type. Specifically, I examined the importance of referrals from educational and labour market actors: educational institutions and current employees. It is worth noting that employers did not receive any additional information related to race, name, or tribe of the candidates in the factorial survey design to avoid bias from participants, as Oman is considered a tribal society (for more discussion, see Chapter 4).

The analysis of factorial survey and interview data revealed mixed results regarding the importance of referrals in employers' hiring decisions, but also differences by occupation and size of organisation. On the one hand, the factorial survey experiment indicated that employers do not rely on referrals from existing employees but that they do on referrals from educational institutions. On the other hand, interview data suggested that employers do not value either of these two types of referrals. These findings on the lack of importance of employee referrals is surprising. Montgomery (1991) proposes that the *quality* of referrals (i.e. based on referrer type) serves as a signal of the productivity of job applicants. In other words, employers infer information about job applicants based on referrer type. It is claimed that employers prefer to rely on referrals from highly productive employees rather than low productive employees (Yakubovich and Lup 2006; Hensvik and Skans 2016). Hence, it is assumed that highly productive employee might refer someone who has potential productivity to protect his/her self-image and reputation (Fernandez et al. 2000).

As information on the quality of the employee was not included in my factorial survey, this could be an explanation for the lack of importance of employees' referrals in my findings. However, this explanation does not seem plausible as employers mentioned during my interviews that, in fact, they avoid employee referrals because they perceive them as being linked to nepotism (see Section 6.5.1), and that where nepotism prevails the use of referrals may lead to the hiring of candidates with lower qualifications (Beaman and Magruder 2012).

Most employers interviewed noted that they do not use referrals from existing employees because they do not have an employee referrals scheme in their firms. This

is different from the situation in other countries, such as the US, where Topa (2011) reported that approximately 70% of all companies use employee referral schemes for hiring. Thus, it is an accepted practice in other countries. My findings are echoed by Al-Jahwari (2016, p. 99) who conducted interviews with HR professionals in the Omani labour market and found that "(d)espite the fact that employee referrals are a highly effective recruitment method, organisations don't use them formally. This could be out of caution to avoid perceptions and accusations of nepotism or to avoid behaviours that could reinforce them".

This can help explain the different value attached to referrals in Oman compared to other countries (e.g. the US), and why Omani employers - from the interview data- decided not to reduce their uncertainty about the characteristics of prospective applicants using information obtained from their current employees. What is indicated, tentatively, is that the notion of social capital - referrals in our case - operates differently in different cultures, and it is particularly different in Oman compared to western countries such as the US. At the same time, it is worth noting that Oman ranked 52 out of 100 in the corruption index in 2021 (Transparency.org 2021). It has been argued that the hiring process can be described as corrupt in Arab countries due to the prevalence of nepotism that exerts influence on employers' hiring decisions (Hutchings and Weir 2006b; Hutchings and Weir 2006a; Whiteoak et al. 2006). Such practices have also been found to exert influence on employers' hiring practices in Oman (Al-Ghailani 2005; Khan 2010; Al-Jahwari 2016; Goldsmith 2020). In other words, these practices are known to exist, but what is suggested in this study is that employers react to them by not working with formal referral schemes and employers reported to prefer to ignore the value of referrals to not be seen as corrupt.

On the other hand, the factorial survey suggests that the collaboration between higher education institutions and employers enhances graduates hiring chances (e.g. Arranz et al. 2022). Collaboration between employers and education institutions can create trust and enhance the chances of employment of graduates from that institution (see Souto-Otero and Białowolski 2021). Some employers mentioned in the interviews that they prefer to use referrals from educational institutions with whom they had collaborated.

This collaboration is based on previous positive experiences of graduates from some leading higher education institutions in Oman, such as SQU, CBFs, and UTAS. Therefore, employers consider referrals based on trustworthy information about graduates from certain higher educational institutions and this trustworthiness comes from positive previous experience of graduates from these institutions. Referrals from HEIs may be seen as less suspect from the perspective of nepotism. This is complementary to the previous discussion in Section 7.2.2, where graduates from leading universities were found to have higher chances of employment compared to non-leading universities in the Omani labour market. Similarly, Bloomquist and Grieco (1989) observe that employers keep relying on referrals from institutions that met their expectations in their previous experience of their graduates. As discussed in Section 7.2.3, employers do not trust GPA as a screening criterion from some institutions, but they do trust GPAs from a small set of institutions based on previous collaboration.

Occupation may have an impact on whether employers use employee and higher education referrals or not. Lester et al. (2021) highlight the importance of not only distinguishing between different types of referrals (family or friend, business contact, etc.) but also of the impact of referrals between high and low skilled occupations. Previous research indicates that employers preference for formal or informal hiring channels can vary for different types of occupations (e.g. Granovetter 1995; Flap and Boxman 2001; Marsden and Gorman 2001). Gërxhani and Koster (2015) found that employers tend to use referrals for technical occupations (to avoid training costs and any potential damage associated with the ineffective use of machines) and these channels might provide them with more reliable information about potential candidates. Lester et al. (2021), also find that employee referrals are more common for high-skilled occupations while family referrals are more common for low-skilled occupations. Other studies argue that employers rely on employee referrals for highly skilled occupations as they send more signals about potential job applicants and reduce recruitment costs and hiring errors (Flap and Boxman 2001; Marsden and Gorman 2001). In contrast, some studies (e.g. Topa 2001; Bayer et al. 2008; Brown et al. 2016) have

shown the positive effects of employee referrals on low skilled jobs rather than high-skilled jobs.

In the factorial survey undertaken for this thesis, employers who hire mechanical engineers preferred to hire candidates who are referred by some leading educational institutions in Oman, whereas this was not the case for software developers and accountants. Employers recruiting for mechanical engineers stated in their interviews that they are trying to avoid the costs of potential errors when recruiting mechanical engineers, so they prefer graduates who referred from educational institutions, as they have had previous experience of graduates from those institutions - which is consistent with the arguments of Gërxhani and Koster (2015).

Differences by size of organisation were also relevant, as some employers from medium sized organisations reported relying on referrals. While larger organisations generally have more resources to devote to more costly recruitment methods (see Cardon and Stevens 2004 for an overview), medium sized organisations tend to rely on informal channels to avoid the cost associated with use of formal channels (see also Gërxhani and Koster 2015; Di Stasio and Gërxhani 2015).

A central question is how education and referrals operate in the hiring process in relation to each other. As discussed in Section 7.2, the signalling value of education is more important than referrals for employers in the Omani labour market. This is consistent with Souto-Otero and Białowolski (2021) who found that European employers tend to rely less on social capital and more on signals of graduate skills during the recruitment process of graduates in the private sector.

Albrecht and Van Ours (2006) developed a test to compare the signalling value of education through formal (i.e. company website, employment agency, advertisement, etc.) and informal hiring methods (i.e. referrals and social connections). They argue that employers can know more about job candidates when they rely on informal hiring methods such as referrals (Albrecht and Van Ours 2006). Thus the signalling value of education is more important when employers rely on formal hiring methods and less important when they rely on informal hiring method. They found that that education is

more important in formal hiring methods. The characteristics of the education system are also important here: employers are expected to rely on referral if the signalling value of education is weak. As Fernandez et al. (2000, p.1338) stated "if the characteristics being screened for are easy to measure, then there is no independent benefit to the company in preferring referrals once recruiters apply their screen."

The factorial survey experiment allows me to go a step further to test the link between referrals and educational attributes during the hiring process. I tested the interaction effect between referrals and educational attributes to examine whether the value of education will be less or more in the presence or absence of referral. I find that employers value relevant field of study over referrals (see Figure 7.1). This means that education sends clearer signals about candidates compared to referrals from educational institutions or existing employees.

Figure 7.1 Interaction effect between referrals and field of study
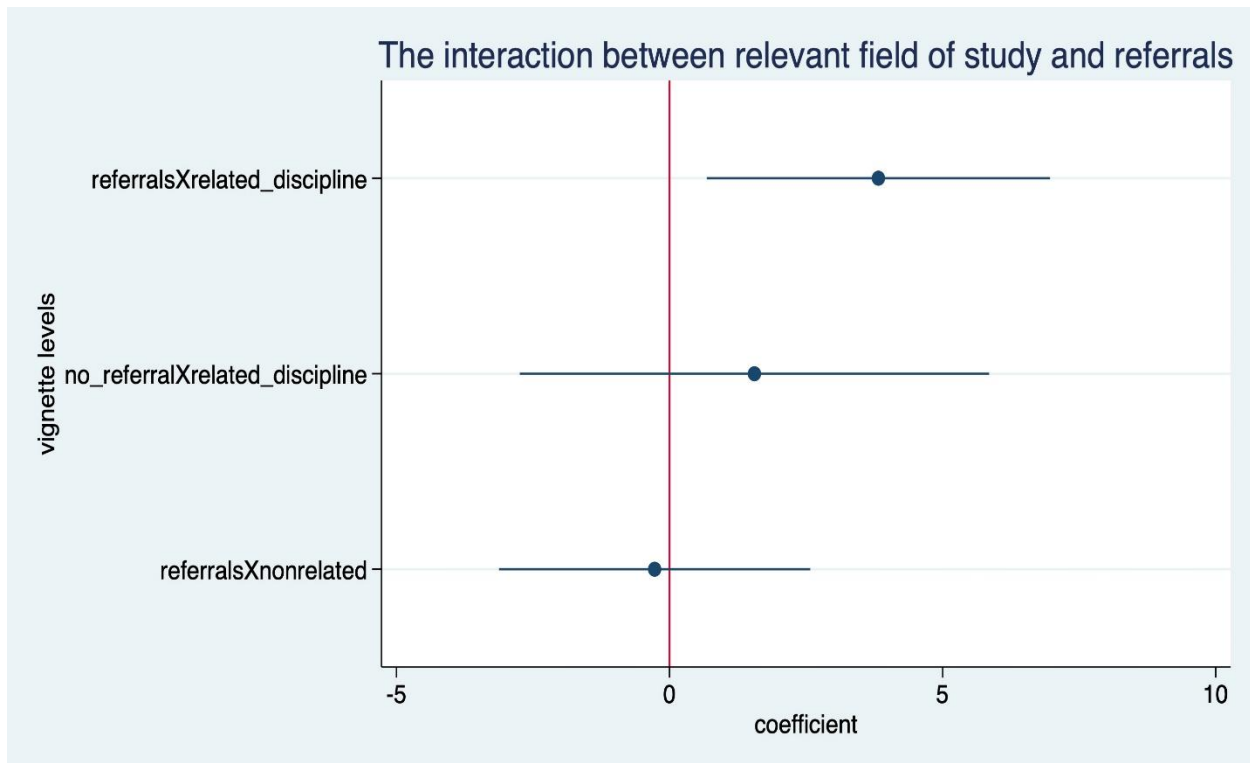
X refers to the interaction effect

Reference category: no referrals and unmatched field of study

Source: Factorial Survey Data

7.4.1 LinkedIn and Employers' Hiring Decisions

One key finding in the thesis was the widespread use of social media, in particular LinkedIn, to recruit fresh graduates among employers in the Omani labour market. There is a growing body of literature on the use of social media platforms in employers' hiring decisions (Skeels and Grudin 2009; Rhee et al. 2018). LinkedIn is the largest social media platform for professionals with over 800 million users (533,800 LinkedIn users in Oman in March 2020) and 57 million companies. It is considered the most trusted social media platform where employees can look for their desired company and organisations can search for potential candidates (Merskin 2019; Prodromou 2019). One explanation comes from employers in this study of why they prefer to use LinkedIn over other social media platforms is that it is easy to use and gives a wide set of options to screen out job applicants based on several pre-defined characteristics, as reported during interviews. They mentioned also that they can explore the profile of job applicants and can see their qualifications, activities, and training courses, and their interactions, which gives employers a more detailed picture of the candidate. LinkedIn, for the employers, plays a double role, as it provides employers with information about the activities in which the candidates engage and has screening tools that employers can apply to identify and contact desirable candidates in a quick, simple, and cost-effective way.

Professional social media networks such as LinkedIn also provide employers with an alternative way to the traditional referral approach, which may contribute to explain the results discussed earlier on the limited importance of referrals from current employees. LinkedIn provides employers and employees with the opportunity to connect and exchange information. Employers have the ability to navigate through a potential candidate's page and see who has provided recommendations and referral to candidates. The emergence of professional career platforms such as LinkedIn has repercussions on the hiring process and the notion of 'strong' and 'weak' ties. There is evidence that employers are more reliant on strong ties when using social media platforms to recruit potential candidates (Gee et al. 2017). Gee et al. (2017) used data

of 6 million Facebook users and found the majority of people got hired through various strong ties.

7.4.2 Summary

This section discussed the role of social capital in employers' hiring decisions in Oman thorough the use of employee referrals, institutional referrals, internships, and social media. The results point to positive effects from internships and institutional referrals but a lack of use and even negative effects from employee referrals. The use of employee referral schemes is a concern in the Omani context as it is associated with nepotism. In addition, I found that LinkedIn is a commonly used social media platform among employers in the Omani labour market. It is a frequently used platform to help find and screen job applicants because of its simplicity, cost effectiveness, and the various kinds of information that it provides about applicants.

Although extensive research has been carried out on the use that employers make of referrals, such studies tend to remain narrow in focus dealing only with single organisation hiring practices in Western countries (Fernandez and Weinberg 1997; Fernandez et al. 2000; Petersen et al. 2000; Flap and Boxman 2001; Castilla 2005). By exploring how Omani employers use referrals (or not), this study contributes to understanding the role of social capital in labour market outcomes in Oman. In particular, in the analysis and discussion of the use of referrals in 190 firms of different sizes, across three different occupations, this thesis suggests that referral types play different roles across occupations and firm size. Notably, employers who hire mechanical engineers rely more on institutional referrals to reduce uncertainty about potential productivity and for safety and cost reasons, due to the nature of mechanical engineers' work. The high cost associated with formal recruitment channels is an important consideration in explaining SMEs' reliance on informal recruitment channels -whereas large employers have the resources to afford such costs and use different recruitment channels. What might be concluded is that the role of social capital in employers' hiring decisions in a rentier and tribal state offers a different understanding of how social capital is perceived or what could be considered as a negative aspect of social capital.

7.5 Employers' Hiring Decisions in Institutional, Occupational, and Organisational contexts

7.5.1 Introduction

This section aims to address and discuss the third research question: In what ways do employers' assessment of applicants vary across occupational and organisational contexts and the reasons why. Employers' recruiting practices depend not only on the characteristics of job applicants, but also on economic and labour market conditions. This section discusses the role of contextual factors in employers' hiring decisions in Oman. There is increasing interest in the relationship between education and labour market outcomes in rentier contexts (e.g. Al Shabibi 2020; Langthaler et al. 2022), and this thesis offers an important contribution to the debate on the relationship between education and the labour market within such contexts and, more broadly, within (wealthy but authoritarian) developing nations. Previous sections provided an initial discussion on the importance of certain contextual factors in recruitment in Oman. This section further discusses the role of two contextual factors (the education system and labour market in Oman), with regard to firm size, occupation type, and Omanisation and minimum wage policies in influencing employers' hiring decisions.

In Bridges's view (2000, p.173), "education can play a different role in different labor market contexts". The relationship between education and the labour market is institutionally embedded, and the way that relationship is interpreted can vary dependent on context (Shavit and Muller 1998; Müller and Gangl 2003; McCoy and Smyth 2011). According to Bills (2003), labour market outcomes correspond to a range of mechanisms in different settings. Previous literature has noted that it is important to understand the impact of the characteristics of the education system and the labour market such as firm size, occupational characteristics and economic conditions, such as unemployment rate (McCoy and Smyth 2011; Van De Werfhorst 2011), on hiring decisions, and these will be discussed in detail in the forthcoming sections (7.5.2, 7.5.3 and 7.5.4).

This chapter discusses the overall impact of the education system, the Omanisation policy, and job and firm characteristics in the Omani labour market. Section 7.5.2 discusses the effect of the education system's characteristics on employers' hiring decisions; Section 7.5.3 considers the impact of government policies on employers' hiring decisions; and Section 7.5.4 reviews the role of occupations and firm size on employers' hiring decisions.

7.5.2 Education System and Employers' Hiring Decisions

This section discusses the role of the education system in the context of education policies that impact on employers' hiring decisions. The Omani education system is highly standardised, as discussed in Chapter 2. Previous studies on highly standardised education systems (i.e. in Ireland and Italy) reported that they provide useful information to employers and make the transition to work easier (Breen et al. 1995; McCoy and Smyth 2011; Di Stasio 2014). For example, Breen et al. (1995, p.70) found that Irish employers rely on exam results and grades, which are perceived as important hiring criteria because "the educational system provides substantial information, which is considered both reliable and valid, to employers concerning the potential general productivity of job seekers".

Breen et al. (1995, p. 59) considered the importance of such considerations, arguing that:

> The set of criteria potentially available for use by employers will depend upon the educational system, but which is used in any given context will depend upon which aspects of educational performance are perceived to be relevant by those who determine what these rewards will be. This, in its turn, will depend, to a large extent, on the nature of the institutional links between the educational system and the labour market. Failure to take account of the way in which educational performance is perceived may seriously distort our understanding of the way in which educational attainment is rewarded in the labour market and how this can vary between different sectors within a country and between different countries themselves.

In line with these findings, employers can easily compare educational qualifications and sort applicants in the highly standardised education system of Oman. However, evidence from the empirical findings suggest that the system is characterised by weak connections between educational credentials and career destinations because the lack of vocational majors and low levels of cooperation between HEIs and employers, which limits employers' trust in the education system when recruiting. Previous studies support this finding, arguing that there is a weak link between HEIs and employers in Oman (Al-Harthi 2011; Belwal et al. 2017). For example, Omani graduates require more training to compete in national or global labour markets (Al-Barwani et al. 2009). Other studies found that employers note Omani graduates' lack of English communication skills (Belwal et al. 2017; Al Riyami 2021). and employers in this study were concerned about the quality of Omani graduates from certain institutions, as discussed in Chapter 6. The World Bank (2012) has previously recommended that Oman strengthen the links between the education system, HEIs, and employers. As discussed previously, it is understandable that education factors play an important part in graduate recruitment in Oman, suggesting that, in the absence of strong educational outcomes, employers use a combination of other characteristics (i.e. professional certificates, experience, and internships) together with educational attributes to determine a candidate's skills and knowledge. This practice occurs even when a broad set of attributes, such as field of study, educational level, GPA, a university's reputation are considered. The next section discusses the place of Omanisation and unemployment in employers' hiring decisions in Oman.

7.5.3 Omanisation Policy, Unemployment and Hiring Decisions

As discussed earlier, extant education and labour market theories do not fully consider the institutional context in terms of employers' decision-making. This section discusses how policies, such as Omanisation and wage policies (i.e. differentiating wage levels based on the level of formal education achieved), affect recruitment decisions that the theories used in this thesis did not help to predict. The section discusses the role of Omanisation in employers' hiring decisions and how employers react to Omanisation

and policies geared to increase the number of Omani graduates hired when employers make hiring decisions. One of the most important changes in the organisation of the labour market in Oman is the introduction of the Omanisation policy, a long-standing policy relating to the private sector that allows the Omani Government to regulate the recruitment process (see Chapter 2). Findings from this thesis suggest that government policies, such as Omanisation, impact on employers' hiring decisions, as sanctions associated with not meeting Omanisation targets can be strong. As a result of their failure to meet Omanisation targets, the Omani Government cancelled agreements with almost 200 companies in February 2018 (Oxford Business Group 2020). The factorial survey data suggest that employers in Oman prefer to hire Omani graduates rather than expatriates for the three occupations analysed, and interview data suggests that there are four reasons that justify employers' preference for Omani graduates over expatriates, namely, social responsibility, investment, cost, and policy aims. There are, however, different perceptions among Omani employers about the place of Omanisation in their hiring decisions.

Graduate unemployment has risen in Oman since 2014 due to the drop in oil prices around that period. According to the World Bank, Oman's youth unemployment rate stood at 49 per cent in 2018[29] (World Bank 2019). In the 2010s, the Omani Government significantly cut spending, particularly to oil-related projects which, in turn, affected the recruitment and selection practices of companies in the oil and gas sector. This led to a reduction in the number of employees hired and changes in how the recruitment and selection process is conducted, that is, by increasing the requirements of potential employees (e.g. use of higher GPAs to screen out job applicants; reliance on a wide range of educational attributes) and shifting to lower-cost recruitment methods, such as LinkedIn.

This suggests that the notion of human capital is being challenged, as market equilibrium becomes a factor in employers' hiring decisions. From the perspective of human capital theory, education improves employability. However, the focus on supply,

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[29] The job-seeker rate for those aged 15-24 in February 2022 is 15.3% (NCSI 2022)

which follows the OECD[30] and World Bank emphasis on HCT imperatives, neglects the importance of labour market demand. The expansion of higher education and the increase in the number of graduates has changed the perceptions of graduate jobs globally (Brown et al. 2020) and Oman is not an exception. During the most recent economic contraction (pre-pandemic), the number of graduates increased while the demand for workers decreased, creating long job queues. The increased competition among graduates for jobs forces employers to be more selective and to expect stronger signals from job applicants. These factors suggest that the increase in supply is as much socially and politically driven as it is economically driven, i.e. to avoid protests at government policies in the short-term (Valiente 2014).

There are differences between large and medium-sized firms regarding the impact of Omanisation in their hiring decisions. Large employers mentioned that, at times, they had to hire Omani graduates over expatriates, even if they do not meet hiring requirement (i.e. education qualifications, experience, GPA). Hence, the Omanisation policy puts considerable pressure on large employers to hire Omani graduates. This pressure is greater than in other countries with similar policies (GulfTalent 2015). Medium-sized organisations, on the other hand, prefer to hire Omanis to avoid the costs associated with hiring expatriates.

7.5.4 Occupational and Organisational Differences in Employers' Hiring Decisions

This section discusses the role of occupational and organisational characteristics in employers' hiring decisions. As discussed in Chapter 2, the demand for the three occupations studied in this thesis (mechanical engineers, accountants, software developers) is amongst the highest in the Omani labour market. According to the Employer Survey conducted by the Ministry of Higher Education, Research and Innovation in Oman in 2016, graduates specialising in business administration,

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[30] The Organisation for Economic Co-operation and Development (OECD)

engineering, and information and communication technology are the most sought-after graduates in the private sector (Ministry of Higher Education Research and Innovation 2016). This led to an increase in the number of university places offered for these disciplines in response to market demand (Ministry of Higher Education Research and Innovation 2015)[31] and the consequent increase in supply of graduates increased the competition for employment. I tested whether employers' hiring decisions vary across the three occupations and firm size (see Chapter 5, Table 5.11 and Table 5.12 for detailed analyses). Here I discuss those results in more detail.

There are commonalities and variations among the occupations covered in this thesis in the type of attributes employers value. One of the main differences is that work-related experience is an important screening criterion for the three occupations, but an internship (either inside or outside organisation) is highly valued for hiring mechanical engineers only. This shows the importance of taking into account occupational differences in the analysis. As the mechanical engineer occupation is considered a highly skilled technical occupation, human capital has a greater role in accounting for employers' preferences, while for accountants, employers look for signals of trainability, which is more in line with queue theory. The majority of employers hiring mechanical engineers in this study indicated that experience and internships provide indirect indicators about job-readiness, which led to savings in training costs and helped to avoid fatal errors when employees worked with machines, as such accidents have significant costs (e.g. fixing machinery broken by inexperienced workers). Thus, experience and internship equip students with practical skills needed in the workplace (Helyer and Lee 2014; Jackson and Collings 2018; Silva et al. 2018) and familiarises them with the business environment (Bills et al. 2017).

A key finding regarding organisation size is that the influence of educational attributes in employers' screening vary across organisation size (Stewart and Knowles 2000; Di Stasio 2014; Beardwell and Thompson 2017). Overall, large employers' hiring

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[31] The number of Omani students who were studying for a diploma, bachelor's master's and PhD at higher education institutions in Oman till 2019/2020 was 129,619 students and the number of graduates in 2019/2020 was 23,925 (NCSI 2021a).

preference are closer to human capital theories, while SMEs hiring preferences contradict HCT for three reasons: firstly, while large employers prefer to hire bachelor degree-holders, SMEs consider diploma-holders an acceptable entry threshold to their organisations; secondly, the factorial survey results show that Omani employers in large organisations penalised job applicants with no relevant field of study more than did medium-sized organisations; and thirdly, large employers prefer to hire from leading universities, while SMEs had no preference for the status of awarding institutions.

7.6 Conclusion

This chapter has discussed the key findings of this research and explained the results in relation to education and labour market theories. The central argument is that a combination of theories explains employers' hiring decisions in the Omani labour market better than a single theory, although some recruitment preferences cannot be easily accommodated within the main tenets of any of the theories to which reference is made. In particular, the empirical evidence discussed in Chapters 5 and 6 indicates that no single theory provides a satisfactory explanation for how education (and the range of educational attributes that form part of education) informs the hiring decisions of those employers recruiting graduates from different fields into their organisations.

I examined a range of educational attributes in employers' hiring decisions. The data show that employers value aspects of education in their hiring decisions and use a combination of educational attributes (i.e. relevant field of study, bachelor's degree, high GPA, leading university) to screen résumés of job applicants, although the value of these aspects is not uniformly regarded. Based on employers' interpretations of the role of education in their hiring decisions from the interview data, and their evaluations of vignettes in the factorial survey, I have demonstrated how human capital theory was inadequate to explain the relation between education and the labour market in Oman, as it does not consider labour market characteristics or contextual and institutional factors. I discussed how sorting and queue theories better explain employers' interpretations of GPA and university reputation, as these attributes signal willingness to learn new skills which reduces training costs for employers.

Regarding the role of experience in employers' hiring decisions, I discussed the reasons that employers consider experience a strong screening criterion and how their interpretation of the role of experience extends the critique of most human capital analyses, although not necessarily HCT (Wolf 2004). This opens the window for further research in rentier state contexts. I also discussed how the importance of experience differs among occupations and showed why employers who hire mechanical engineers consider it a priority in their hiring decisions to avoid training costs and to favour safety issues, although this differed for the other positions analysed, where trainability was more important.

In terms of social capital, I discussed why employers are more reliant on institutional rather than individual referrals to recruit graduates, based on Oman's cultural context. I demonstrated why employers avoid employee referrals because of the association with nepotism, a further indication of the importance of context.

Finally, the chapter demonstrates the importance of considering the labour market context when analysing employers' hiring decisions, which the theories of relationship between education and the labour market fail to address in a sufficiently robust way. More specifically, this research contributes to the understanding of how the role of government policies (specifically Omanisation, but also wage regulations), the occupational and organisational contexts, and the education system and economic conditions play a major role in shaping employers' hiring decisions.

Chapter 8 Conclusion

8.1 Introduction

This thesis set out to understand employers' hiring decisions in the rentier state context of Oman. It explored the role of educational attributes, social networks and context (occupational, organisational, labour market) in employers' hiring decisions. This chapter provides a summary of the main findings, outlines the answers to the thesis research questions and discusses the limitations of the thesis and its implications for future research. The chapter concludes by discussing policy and practice implications.

8.2 Overview of the Research Questions and Findings

This section starts with a summary of the analysis of the factorial survey and interview data. It then provides an overview of how the factorial survey experiment and semi-structured interviews address the overarching research question as well as the three sub-questions that guided this study and presents how the study supports or challenges extant theories of education to work.

8.2.1 Summary of the Findings

Table 8.1 summarises the main findings from the factorial survey. It shows that employers value a combination of factors during the hiring process: relevant field of study, high GPA, relevant experience and internship, a bachelor's degree, and university's reputation as well as referrals from educational institutions, Omani nationality, and males – for mechanical engineers. However, there are differences between the three occupations analysed and firm size, as listed below.

Recruitment for accountant and software developer positions showed very similar profiles, but mechanical engineers were different to them in a number of elements:

- When hiring mechanical engineers, male candidates had an advantage over female candidates, but there was no gender preference for accountants and software developers.

- Employers who hired mechanical engineers preferred bachelor's degree holders over diploma and master's holders whereas there was no preference for a specific level of education from employers who hired software developers and accountants.
- There was no preference for place or rank of the university from the employers who hired mechanical engineers and software developers but employers who hired accountants preferred candidates who graduated from a leading university.
- Employers who hired mechanical engineers preferred candidates who had experience and internships whereas those who hired for the other two occupations valued only experience, not internships.
- Employers who hired mechanical engineers negatively valued applicants who participated in extra-curricular activities whereas employers who hired accountants and software developers did not use extra-curricular activities as a screening criterion (i.e. not statically significant).
- Employers who hired mechanical engineers preferred candidates who were referred by educational institutions while this was not the case for software developers and accountants.

With regard to firm size, there were some commonalities and differences between large employers and SMEs. Large employers and SMEs, both, had the same preference and use GPA, relevant experience and nationality as a screening criterion and do not consider extra-curricular activities for hiring preferences. Large employers prefer to hire candidates with bachelor's degree whereas SMEs consider a diploma as an acceptable threshold to get hired. Large employers preferred applicants who referred by educational institution while SME did not use referrals as a screening criterion (not significant statistically). SMEs have no preference for rank of university while large employers prefer leading universities either from abroad or in Oman and non-leading university abroad and penalise applicants who studies in non-leading universities in Oman.

The key findings from the interview data are:

- The majority of employers placed a high value on the following characteristics: relevant field of study, a bachelors' degree, experience and internships, leading universities, a high GPA, and relevant professional certificates.
- Most employers (24) used qualifications to screen job applicants, but, employers who hire for accountants and software developers prefer professional certificates such as the Association of Chartered Certified Accountants (the ACCA) qualification in addition to holding a degree.
- In terms of importance and the first filter used by employers during the hiring process, 21 employers use a bachelor's degree for hiring as a first filter, 13 use experience as first filter, just over half use GPA and over half prefer graduates from a foreign or Omani leading universities.

The results between the factorial survey and interviews were generally consistent, but also revealed some differences. The main difference is that employers in the interviews reported to prefer professional certificates in addition to having a degree. From the factorial survey data, employers for mechanical engineers rely on experience and internships whereas employers for accountants and software developers rely on relevant experience only. However, the interview data indicated that employers for mechanical engineers rely heavily on experience compared to the employers for the other two positions. There was no preference for Omani candidates or those who were referred by educational institutions or existing employees (as discussed in Chapters 6 and 7).

Table 8.1 Factorial survey results

Screening Criteria	All employers	Mechanical Engineers	Software Developers	Accountants	Firm size	
					SME	Large
Gender (male vs female)	Males	Males	No preference	No preference	No	Males
Nationality (Omanis vs expatriates)	Omanis	Omanis	Omanis	Omanis	Omanis	Omanis
Field of study (ref. engineering)	Relevant field of study	Relevant field of study	Relevant field of study	Relevant field of study	Not significant	Relevant field of study
Level of education (Diploma, Bachelor's, Masters')	Bachelor's degree	Bachelor's degree	No preference	No preference	No preference	Bachelor's degree
GPA (2.0, 2.7, 3.5, 4.00)[32]	Significant at 4.00,	Significant at 4.00, 3.5, 2.7	Significant at 4.00, 3.5,4	Significant at 4.00, 3.5	Significant at 4.0	Significant at 4.0,4.0,3.0/2.7
Place of study and rank of university (leading vs non-leading) in Oman or abroad	Leading universities either in Oman or abroad	No preference	No preference	Leading university either from abroad or in Oman	No preference	Leading university either from abroad or in Oman, Non-leading university abroad
Experience and/or internship	Relevant experience and internship	Relevant experience and internship	Relevant experience only	Relevant experience only	Relevant experience	Relevant experience and internship
Extra-curricular activities	Not significant statistically	Prefer no extra-curricular activities	Not significant statistically	Not significant statistically	Not preferred	Not preferred
Referrals	Referrals from educational institutions	Referrals from educational institutions	No preference	No preference	Not significant	No referrals

Source: Factorial survey data

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[32] The most common grading system in Oman is GPA where 2.0 is the lowest grade required to graduate (third class) and 4.0 is the highest grade which is equivalent to first class in the UK system, 2.7 is equivalent to lower second-class and 3.5 is equivalent upper second-class. However, there are some variations in the grading system among higher education institutions in Oman.

8.2.2 Overview of the Research Questions

The above sets out to remind the reader of the main findings in a descriptive way and situates the critical analysis that follows. The overarching goal of this thesis is to understand employers' hiring decisions in a rentier and developing state context, with reference to the recruitment for mechanical engineer, accountant and software developer positions. This study revealed that employers in Oman use a combination of educational attributes i.e. a relevant field of study, bachelor's degree, GPA, leading university, and relevant professional certificate. In addition, the findings revealed the limited use of referrals as a form of social capital in a rentier state context, and it revealed significant contradiction to what is found in western countries. Moreover, this thesis found the value of such attributes is different among occupations and firm size. It shows how government policies such as Omanisation and minimum wage influence employers' hiring decisions. Now I discuss the key findings of the three research questions of this study.

8.2.2.1 The Role of Education and Experience in Employers' Hiring Decisions in a Rentier State Context

The first research question addressed 'to what extent do employers attach value to particular educational attributes when screening job-applicant résumés, and why?' This thesis found that employers in Oman value a combination of educational attributes i.e. relevant field of study, bachelor's degree, a high GPA, leading university, and relevant professional certificate. The reasons why employers value specific educational attributes can be summarised as follows:

- Employers rely on relevant fields of study because they view education as a contributor to the skills and knowledge of job applicants to meet the job requirement.

- Employers use education level (i.e. bachelor's degree in this study) as they perceive candidates with degrees are more trainable compared to diploma holders, and this could help to save training costs. However, they do not prefer to hire master's graduates to avoid paying higher wages which could cost more

than the training budget for bachelor's graduates and they also perceive that such jobs can be executed by bachelor's graduates.

- Employers use a high GPA as a screening criterion because they believe that a high GPA is associated with hard work, productivity, and responsibility and is a low-cost filter, especially with a large pool of applicants.

- Employers associate leading university graduates with better exposure to the subject skills and knowledge because they believe that these universities have a quality curriculum and can afford to buy the latest software in the field to equip their students with up-to-date technologies, while non-leading universities cannot afford such investments.

- Employers prefer to hire job applicants who have relevant experience and internships because they value practical knowledge and can monitor the interns' skills and attitudes.

The question now is how these findings, the role of educational attributes in employers' hiring decisions and the reason why, can be interpreted in relation to education-work theories (i.e. HCT, sorting and queue theories). The task was not easy and involved caution, given the complexity of the education-work relationship and the context of this study. Given that Oman's status as a rentier state and its approach to the education-work relationship are the contexts for this study, this thesis argues that a combination of theories explains employers' hiring decisions in the Omani labour market better than a single theory. This thesis demonstrated how the human capital theory was inadequate to explain the relationship between education and the labour market in Oman, as it does not consider labour market characteristics or contextual and institutional factors. In particular, it fails to explain why employers do not reward job applicants who have more years of education (i.e. master's holders) as employers in the Omani labour market assume that such jobs can be executed by degree holders or diploma holders for medium-sized employers. Employers also were restricted by the wage policy and assumed that paying a high salary for such jobs was not an economical

option. This thesis shows how sorting and queue theories better explain why employers value a high GPA and university reputation in their hiring decisions because such attributes signal willingness to learn new skills, which reduces training costs.

8.2.2.2 The Role of Social Capital in Employers' Hiring Decisions

The second research question addressed 'to what extent, if at all, is an applicant's social capital a factor in employers' screening of résumés, and why?' Consideration was given to whether referrals, internships and social media platforms as a form of social capital play a role in employers' hiring decisions. This thesis found mixed evidence on the role of referrals in the Omani labour market, where the factorial survey data show that employers prefer referrals from educational institutions, whereas the interview data indicate that employers avoid using either institutional or individual referrals in their hiring decisions. This shows the importance of taking into consideration the context of the study to explain employers' hiring decisions. As this study is based on Oman's cultural context, I demonstrated why employers (claim to) avoid employee or individual referrals because of the association with nepotism.

The results also point to the positive effects of internships and social media platforms (i.e. LinkedIn). Employers value internships because they report that internships provide them with an opportunity to closely monitor interns' skills and attitudes. I found that LinkedIn is a commonly used social media platform for recruitment among employers in the Omani labour market. In recent years, it has become a popular platform for Omani employers to find and screen job applicants because of its simplicity, cost-effectiveness, and various types of information it provides.

Further, this thesis suggests that referral types play different roles across occupations and firm sizes. Notably, employers who hire mechanical engineers rely more on institutional referrals to reduce uncertainty about potential productivity and for safety and cost reasons due to the nature of mechanical engineers' work. The high cost associated with formal recruitment channels is an important consideration in explaining

SMEs' reliance on informal recruitment channels - whereas large employers have the resources to afford such costs and use different recruitment channels.

8.2.2.3 The Role of Occupational, Organisational Context in Employers' Hiring Decisions

The third research question was "in what ways do employers' assessment of applicants vary across occupational and organisational contexts, and why?" Spence (1973, p. 359) observed that "a characteristic may be a signal with respect to some types of jobs but not with respect to others". This thesis found that occupation type, firm size and Omanisation and wage policies affect employers' hiring decisions.

The role of work experience in employers' hiring decisions is different among occupations. The factorial survey data showed that employers for the three occupations consider work-related experience is an important screening criterion, but an internship (either inside or outside the organisation) is highly valued for hiring mechanical engineers only. The interview data indicated that employers for mechanical engineers consider the experience more important compared to employers who hire accountants and software developers.

With regard to firm size, there were some commonalities and differences between SMEs and large employers. Large employers and SMEs both have the same preference and use GPA, relevant experience and nationality as a screening criterion and do not consider extra-curricular activities for hiring preferences. Large employers prefer to hire candidates with bachelor's degrees, whereas SMEs consider a diploma as an acceptable threshold to get hired.

The factorial survey data and interview data had some differences regarding the role of location of study rank of a university in employers' hiring decisions between SMEs and large employers. On the first hand, the factorial survey data showed that SMEs have no preference for the rank of the university while large employers prefer leading universities either from abroad or in Oman and non-leading universities abroad and

penalise applicants who study in non-leading universities in Oman. On the other hand, the interview data indicated that just over half the employers consider leading universities as desirable, but they reported that it is not a formal screening criterion, but they acknowledge that leading universities have higher-quality teaching, better curriculum and staff.

Omanisation and wage policies play a role in employers' hiring decisions as the government exercises strong sanctions on firms that do not meet the Omanisation targets. The factorial survey data suggest that employers in Oman prefer to hire Omani graduates rather than expatriates for the three occupations analysed, and interview data suggests that there are four reasons that justify employers' preference for Omani graduates over expatriates, namely, social responsibility, investment, cost, and policy aims.

8.3 Key Contributions of the Study

Overall, the study contributes empirically, theoretically, and methodologically to the research on transitions from education to work in a rentier state context.

First, it makes a novel contribution considering a rarely researched context in the analysis of recruitment and selection processes: a rentier and developing state context. This thesis is the first study of its kind to shed light on the screening phase of recruitment and selection practices of employers in Oman in the private sector.

Second, this study by exploring the role of several educational attributes (i.e. fields of study, levels of education, GPA, rank and place of the university) in employers' hiring decisions, went beyond a large body of studies in the literature on education and labour market outcomes in which education is frequently regarded as either a single characteristic and often represented by years of education only. Thus, the study presented employers with several characteristics that closely match "real" résumés. The study included under each education attribute relevant characteristics (e.g. level of study: diploma, bachelor's and master's degree) to explore how employers use these and make decisions that may entail trade-offs in their hiring. In addition to exploring

the role of a wide set of educational attributes in employers' hiring decisions, this study contributes to the literature on the role of social capital (i.e. referrals, internships, social media) and personal characteristics (gender, nationality) as well as other characteristics (i.e. experience and internship, extra-curricular activities) in employers' hiring decision in a way which allows us to capture how employers trade-off between educational attributes and other characteristics of job applicants résumés. Controlling these factors helps to provide more valid tests of human capital and sorting theories.

For example, there has been considerable evidence presented to challenge the argument of HCT that education enhances productivity of job applicants (e.g. Wolf 2004; Brown and Souto-Otero 2020; Souto-Otero and Białowolski 2021). This supports my argument in Chapter 7, that there is no single theory provides a satisfactory explanation of how education (and the range of educational attributes that form part of education) informs the hiring decisions of those recruiting graduates from different fields into different organisations. For example, some empirical findings (e.g. level of study) in Chapter 5 and Chapter 6 question central tenets of these theories – including HCT - that is more heterogeneity in the labour market than acknowledged by most of these theories.

Third, this thesis contributes to understanding the relevance of occupational, organisational and institutional (policy and labour market) contexts for the analysis of how and why educational attributes and personal and social characteristics are valued in employers' hiring decisions. It examines graduate labour markets, rather than considering that a single graduate labour market exists, by focusing on the analysis of three different occupations and firms of different sizes (SMEs and large) and revealing important differences in the relative importance of various factors in recruitment. Additionally, the thesis investigated the role of participants' characteristics (i.e. experience in recruitment, gender, qualifications, etc.) in their preferences of educational attributes, social capital and other personal characteristics of job applicants during the résumés screening process. It also explored the role of

government policies such as Omanisation and the minimum wage in employers' hiring decisions.

Finally, these empirical and theoretical contributions were made possible methodologically by using a factorial survey experiment and semi-structured interviews. Employers consider a wide range of job applicant characteristics simultaneously when making hiring decisions. Therefore, to study their hiring decisions, the factorial survey experiment offered a nuanced approach to investigate the relative importance of a wide range of characteristics and manipulate several factors at the same time compared to other methods such as audit studies and traditional surveys that tend to be challenging for a researcher to observe several factors at once. Then it was followed by interviews that allowed participants to reflect on the rationale behind their hiring decisions. This mixed approach to understanding employers' hiring practices at the screening stage provides a closer look to understand the reality of employers' hiring decisions in relation to the explanatory theories. Overall, it combines educational, sociological, economic, and organisational perspectives about employers' recruitment and selection practices.

8.4 Limitations of the Study

This thesis examined what employers in the Omani labour market look for when hiring mechanical engineers, accountants, and software developers job applicants and why. It provided deep insights into employers' hiring practices by using factorial surveys and semi-structured interviews. However, the thesis has a number of limitations.

With regard to the research methods, some limitations need to be acknowledged. First, despite the vignettes (résumés) almost resembling real résumés with some exceptions (e.g. excluding name and age), The artificiality of the hiring simulation may have influenced employers' perceptions of applicants. Although recent validation studies show that respondents' evaluations of applicants' profiles closely resemble their evaluations of similar profiles in actual hiring decisions. (Eifler 2010; Hainmueller et al. 2015; Petzold and Wolbring 2019; Gutfleisch et al. 2021; Petzold 2022).

Second, the inclusion of general skills in the factorial survey such as communication skills and English proficiency and other occupation-specific skills such as the ability to work with specific software (e.g. Oracle) or specific machines could be of value to understanding employers' hiring decisions with regards to detailed specific skills for the three occupations. However, the interview data offered such input in this matter.

Third, this study did not investigate all stages of the hiring process (i.e. assessment centres, interviews) where employers meet face-to-face with candidates, as well as did not conduct interviews with job applicants. This would provide a comparable understanding of how employers' hiring decisions are similar or different to the screening stage and would capture job applicant evaluations and experiences in competing for their own labour market outcomes.

Finally, the ability to generalise the findings of this study to other contexts other than Gulf Cooperation Countries[33] that share almost the same economic, political and social factors is limited. The occupation types investigated in this study showed that there were differences among employers' hiring decisions. The scope of this study was limited in terms of the occupations being investigated. Therefore, the ability to generalise the findings to low-skilled occupations or managerial jobs is limited. This indicates that future studies could investigate a wide range of occupations in similar or different contexts.

8.5 Suggestions for Future Research

This thesis suggests a few avenues for further research. First, the thesis aimed to contribute to the understanding of employers' hiring decisions and the theories that explain the relationship between education and labour market outcomes, but the complexity of this relationship requires taking into account a very large range of possible factors to have a more informed debate of the relative contributions of educational attributes (e.g. delay in study), skills (e.g. soft and hard skills), social and demographic characteristics (e.g. gender, race, ethnicity, migrants) to labour market

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[33] (Oman, Saudi Arabia, the United Arab Emirates, Bahrain, Qatar and Kuwait)

outcomes. By incorporating a wide range of factors, this could be providing an inclusive understanding of the relationship between education and labour market outcomes.

This thesis found that there is a lack of cooperation regarding access to internships between HEIs and industries. It is worth investigating how job seekers get access to internships and how internships are organised in the Omani labour market. With the results of this study, that employers value internships, this could add insights to understanding both supply and demand processes of labour market outcomes in a rentier state context. In addition, it would be interesting to compare the experiences of graduates in getting internships within the same occupation as well as employers' preferences for interns.

Another possible area of future research would be to investigate the stages of the hiring process. This could involve identifying employers' hiring practices for each stage, as well as understanding how they measure the success of each stage in terms of candidate quality and fit with the organisation. This could be explored in more detail by adding other dependent variables to vignette evaluations (e.g. invitation to assessment, invitation to job interviews, invitation to a second stage of the hiring process). The trainability of job applicants could also be tested by adding other dependent variables (e.g. cost of training, initial wage).

This study has considered the context of a single rentier state to understand the relationship between higher education and work and provided valuable insights into the specific context of the state and how it affects the relationship between higher education and work. However, more comparative research with similar or different contexts is required to develop a deeper understanding of this relationship in rentier states. For example, comparing recruitment practices in a rentier state in the Middle East to one in Latin America may reveal similarities and differences in the relationship and how different types of national policies and economic structures impact hiring practices. In turn, this can help to identify characteristics or challenges that may be present in employers' hiring decisions and in the relationship between higher education and work in rentier states and thus inform policy and educational decisions accordingly.

While the study is conducted in the rentier state context of Oman and focuses on the private sector hiring decisions, the majority of Omanis prefer to work in the public sector because it is characterised by better wages and job security. Future studies comparing recruitment in the public and private sectors in Oman would complement the present study and contribute to the provision of a more systematic understanding of the differences and similarities between the two sectors. For example, future studies could investigate the effectiveness of recruitment strategies specifically in the public sector, such as the use of standardised tests, which are not commonly used in the private sector – as this study found - and further examine the role of social media and online platforms in recruitment in both sectors. This could include studying how these tools are used to connect job seekers with potential employers and assess the impact of these tools on recruitment outcomes. Another area that could be studied is the impact of labour market and education policies on recruitment and selection in both sectors. Such research could reveal that recruitment in the public sector may be more heavily regulated than in the private sector, which may have an impact on recruitment outcomes.

As this study found that Omanisation and wage policies had an impact on employers' hiring decisions for the three occupations in three different sectors (engineering, IT and finance) future studies could examine the impact of these policies on different occupations in different sectors (particularly where there is both public and private sector employment). Future studies on the impact of wage policies on employers' hiring decisions could involve analysing the effects of minimum wage increases on employment levels and job creation. Researchers could also examine how wage policies impact the hiring decisions of different types of employers, such as small businesses versus large corporations, and in different industries.

Future studies could also investigate the views of a wider range of key stakeholders on graduate recruitment and selection through various methods such as factorial surveys, interviews, focus groups, or case studies. These methods could be used to gather data and perspectives from policymakers, graduates, students, lecturers, higher education

institutions, as well as employers and other relevant stakeholders, to understand the perspectives of these stakeholders and identify any areas of agreement or disagreement on the topic of graduate recruitment and selection. This may lead to a better understanding of how graduates' employability and employment could be enhanced and would provide a more comprehensive understanding of the issues and potential solutions related to enhancing employment outcomes for graduates.

8.6 Implications for Policy and Practice

This section provides recommendations based on the findings of this thesis for different parties: students, graduates, employers, HEIs and policymakers in Oman.

This study showed that there was a weak collaboration between HEIs and employers. This can be of value for policymakers to investigate challenges and reasons that hinder this relationship and bridge the gap between employers and HEIs. In addition, an active collaboration between HEIs and employers is recommended to facilitate access to internships and invite employers to conduct workshops in HEIs.

This thesis found that employers prefer common criteria when hiring job applicants for mechanical engineers, accountants and software developers, such as relevant field of study, bachelor's degree, a high GPA, experience and internship and referrals from HEIs. This thesis could be of value for students and graduates to understand what employers look for and why.

This thesis found that employers' hiring decisions differ among occupations and firm size. This should guide students and graduates that occupation-related specificities may mean that what is applicable in some areas of the labour does not necessarily need to follow in their own area. As such, they would be advised to seek, primarily, occupation-specific information about employers' preferences. For example, this thesis found that employers who recruit for accountant positions prefer candidates with professional certificates such as Association of Chartered Certified Accountants (the ACCA), whereas employers who recruit for software developers value students who can work with specific software such as Oracle. The importance of experience and internship is crucial for mechanical engineers to get valued by employers in their hiring decisions.

This thesis showed that employers use social media platforms such as LinkedIn to attract job applicants, which could help students and graduates to upload their résumés on such platforms and how to connect with employers. As this study found that employers use LinkedIn, it is recommended that university students and graduates create profiles on such networks and other related platforms (e.g. Oman Careers). Building a profile on such platforms could help students to widen their network and connect with employers.

The findings of this study could be of value for higher education institutions to prepare their graduates, for example, through the establishment of greater cooperation with private sector organisations to help their students to get internships and experience. It also helps higher education institutions to get insights into what employers in Oman value and how they should set out their learning outcomes to meet employers' demands and requirements from graduates. Furthermore, higher education institutions can enhance internship opportunities for students by offering early opportunities in the curriculum for students to participate, exposing them to the workplace through connections with the public and private sector. This can help students become more aware of labour market demands and develop work-related skills.

Regarding policy implications, the literature on the relationship between education and work in Oman has focused mainly on graduates' deficiencies in not able to obtain jobs or meet job demands because it is claimed that graduates lack skills such as English proficiency and communication skills to do the job, but it neglects that the problem also occurs in job creation and the labour market structure. As discussed in Chapter 2, the Omani government derives its policies from human capital interpretations. Brown et al. (2020, p.2) argue that "…human capital theory has become a victim of its own success in getting individuals, families, and governments to believe that investments in education and training remain the route to better jobs, higher incomes, and economic growth. The massive growth in college diplomas and degrees that national governments believed were needed to meet the rising demand for high skills has instead resulted in credential hyperinflation…". The expansion of higher education in Oman and the increased investment in education by the Omani government has been driven by

significant political and social pressures in response to the young's demands for employment in the 2011 and 2017 protests and economic diversification policies. However, the unemployment issue persists among graduates. This thesis pointed out the necessity to review labour market policies in Oman, such as Omanisation and wage policies, to cope with the dynamics of labour markets. The review could incorporate the views of different stakeholders, namely students, graduates, HEIs, employers, and policymakers. Understanding employers' hiring practices may inform the Omani government on the value of different strategies to link educational institutions and the labour market to improve job opportunities for graduates. It helps to improve labour market opportunities for job seekers by knowing what employers value. This also could guide the government to avoid the increasing unemployment rate due to the mismatches between the labour market and job seekers in terms of what the employers look for and what job seekers have.

Appendices

Appendix A: Summary of studies conducted to investigate the role of experience and internship in labour market outcomes

Author(s)	Place of study	Methodology	Findings	Sample
(Nunley et al. 2016)	the United States	a correspondence test by using a résumé-audit study. randomly assign three-month internship experience to fictitious job seekers	They found that applicants with internship experience receive about 14% more interview requests than applicants without such experience.	Business-related industries
(Baert et al. 2021)	Belgium	A randomised field experiment - correspondence experiment	Job candidates with internship experience are invited to interviews in approximately 12.6% of cases. The characteristics of candidates and organisations did not affect the invitations to interview-	Employers.
(Gault et al. 2000)	the United States	A survey of business graduates of a north-eastern United States public university	There is a positive relationship between internships and shorter job search times, wage increases, and overall job satisfaction	Business graduates
(Klein and Weiss 2011)	Germany	observational data from Germany for the graduation cohort 1997,	University graduates in Germany are not affected by mandatory internships on their wages	graduates
(Weiss et al. 2014)	Germany	Graduate Panel 1997 Survey sent to 6216 graduates after 5 years of graduation	Graduates who obtain field-related and voluntary internship experience are likely to achieve an easier integration into the job market	Graduates
(Verhaest and Baert 2018)	Belgium	Longitudinal study of Belgian graduates	No effects on employment. In this study, researchers examine whether a higher education program with significant internship opportunities implies early career trade-offs between higher employment prospects and better job matches.	graduates
(Margaryan et al. 2020)	Germany	longitudinal data from graduate surveys	They found that graduates who completed an internship with a firm were less likely to experience unemployment in the first year of their careers	Graduates

(Beck and Halim 2008)	Singapore	Mixed methods (qualitative data, with quantitative analysis)	The student reported that what they had learned during the internship would benefit their professional development, that it had prepared them for their first job and helped them to choose a career.	Accounting students
(Cook et al. 2004)	The United States	Longitudinal study from 1992-2002, 351 student interns from 12 colleges and universities	Positive, help to find/gain a job upon graduation	Graduates
(Callanan and Benzing 2004)	the United States	163 senior graduates	Higher chance of choosing a career-oriented job	Graduates of a business degree
(Taylor 1988)	the United States	A quasi-experimental design	Internships provided strong support for better employment opportunities.	Graduates, employers
(Silva et al. 2016)	Portugal	Empirical data on a large-scale study of Portuguese first-cycle study programmes	Graduates from study programmes which include internships tend to be significantly more employable.	Graduates
(Rigsby et al. 2013)	the United States	A survey of professional employees below the manager level among three	Students who have internship experience are likely to get hired because employers value internship experience highly.	Employees
(Wilton 2012)	the United Kingdom	Questionnaire survey and Interviews with graduates	There was no strong evidence on the impact of internship on employment opportunities	Business graduates of class 99
(Hergert 2009)	the United States	survey	This study found that students value the internship experience.	Students
(Jackson 2015)	Australia	survey data from 131 undergraduates across different disciplines in an Australian university.	Students valued the benefits of internships to provide opportunities to practice and refine skills.	Undergraduates

(Alpert et al. 2009)	Australia	Questionnaires	Employers utilize internships to find and hire new employees for their full-time positions	Students, Academic staff Employers
(Gault et al. 2010)	the United States	Survey to 185 employers	Positive link between internship and employment. Interns are more likely to revive job offers than non-interns	Employers
(Silva et al. 2018)	Portugal	Conducted content analysis of Internship Study Programmes of universities in Portugal.	There is a positive link between internship and graduate employment	Internship Study Programmes of universities in Portugal
(Cook et al. 2015)	the United States	A longitudinal case study of 816 student interns from 25 different colleges and universities from 2002-2012	Help to find employment after graduation	Graduates (student interns)
(Häkkinen 2006)	Finland	Panel data of Finnish university students from 1987-1998	Better employment chances and higher wages	Graduates
(Passaretta and Triventi 2015)	Germany, Italy, Norway, Spain	Survey	The effect of internship on student employment was larger in Italy and Spain and smaller effect in Germany and no effect in Norway	Graduates
(Robert and Saar 2012)	6 East European countries (Poland, Estonia, Slovenia, Hungary, Lithuania, Czech Republic)	Survey	Having a relevant internship shortens the job search process and increases employability	Graduates

A résumé of Software Developer applicant:

Personal Information

gender	Male
nationality	Omani

Experience

experience and internship	Relevant experience
Extra-Curricular Activities (clubs, societies, volunteer work, etc.)	No

Education

place of study	A non-leading university in Oman
level of education	Diploma
field of study	Information and Technology
grade (GPA)	4 out 4 and within the top 5% of their classes

Reference

referral by an existing employee or through cooperation with a university	Yes, by an existing employee

Please rate the above résumé by moving the slider along the line. The answers to the two questions may differ.

Extremely unlikely										Extremely likely
0	10	20	30	40	50	60	70	80	90	100

How likely is it that you would hire this applicant?

If this applicant hired, how likely is the applicant would be easy to train to meet the job demands?

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A résumé of Mechanical Engineer applicant:

Personal Information

gender	Female
nationality	Expatriate

Experience

experience and internship	internship outside of your organisation
Extra-Curricular Activities (clubs, societies, volunteer work, etc.)	Yes, in a leadership position

Education

place of study	A non-leading university abroad
level of education	Bachelor's Degree
field of study	Engineering
grade (GPA)	2 out of 4

Reference

referral by an existing employee or through cooperation with a university	No

Please rate the above résumé by moving the slider along the line. The answers to the two questions may differ.

Extremely unlikely									Extremely likely
0	10	20	30	40	50	60	70	80	90	100

How likely is it that you would hire this applicant?

If this applicant hired, how likely is the applicant would be easy to train to meet the job demands?

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A résumé of Accountant applicant:

Personal Information

gender	Female
nationality	Expatriate

Experience

experience and internship	Relevant experience
Extra-Curricular Activities (clubs, societies, volunteer work, etc.)	Yes, in a leadership position

Education

place of study	A leading university in Oman
level of education	Master's Degree
field of study	Business and Management
grade (GPA)	2.7 out of 4

Reference

referral by an existing employee or through cooperation with a university	Yes, by an existing employee

Please rate the above résumé by moving the slider along the line. The answers to the two questions may differ.

Extremely unlikely									Extremely likely
0	10	20	30	40	50	60	70	80	90 100

How likely is it that you would hire this applicant?

If this applicant hired, how likely is the applicant would be easy to train to meet the job demands?

243

Cardiff University

gender	experience and internship	nationality	place of study	level of education	field of study	grade	extra-curricular activities	referred by
female	yes at the employer's premises	non-Omani	leading university abroad	College Diploma	Engineering	High	yes	yes by an existing employee

0 equals the least likely and 100 the most likely option

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

How likely is it that you would hire this applicant?

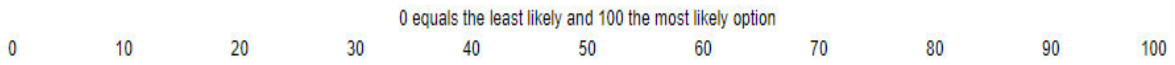If this applicant hired, how likely is it that would be easy to train?

0%   100%

→

Appendix D: Regression Models of Hiring Probability (Random Intercept and Random Intercept Models with Lower Limit Respective Lower and Upper Limits)

Characteristics	Attributes/Levels	RI	Tobit (RI) Lower Limit	Tobit (RI) Lower and Upper Limit
Gender (reference: male)	Female	-2.609** (0.956)	-3.009** (1.053)	-3.028** (1.067)
Nationality (reference Omani)	Expatriate	-9.834*** (0.956)	-10.82*** (1.053)	-10.91*** (1.067)
Education level (reference: Diploma)	Bachelor's Degree	2.370* (1.170)	2.589* (1.290)	2.585* (1.307)
	Master's Degree	1.940 (1.168)	2.353 (1.288)	2.334 (1.305)
Extracurricular activities (reference: yes, a leader of group)	Yes, as a member of group	-0.434 (1.160)	-0.219 (1.279)	-0.154 (1.296)
	No	-0.875 (1.170)	-0.781 (1.290)	-0.705 (1.307)
Field of study	Business and Management	-2.207 (1.173)	-2.829* (1.291)	-2.915* (1.308)
	Information and Technology	-4.789*** (1.169)	-5.888*** (1.288)	-6.030*** (1.304)
Place and rank of university	A leading university in Oman	-0.750 (1.367)	-0.756 (1.504)	-0.764 (1.524)
	A non-leading university in Oman	-3.456* (1.367)	-3.678* (1.506)	-3.710* (1.526)
	A non-leading university abroad	-2.910* (1.347)	-3.099* (1.483)	-3.186* (1.502)
Experience and internship	internship at your organisation	-4.981*** (1.371)	-5.390*** (1.508)	-5.455*** (1.528)
	internship outside your organisation	-5.179*** (1.364)	-5.650*** (1.502)	-5.637*** (1.523)
	No relevant experience	-8.140*** (1.365)	-8.485*** (1.502)	-8.572*** (1.522)
Referrals	yes, by an existing employee	-3.090* (1.343)	-3.795* (1.478)	-3.711* (1.497)
	yes, from an Omani university	-1.388 (1.356)	-2.283 (1.492)	-2.216 (1.511)
	No	-2.692* (1.367)	-3.747* (1.503)	-3.838* (1.523)

GPA (reference: 2)	4 out 4 and within the top 5%	10.16*** (1.337)	10.53*** (1.472)	10.65*** (1.492)
	3.5 out 4	7.782*** (1.349)	8.172*** (1.486)	8.206*** (1.505)
	2.7 out of 4	3.758** (1.360)	3.626* (1.501)	3.593* (1.520)
Constant		51.18*** (2.467)	51.06*** (2.781)	51.29*** (2.813)
sigma_u			20.47*** (1.211)	20.62*** (1.223)
sigma_e			24.21*** (0.406)	24.50*** (0.416)
Number of vignettes		2238	2238	2238
Left-censored cases			252	252
Right-censored cases				26

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Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001
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Appendix E: Regression Models of expected Trainability (Random Intercept and Random Intercept Models with Lower Limit Respective Lower and Upper Limits)

		RI	Lower Limit Tobit (RI)	Lower and Upper Limit Tobit (RI)
Gender (reference: male)	Female	-2.049*	-2.305*	-2.422*
		(0.929)	(1.009)	(1.028)
Nationality (reference Omani)	Expatriate	-7.806***	-8.332***	-8.393***
		(0.929)	(1.009)	(1.028)
Education level (reference: Diploma)	Bachelor's Degree	4.391***	4.485***	4.677***
		(1.137)	(1.235)	(1.259)
	Master's Degree	4.279***	4.496***	4.665***
		(1.135)	(1.234)	(1.257)
Extracurricular activities (reference: yes, a leader of group)	Yes, as a member of group	0.774	1.072	1.094
		(1.128)	(1.227)	(1.250)
	No	0.989	1.324	1.423
		(1.138)	(1.237)	(1.261)
Field of study	Business and Management	-2.151	-2.772*	-2.905*
		(1.139)	(1.236)	(1.260)
	Information and Technology	-4.596***	-5.544***	-5.679***
		(1.136)	(1.234)	(1.258)
Place and rank of university	A leading university in Oman	0.472	0.887	0.831
		(1.328)	(1.442)	(1.470)
	A non-leading university in Oman	-2.728*	-2.722	-2.754
		(1.330)	(1.446)	(1.474)
	A non-leading university abroad	-1.209	-1.051	-1.265
		(1.309)	(1.423)	(1.450)
Experience and internship	internship at your organisation	-3.952**	-4.517**	-4.494**
		(1.333)	(1.447)	(1.475)
	internship outside your organisation	-4.464***	-4.798***	-4.883***
		(1.326)	(1.439)	(1.466)
	No relevant experience	-6.665***	-6.778***	-6.761***
		(1.328)	(1.440)	(1.467)
Referrals	yes, by an existing employee	-3.491**	-4.258**	-4.342**
		(1.306)	(1.419)	(1.446)
	Yes, from an Omani university with which your organisation cooperates	-2.821*	-3.540*	-3.575*
		(1.318)	(1.431)	(1.459)
	No	-3.020*	-3.596*	-3.790**
		(1.329)	(1.440)	(1.467)
GPA (reference: 2)	4 out 4 and within the top 5% of their class	11.51***	11.94***	12.17***

		(1.301)	(1.412)	(1.439)
	3.5 out 4	7.503***	7.832***	7.942***
		(1.312)	(1.424)	(1.451)
	2.7 out of 4	4.057**	3.941**	3.984**
		(1.321)	(1.438)	(1.465)
	Constant	49.11***	48.55***	48.86***
		(2.429)	(2.702)	(2.756)
	Std Dev sigma_u		20.53***	20.97***
			(1.198)	(1.226)
	Std Dev sigma_e		23.29***	23.68***
			(0.387)	(0.399)
Number of vignettes		2241	2241	2241
Number of respondents		190	190	190
Left-censored cases			218	218
Right-censored cases				41

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

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Pilot Interview Schedule

Introductory question:

Please tell me about your job. How do you find it so far?

Part 1: Hiring decisions.

General Questions:

- What is the first thing you look at/consider when you have a résumé of a job applicant? Why?
- What is the minimum level of education required for this position at your organisation?
- Do you prefer a candidate who graduates from universities in Oman or abroad? Why?
- Do you prefer a candidate who graduates from leading or non-leading universities? Why?
- How do you interpret the educational qualifications/background of a job candidate?
- Do you consider having a high grade is crucial for hiring a prospective candidate? Why?
- Will consider a candidate who hold a diploma? Why?
- To what extent do you consider experience and internship when you screen résumés?
- Do you think Omanisation and government regulations (i.e. minimum wage for Omani nationals) affect your hiring decisions? How?
- What are the most important characteristics to you and your organisation that the job applicant should have: educational qualification or relevant experience or extra-curricular activities? Why?
- If you find yourself reluctant to choose among a few job candidates that you believe they will be fit for this position in your company, what is the first filter/criterion you will apply? Why?
- What are the most characteristics that you will reject a job candidate for? Why?

Accountant:

- What are the minimum qualifications/level of education required from a fresh graduate?
- What are, if any, skills/competencies required from a fresh graduate to apply for this job?
- Do you consider relevant field of study is important when you evaluate job applicants' résumés? Why?

- Do you consider having a good grade is important when you evaluate job applicants' résumés? Why?

Software Developers:

- What are the minimum qualifications/level of education required from a fresh graduate?
- What are, if any, skills/competencies required from a fresh graduate to apply for this job?
- Do you consider relevant field of study is important when you evaluate job applicants' résumés? Why?
- Do you consider having a good grade is important when you evaluate job applicants' résumés? Why?
- Why do you think Omani employers prefer candidates from leading universities in Oman and abroad for this job?

Mechanical Engineers:

- What are the minimum qualifications/level of education required from a fresh graduate?
- What are, if any, skills/competencies required from a fresh graduate to apply for this job?
- Do you consider relevant field of study is important when you evaluate job applicants' résumés? Why?
- Do you consider having a good grade is important when you evaluate job applicants' résumés? Why?
- Why do you think Omani employers prefer candidates who are not involved in extra-curricular activities for this job?
- Why do you think Omani employers prefer candidates who hold bachelor's degree to get this job?
- Why do you think Omani employers prefer candidates with high grades for this job?
- Do you think males are better fit for a mechanical engineer's job? Why?

Social Capital:

- What are your recruitments channels to search for/hire job candidates? Which one do you recruit most from? Why?
- Do you have links/cooperation with educational institutions in Oman or abroad? If yes, describe this relationship?
- Do you hire candidates through this cooperation? Why?
- Do you search for/recruit candidates through social media websites or from existing employees at your organisation? If yes, what are the search filter you use when you search for job candidates?

- Do you prefer a candidate who involves in extra-curricular activities? If no, why? If yes, do you prefer a candidate to be in a leadership position or as a member of a group? Why?
- According to the result of the survey, Omani employers prefer candidates who referred by a university which their organisation do not cooperate with. What are the reasons behind this choice?

Part 2: Trainability

Let us know talk about training at your organisations:

First of all, what do you think about training in general for new job candidates.

- Do you think all job candidates are trainable? Why?
- What do you look at when you recommend a new candidate to take a training course?
- Do you offer training courses based on job candidates' résumé or based on performance monitoring program at your organisation? Why?
- Do you measure the trainability of a job candidate based on their educational qualifications?
- What are the characteristics you believe that if candidates have them – would be easy to train?
- What is the amount of initial training needed for a new candidate with relevant field of study and educational qualifications to meet the job demands?
- Omani employers believe that candidates who hold bachelor and masters' degrees are easy to train. What is your intake on that? (Accountant only)
- What kind of training courses do you offer for new candidates? To meet the job demands or in general?
- Does your organisation offer training courses internally or externally? Why?

Demographic Data

1- Name:
2- Age:
3- Nationality:
4- Current position:
5- Years of experience in this position:
6- Number of résumés you screened during the past 12 months:
7- Type of your organisation: national/ international/ part of an international organisation
8- The most frequently occupation required in your organisation:
9- Number of employers at your organisation:
10- Do you have a recruitment/HR department in your organisation?
11- When was the last time you hire a candidate for this position?

Interview Schedule

Introductory questions:

Please tell me about your job!

How long have you been working here?

 What do you like/dislike about what you do?

Let us talk about the recruitment and selection for a (accountant or mechanical engineer or software developer) job at your organisation:

Part 1: Hiring decisions.

1- Could you please tell me about the steps/procedures of the recruitment and selection you follow in your organisation?

   a- How do you structure the recruitment process? (for example, machines may do part of that before you get to see screened applications)

   b- At what stage do you see the applicant?

2- What is the most important thing you look at/consider when you have a CV of a job applicant? Why?

3- What are the most important characteristics to you and your organisation that the job applicant should have? Why?

4- If we talk about academic profiles of fresh applicants, what do you consider a good academic profile? Why?

5- What is the minimum level of education, if any, required for a junior (accountant or software developer or mechanical engineer) job at your organisation? Why?

6- If you find yourself having to choose among a few job candidates that you believe will all, be fit for this position in your company, what is the first filter/criterion you will apply? Why?

    a– How often does this happens?

    b– What are the average numbers of applications for a position?

    c– What percentage of those applicants are suitable and what proportion are not?

7- Why might you reject a job candidate? What characteristics? Why?

8- Do you think Omanisation and government regulations (e.g. minimum wage for Omani nationals, the minimum number of expatriates in the organisation) play a role in your hiring decisions? How?

9- Do you prefer a candidate who graduates from universities in Oman or abroad? Why?

10- Do you prefer a candidate who graduates from leading or non-leading universities? Why?

11- To what extent do you consider the grade of applicants when you screen their CVs?

12- According to the result of my survey, Omani employers consider having a high grade is crucial for hiring a prospective candidate. Do you agree with them? Why?

For Accountant or Software Developer or Mechanical Engineer Jobs only:

13- What are the minimum qualifications/level of education required from a fresh graduate?

14- Do you consider having a good grade important when you evaluate job applicants' CVs for this position? Why?

15- Do you consider a relevant field of study important when you evaluate job applicants' CVs for this position specifically and other types of position generally? Why?

16- What are, the most important skills/competencies required from a fresh graduate to apply for this job?

17- How do you assess these skills/competencies? What are the signifiers/predictors/hints you use?

Part 2: Trainability

Let us now talk about training for a/n (accountant or software developer or mechanical engineer) job at your organisations:

1- How training is organised within the organisation?

2- How much training is provided to new recruits?

3- What kind of training courses do you offer to new candidates? What is the purpose -to meet the job demands or in general?

4- What do you look at before you recommend a new candidate to take a training course?

5- Do you look for candidates who already can show they have the skills to do the job or candidates who will be easily trainable to meet changing organisation needs?

6- What are the characteristics you believe that if candidates have– would be easy to train?

7- How do you measure the trainability of a job candidate?

8- My study found that Omani employers believe that candidates who hold bachelor's and master's degrees are easy to train. What is your intake on that? (Accountant only)

Part3: The role of social networking in the recruitment and selection process:

1- What are your recruitment channels to search for/hire job candidates? Which one do you recruit most from? Why?

2- Do you look at the contacts of potential recruits in social media (e.g. LinkedIn) or only at their profiles?

3- Do you search for/recruit candidates through social media websites? If yes, what are the search filter you use when you search for job candidates?

4- Do you have links/cooperation with educational institutions in Oman or abroad? If yes, tell me about this relationship! (Prompts: is it for internship/courses/projects?

5- Do you hire/select candidates through this cooperation/links? Why?

6- According to the result of the survey, Omani employers prefer candidates who are referred by a university which their organisation do not cooperate with. What is your opinion?

7- Do you prefer a candidate who is/ has been involved in extra-curricular activities? If not, why? If yes, do you prefer a candidate who has been in a leadership position or as a member of a group? Why?

8- How do you select applicants to get internships at your organisation? Do the existing employees/family members/ friends recommend them?

9- How important are the applicants who get internships at your organisation to the recruitment to jobs?

Let us talk now about the role of friends and relatives in your hiring decision:

10- To what extent does your network (friends and relatives) outside the work affect your hiring decision?

Closing: Is there any further information that you would like to share that we have not covered?

The following questions are from the results of the survey I conducted this year:

1- Why do you think Omani employers prefer candidates from leading universities in Oman and abroad for a software developer job?

2- Why do you think Omani employers prefer candidates who are not involved in extra-curricular activities for a junior mechanical engineer job?

3- Why do you think Omani employers prefer candidates who hold bachelor's degrees to get a junior mechanical engineer job?

4- Why do you think Omani employers prefer candidates with high grades for a junior mechanical engineer job?

5- Do you think males are a better fit for a mechanical engineer job? Why?

Demographic Data

Personal information

12- Name:

13- Age:

14- Nationality:

15- Current position:

16- Years of experience in this position:

17- Previous position:

18- Highest Qualification (academic and professional)

19- Number of CVs you screened during the past 12 months for graduate jobs:

Background information about your organisation

20- Type of your organisation: national/ a multinational / branch or HQ

21- The most frequently occupation/job title you recruit for in your organisation:

22- Number of employers at your organisation or at the branch:

23- Do you have a recruitment/HR department in your organisation?

24- When was the last time you hired a candidate for the (. . .) position?

Appendix H: Cardiff University' School of Social Sciences Research Ethics Committee Approval Letter

School of Social Sciences
Ysgol Gwyddorau Cymdeithasol
Head of School, Pennaeth yr Ysgol
Dr Tom Hall

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Glamorgan Building
King Edward VII Avenue
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17 October 2018

Our ref: SREC/2867

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Khalifa Salim Rehen Al Hatmi
PhD Programme
SOCSI

Dear Khalifa,

Your project entitled *'Examining Employers' Hiring Behaviour in Oman, a Vignette Study'* has now been approved by the School of Social Sciences Research Ethics Committee of Cardiff University and you can now commence the project should all necessary forms of approval been received.

If you make any substantial changes with ethical implications to the project as it progresses you need to inform the SREC about the nature of these changes. Such changes could be: 1) changes in the type of participants recruited (e.g. inclusion of a group of potentially vulnerable participants), 2) changes to questionnaires, interview guides etc. (e.g. including new questions on sensitive issues), 3) changes to the way data are handled (e.g. sharing of non-anonymised data with other researchers).

In addition, if anything occurs in your project from which you think the SREC might usefully learn, then please do share this information with us.

All ongoing projects will be monitored and you will be obliged periodically to complete and return a SREC monitoring form.

Please inform the SREC when the project has ended.

Please use the SREC's project reference number above in any future correspondence.

Yours sincerely

Professor Emma Renold
Chair of School of Social Sciences Research Ethics Committee

Cc: Dean Stroud, Manuel Souto-Otero, Corinda Perkins

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Appendix I: Information Sheet and Consent Form for Factorial Survey Experiment Participants

Title of the Study: The Recruitment Practices of Employers and Recruiters in Oman

General Information

The aim of this project is to understand the recruitment practices of employers and recruiters in Oman when assessing resumes of graduates. I appreciate your interest in participating in this online survey. Please read through these terms before agreeing to participate by ticking the 'yes' box below. You may ask any questions before taking part by contacting the researcher (details below). You will be given some questions and scenarios to read, and then answer questions on recruitment practices and rate resumes of job applicants. It should take about 10 to 15 minutes.

Do I have to take part?

Please note that your participation is voluntary. You may withdraw at any point during the online survey for any reason, before submitting your answers, by closing the browser.

How will your data be used?

Your answers will be completely anonymous, and I will use all reasonable endeavours to keep them confidential. Your data will be stored in a password-protected file and aggregate data may be used in academic publications. Your IP address will not be stored. Research data will be stored for a minimum of five years after completion of the project and then it will be destroyed.

Who will have access to your data?

Cardiff University is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest. Our privacy policy can be viewed here https://www.cardiff.ac.uk/__data/assets/pdf_file/0004/153823/Data-Protection-Policy-June-2018.pdf

The data will not be shared with any third parties. All data collected in this survey will be held securely by the survey software provide (Qualtrics) under contract and then retained by the Student Engagement at Cardiff University in accordance with the General Data Protection Regulation and Data Protection Act 2018.

This online survey is for a PhD project. The principal researcher is Khalifa Al Hatmi, who is attached to the School of Social Science at Cardiff University. This project is being completed under the supervision of Dr Dean Stroud and Professor Manuel Souto-Otero. This project has been reviewed by, and received ethics clearance through, School of Social Science Research Ethics Committee [reference number: SREC/2867].

What if there is a problem?

If you have a concern about any aspect of this project, please speak to the researcher (Khalifa AL Hatmi – alhatmiks@cardiff.ac.uk) or his supervisors Dean Stroud (StroudDA1@cardiff.ac.uk) and Manuel Souto-Otero (Souto-OteroM@cardiff.ac.uk), who will do their best to answer your query. If you remain unhappy or wish to make a formal complaint, please contact the relevant Chair of the Research Ethics Committee at SOCSI-ethics@cardiff.ac.uk. The Chair will seek to resolve the matter in a reasonably expeditious manner.

If you have read the information above and agree to participate with the understanding that the data (including any personal data) you submit will be processed accordingly, please check the relevant box below to get started.

Yes, I agree to take part □

Cardiff School of Social Sciences
Cardiff University
1-3 Museum Place
CF10 3BD

Khalifa Al Hatmi
A PhD Candidate
Cardiff e-mail: alhatmiks@cardiff.ac.uk

PARTICIPANT CONSENT FORM

SREC Approval Reference: SREC/2867

'Examining Employers' Hiring Behaviour in Oman, a Vignette Study'

Purpose of Study: The aim of this project is to study Omani employers' selection and recruitment practices when assessing resumes of job applicants.

Please initial each box

1	I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	
3	I understand that research data collected during the study may be looked at by designated individuals from Cardiff University where it is relevant to my taking part in this study. I give permission for these individuals to access my data.	
4	I understand that this project has been reviewed by, and received ethics clearance through, the School of Social Science Research Ethics Committee.	
5	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	
6	I understand how this research will be written up and published.	
7	I understand how to raise a concern or make a complaint.	
8	I consent to being audio recorded	
9	I understand how audio recordings will be used in research outputs	
10	I agree to take part in the study	

_____   _____   _____
Name of Participant   Date   Signature

_____   _____   _____
Name of person taking consent   Date   Signature

Appendix K: Information Sheet for Interview Participants

Cardiff School of Social Sciences
Cardiff University
1-3 Museum Place
CF10 3BD

Title of the Study: 'Examining Employers' Hiring Behaviour in Oman, a Vignette Study'

Information for Interviewees

You are being invited to participate in a PhD research study, which has been funded by the Government of the Sultanate of Oman and approved by the Cardiff University School of Social Sciences Research Ethics Committee (reference number: SREC/2867). This information sheet outlines the purpose of the research project and provides a description of your involvement and rights as a participant.

General Information

The aim of this project is to study Omani employers' selection and recruitment practices when assessing resumes of job applicants. As part of this this I am conducting semi-structured interviews. This will involve talking to professionals who are involved in the selection and recruitment processes about their hiring practices. I would like you to agree to be interviewed. Interviews will be audio recorded so that I will have a record of what is said.

Confidentiality

• Absolute anonymity is guaranteed at every stage of the process. Your real name will not be used at any point of information collection, or in any subsequent written material; instead, you and any other person and place names involved in your case will be given pseudonyms.
• Interview transcripts, and notes during the interview, will only be made available to myself, my doctorate supervisors (Dr Dean Stroud and Professor Manuel Souto-Otero), my progress reviewers and examiners. Subsequent analysis of the data will form part of my doctoral research. The research will be written up as a thesis and the results may be published in academic journals.
• Your participation in this research is entirely voluntary; you have the right to withdraw at any point of the study, for any reason, and without any prejudice. In this case the interviewing process will cease. Any prior information collected relating to yourself will be destroyed.

Contact

If you have questions about any aspect of this project, please speak to the researcher (Khalifa AL Hatmi – alhatmiks@cardiff.ac.uk -) or his supervisors Dean Stroud (StroudDA1@cardiff.ac.uk) and Manuel Souto-Otero (Souto-OteroM@cardiff.ac.uk).

Appendix L: Multilevel linear models of hiring propensity evaluations (random intercept models with respondents' characteristics, group comparisons and cross level interactions)

	(1)	(2)	(3)	(4)
	Number of Résumés(total)	less_than_50 CVs	more_than_50 CVs	Cross Level interaction
Female	-2.829**	-4.410**	-1.702	-5.701
	(0.995)	(1.409)	(1.404)	(3.689)
Expatriate	-10.15***	-7.767***	-12.32***	-0.864
	(0.994)	(1.418)	(1.401)	(3.685)
Bachelor's Degree	2.267	2.939	1.617	3.302
	(1.216)	(1.742)	(1.708)	(2.501)
Master's Degree	1.280	2.089	0.547	3.513
	(1.215)	(1.723)	(1.719)	(4.519)
Business and Management	-2.991*	-2.681	-2.941	-0.840
	(1.223)	(1.751)	(1.719)	(2.479)
Information and Technology	-5.347***	-4.035*	-6.170***	-1.385
	(1.215)	(1.716)	(1.717)	(4.484)
4 out 4 and within the top 5% of their class	9.950***	9.030***	10.89***	4.465
	(1.390)	(1.968)	(1.968)	(4.920)
3.5 out 4	7.710***	5.995**	9.766***	4.115
	(1.402)	(1.962)	(2.005)	(3.434)
2.7 out of 4	4.294**	3.237	5.456**	2.476
	(1.413)	(2.018)	(1.985)	(2.107)
A leading university in Oman	-0.454	-1.607	0.578	-5.049
	(1.419)	(2.015)	(2.005)	(3.475)
A non-leading university in Oman	-3.245*	-6.430**	-0.738	-5.624**
	(1.423)	(2.042)	(1.986)	(2.130)
A non-leading university abroad	-2.901*	-3.148	-3.204	-0.936
	(1.402)	(2.015)	(1.963)	(2.123)
internship at your organisation	-5.586***	-4.692*	-6.564**	-1.110
	(1.425)	(2.022)	(2.010)	(3.494)
internship outside your organisation	-5.245***	-2.396	-7.575***	-2.818
	(1.417)	(2.027)	(2.006)	(2.145)
No relevant experience	-8.295***	-7.747***	-9.282***	-10.86***
	(1.420)	(2.027)	(2.001)	(2.155)
Yes, member of group	-0.301	-1.214	0.386	-5.303*
	(1.206)	(1.709)	(1.706)	(2.505)
No	-0.959	-2.952	0.667	-10.80*
	(1.218)	(1.742)	(1.725)	(4.553)
yes, by an existing employee	-3.761**	-1.004	-6.094**	-2.152
	(1.396)	(1.978)	(1.974)	(3.502)
Yes, from an Omani university with which your organisation cooperates	-1.967	-1.404	-2.578	-1.285
	(1.409)	(2.011)	(1.983)	(2.137)
No	-2.828*	-1.372	-4.288*	-3.729
	(1.423)	(2.032)	(2.011)	(2.128)
Number of résumés	-6.769***			-4.201
	(1.427)			(4.242)
Gender X résumés				0.865
				(1.095)
Nationality X résumés				-2.893**
				(1.093)
Degree X résumés				-0.316
				(0.671)
Extra X résumés				1.508*
				(0.675)
Place X résumés				-0.695
				(0.490)

experience X résumés				0.708
				(0.492)
Referral X résumés				0.255
				(0.493)
Grade X résumés				-0.567
				(0.485)
Discipline X résumés				-0.578
				(0.666)
Constant	74.34***	58.29***	47.33***	75.50**
	(5.270)	(3.550)	(3.614)	(7.508)
Vignettes	2108	994	1114	2108

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

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Appendix M: Multilevel linear models of expected trainability evaluations (random intercept models with respondents' characteristics, group comparisons and cross level interactions)

	(1)	(2)	(3)	(4)
	Number of Résumés (total)	less_than_50 CVs	more_than_50 CVs	Cross level interaction
Female	-2.174*	-4.771***	0.00550	-8.611*
	(0.969)	(1.350)	(1.384)	(3.602)
Expatriate	-7.875***	-6.595***	-9.155***	-2.414
	(0.968)	(1.356)	(1.383)	(3.598)
Bachelor's Degree	4.556***	5.621***	3.680*	5.583*
	(1.185)	(1.669)	(1.685)	(2.442)
Master's Degree	3.863**	4.830**	3.119	6.053
	(1.184)	(1.651)	(1.695)	(4.412)
Yes, as a member of group	0.840	0.289	1.260	-3.171
	(1.175)	(1.638)	(1.684)	(2.446)
No	0.844	-1.451	2.828	-7.084
	(1.188)	(1.669)	(1.704)	(4.446)
Business and Management	-2.749*	-3.123	-2.209	-1.627
	(1.190)	(1.675)	(1.694)	(2.420)
Information and Technology	-5.023***	-4.816**	-4.955**	-3.027
	(1.185)	(1.648)	(1.694)	(4.379)
A leading university in Oman	0.532	-0.621	1.531	-2.365
	(1.382)	(1.931)	(1.977)	(3.393)
A non-leading university in Oman	-2.469	-4.669*	-0.512	-3.910
	(1.387)	(1.957)	(1.961)	(2.079)
A non-leading university abroad	-1.195	-1.480	-1.507	-0.0950
	(1.366)	(1.930)	(1.939)	(2.072)
internship at your organisation	-4.356**	-2.355	-6.145**	-1.006
	(1.388)	(1.938)	(1.983)	(3.413)
internship outside your organisation	-4.379**	-2.751	-5.362**	-2.457
	(1.380)	(1.941)	(1.980)	(2.094)
No relevant experience	-6.696***	-4.961*	-8.584***	-8.637***
	(1.384)	(1.941)	(1.979)	(2.104)
yes, by an existing employee	-4.193**	-1.357	-6.436***	-2.146
	(1.361)	(1.897)	(1.947)	(3.419)
Yes, from an Omani university with which your organisation cooperates	-3.559**	-4.126*	-3.097	-2.652
	(1.374)	(1.933)	(1.954)	(2.088)
No	-3.256*	-3.060	-3.642	-4.367*
	(1.387)	(1.949)	(1.985)	(2.077)

4 out 4 and within the top 5% of their class	11.50***	11.84***	11.27***	6.075
	(1.355)	(1.888)	(1.942)	(4.804)
3.5 out 4	7.598***	6.610***	9.027***	4.081
	(1.367)	(1.881)	(1.979)	(3.353)
2.7 out of 4	4.394**	5.169**	3.979*	2.624
	(1.376)	(1.931)	(1.957)	(2.057)
Number of résumés	-5.892***	-7.219		
	(1.494)			(4.171)
Gender X résumés				1.967
				(1.068)
Nationality X résumés				-1.713
				(1.067)
Degree X résumés				-0.311
				(0.655)
Extra-curricular X résumés				1.213
				(0.659)
Place of study X résumés				-0.426
				(0.478)
Experience X résumés				0.531
				(0.481)
Referral X résumés				0.321
				(0.482)
Grade X résumés				-0.555
				(0.474)
Field of study X résumés				-0.270
				(0.650)
Constant	69.10***	55.65***	44.82***	73.67***
	(5.453)	(3.381)	(3.693)	(7.552)
Vignettes	2111	995	1116	2111

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

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