The Impact of Culture and Social Norms on Female Employment in Arab countries in general and Saudi Arabia in particular

Based on quantitative and qualitative evidence

By

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Abstract

This thesis investigates the role of social and cultural norms on female employment considering behavioural economic theories in addition to the standard economic theories related to labour supply and human capital framework. This relationship between social and cultural norms and its impact on females' employment is explored both at a macro and a micro level. At the macro level, differences in female labour force participation (FLFP) rates are explored empirically, considering countries that have similar religious and cultural background but have different rates for the FLFP; these countries are the Arab and non-Arab Muslim majority countries. At the micro level, the role of cultural norms and their link with FLFP rates is explored both qualitatively and quantitively, with specific reference to the context of Saudi Arabia. The first study in this thesis investigates the factors influencing FLFP. Results shows that diversity in religion has a strong positive association with FLFP. Results also show that, within Arab countries, countries with high oil dependence and displaying high level of social conservatism, are associated with lower FLFP. The second study investigates barriers faced by non-employed Saudi females toward their employment decisions. The study provides evidence that social norms established by the influence of male guardians; social norms manifested through the preference for working within female-only environments; social and cultural norms represented by responsibilities for caring for children and housework, are the most important social barriers faced by those non-employed females. The third study uses experimental vignettes as a research tool to employment decisions. Results show that Saudi males and females tend to assume that their personal preferences are in line with other participants, which could be a possible justification for their personal preference. Results show that nearly half of the females in the sample changed their personal preference from working in a Single Gender Work Environment (SGWE) to a mixed gender working environment when they were told that other females' preferences are different from their own. The fourth study is an additional contextual study complementing the other substantive studies. This study can be considered as testing the temperature in regards attitudes toward females' employment and hence, evidence on the informal institution that impact females' employment in Saudi Arabia. It presents and evaluates policies and reforms implemented to enhance Saudi females' employment. The evaluation is conducted in light of the findings from the interviews and vignettes studies. The thesis suggests the need to institutional changes affecting the formal as well as the informal institutions to reach effective polices enhancing females' employment.

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Chapter 1: Thesis Introduction

Gender equality is a fundamental goal for the achievement of a high level of human rights and social justice and is closely related to sustainable economic development (Morrisson & Jutting, 2005). Despite improvements to women's status in developed and developing countries, gender inequalities still exist (World Bank, 2020). One form of gender inequality is evident in women's low participation in the labour force and low employment rates. A growing number of studies point to the importance of reducing gender inequality and leveraging equity to enhance women's employment rates and vice versa (Seguino, 2007; Ridgeway, 2011; Kabeer et al., 2013). Based on the Gender Inequality Index (GII)[1], levels of gender inequality are greater in developing than in developed countries (0.46 and 0.20 respectively, Human Development Reports, 2020). Much of this difference is explained by lower education levels and higher fertility rates in developing countries, but the residual could be related to social and cultural. This is considered to be particularly relevant in Arab countries, including the Kingdom of Saudi Arabia (Elborgh et al., 2013).

Following the work of economist Claudia Goldin, who provided a comprehensive understanding for how women's status changes as the economy transitions from traditional to contemporary society (Goldin, 1995), this thesis seeks to understand the impact of social and cultural norms on female employment. It is important to understand how and why socioeconomic factors impact employment decision of females and how it may generate gender inequality in the labour market. As Goldin argues, if women do not participate in the labour market, their potential to contribute to economic prosperity is wasted and there will be inefficient use of production factors (Goldin, 1995). Integrating elements from both standard economic theory and behavioural economics, this thesis makes a contribution to the literature by delving into an exploration of the role of social and cultural norms as informal institutions shape women's involvement in the labour market in Saudi Arabia.

[1] This index provides a relatively comprehensive picture of the level of inequality between males and females across three dimensions in each of 160 countries around the world. It includes three main sub-indices: the first is empowerment, measured by the number of parliamentary seats assigned to women, along with education, measured by the percentage of adult males and females aged 25 or more who have completed at least secondary education. The second is health, measured by the maternal mortality ratio and the adolescent birth rate. The third sub-index is economic status, represented by the labour force participation rate (LFPR) of women and men aged 15 and over (Human Development Reports, 2016). The index gives values ranging from 0 to 1, with 0 indicating no inequality and 1, high inequality.

The main claim of this thesis is that social and cultural norms form part of the informal institutions which may have a negative impact on women's employment and participation in the labour market in Arab countries in general and Saudi in particular. Several studies explore the factors affecting female labour force participation (FLFP) but give marginal consideration to social and cultural factors. Whilst recognising that the cultural dimension can be difficult to be measure and quantify, in order to fully understand the differences in FLFP across and within countries it is essential to explore its relationship to cultural norms. Social and cultural norms can be defined as rules and expectations of behaviour or ideas resulting from shared beliefs within a cultural or social group. Although such norms are often unspoken, they establish social standards in terms of what is considered appropriate or inappropriate behaviour, and individuals in the group are expected to adhere to them (Durlauf & Blume, 2008). The main aim for this thesis is to shed light on the cultural norms that promote gender inequality practices and, thereby, limit female labour force participation.

Cultural norms have been used to explain social and economic outcomes (Guiso et al., 2006). Defining the word "culture" and operationalising its meaning may help to understand the mechanisms or channels through which economic outcomes can be impacted. An individual's culture may affect their economic outcomes through its impact on their preferences (Guiso et al., 2006). For instance, Fernández, Olivetti and Fogli (2004) and Fernández and Fogli (2005) find that females in different cultures take different decisions about fertility and work depending on the roles assigned to them in their society.

Culture might be defined on the basis of beliefs, norms, attitudes and values can be considered as the main components (Harrison & Huntington, 2000). These components of culture can impact the economic outcomes, through their impact on an individuals' behaviour and their preferences – see Figure1.1. Females' decisions to work could be impacted by beliefs, norms, attitudes and values that do not support females work outside the house. These restrictive beliefs could be held by the females themselves, close members of their families (especially fathers, husbands or brothers), or by the societies they live in.

This thesis is composed of three substantive studies, followed by additional contextual study that provides evidence on gender attitudes captured through a survey conducted in 2020. This additional study can be considered as testing the temperature in regards attitudes toward females' employment and hence, evidence on the informal institution that impact females' employment in Saudi Arabia. As such, the study provides a useful complement to the three

substantive chapters, and a lens through which the effectiveness of policy changes might be assessed.

Each study closely investigates one or two components of culture in relation to FLFP. The motivation behind each study is different. However, the main argument behind them all is that social and cultural norms impact females' decisions to work or participate in the labour market. Although each study addresses specific issues and employs different methodologies, the overarching research question in this thesis is to explore how social and cultural norms affect FLFP. The studies are presented through a logical order. The first study empirically estimated the impact of certain factors, such as oil dependency and religious diversity, on FLFP including social and cultural norms. The second study used exploratory interviews with non-employed Saudi females, to offer a better understanding of how the social and cultural norms could impact the employment status for females. The third study employed experimental vignettes, engaging subjects with hypothetical scenarios. By extracting information from participants in a less direct way, this approach was used to reduce the pressure of giving responses that might be considered to be socially desirable. Finally, the last study built on survey as a research tool. This is intended to explore the overall Saudi society's attitudes toward females' employment, particularly after the dramatic social and economic changes occurring in this country. The study offers a valuable supplement to the three substantive chapters and serves as a perspective for evaluating the effectiveness of policy changes.

Employing a combined approach from standard economic theory and behavioural economics, this thesis investigates the role of social and cultural norms on female employment both at a macro and a micro level. At the macro level, differences in FLFP are explored empirically, considering countries that have similar religious and cultural background but have different rates for the FLFP; these countries are the Arab and non-Arab Muslim majority countries. At the micro level, the role of cultural norms and their link with FLFP is explored both qualitatively and quantitively, with specific reference to the context of Saudi Arabia. In this sense, these contributions embrace a case-study approach.

The first study investigates the **factors influencing female labour force participation in Arab and non-Arab Muslim majority countries** using panel data for 18 Arab and 16 non-Arab Muslim majority countries over the period 1991 to 2018. Based on the empirical results, diversity in religion has a strong positive association with FLFP. This suggests that FLFP is

high in countries where people live amid different combinations of religious thought. Furthermore, apart from Islam, one of the possible factors that results lower FLFP in Arab countries compared to non-Arab Muslim majority countries is the Arabic culture. Results also show that, within Arab countries, countries with high oil dependence and displaying high level of social conservatism, are associated with lower FLFP. High conservatism and Arabic culture may suggest stronger restrictions on females, resulting in norms discouraging FLFP. High oil dependency would be associated with high unearned income for females, represented by the financial support given to females by their male relatives, which ultimately decreases the incentives for females to work, reducing their participation in the labour market.

The second study explores **the impact of social and cultural norms on non-employed females in Saudi Arabia**. The study investigates barriers faced by non-employed Saudi females toward their employment decisions. It focuses mainly on how social and cultural norms may impact such decisions. The study analyses the data emerging from 35 interviews with non-employed Saudi females (aged 22 to 40 years). The following social barriers were identified: social norms established by the influence of male guardians; social norms manifested through the preference for working within female-only environments; social and cultural norms represented by responsibilities for caring for children and housework. The study also finds that, although Saudi females' decisions are significantly affected by social and cultural norms, the respondents display different attitudes and perceptions toward these social norms, depending on their demographic characteristics.

The third contribution explores **Saudis' expectations and preferences in relation to employment decisions through a vignette study.** The study investigates the perception of social norms of Saudi males and females in relation to employment decisions. In particular, it investigates the role played by: gender of the job seeker, financial support provided by husbands to wives, the type of job considered (mixed or single gender environments), and the wage offered. It also explores males' and females' employment preferences when facing different employment scenarios. The study surveyed 369 Saudi university students online, using experimental vignettes as a research tool. The results show that all three factors tested have a significant impact on the Saudi males and females' perception of social norms in relation to employment decisions. In particular, the results highlight that Saudi females are pressured to follow social norms that limit their participation in the labour market. Results also show that Saudi males and females tend to assume that their personal preferences (working in a single

gender work environment) are in line with those of other participants, which could be a possible justification for their personal preference. Finally, results showed that nearly half of the females in the sample changed their personal preference from working in an SGWE to a mixed gender working environment when they were told that other females' preferences are different from their own, and that the majority of females prefer to work in a mixed gender environment. These results point to the importance of changing or updating the perceptions of those females who restrict their employment preferences to "female-only" working environment in order to increase their chances to be employed.

The fourth study investigates **Saudis' attitudes toward females' employment**. The study aims to explore the possible determinants of Saudis' attitudes toward females' employment. It also aims to contribute to the policy making literature by highlighting the need for structural institutional change in order to reach gender equality in the labour market. Survey responses were received from 1,640 Saudi participants, they responded to statements taken from the "multidimensional aversion to women who work scale" (MAWWWS). The study found that being male, married, less well educated and considering religion as very important, have a negative impact on attitudes toward females' employment. Differences in the determinants of attitudes towards female employment based on gender were also found. For male participants, attitudes are significantly different across regions of provenience, whereas for female participants, age, marriage, and religiosity are significant predictors of their attitudes.

Before presenting these four studies, the next section (Chapter 2) describes the relevant context of the thesis. It provides definitions for concepts and terms that will be used throughout the thesis. Additionally, it provides an overview of the socio-economic context of Saudi Arabia as well as the Arab and non-Arab Muslim majority countries.

Chapter 2: Thesis Context

This chapter consists of four sections. The first section presents the economic theories related to the work in this thesis. The second section introduces the definition of culture and its determinants and outlines how these may be understood as informal institutions. The third section offers an overview of the Saudi socio-economic context. This is followed by an exploration of gender inequality in the Saudi labour market and a discussion of possible explanations. The fourth part of the chapter investigates similarities and differences between the Arab and non-Arab Muslim majority countries.

2.1 Theoretical considerations

This thesis investigates the impact of social and cultural norms as one form of informal institution, on females' employment, using qualitative and quantitative methods. The work in this thesis is linked to theoretical predictions related to the impact of different economic and socioeconomic factors on FLFP. For instance, Chapter 3 contains results related to the impact of oil industry development as well as the impact of human capital on females' employment. Chapter 4 and 5, contain findings and results related to insights from behavioural economics as well as labour supply theory. This following section presents these theoretical considerations in more details.

According to standard labour supply theory, different factors can affect a person's decision to work and how many hours should be worked – these include worker preferences, wage rates and non-labour income. At the individual level, it is assumed that individuals maximise their utility by consuming goods and leisure. They face a trade-off between work and leisure. Those who value leisure time more tend to work fewer hours than people who put less value on their leisure. However, preferences are not the only factors which influence labour supply choices or outcomes, other observable and measurable factors such as wages rates or income must be considered. A person chooses the best combination of leisure and work that maximises their utility (highest level of satisfaction) – subject to their constraints of what is affordable, which is determined by any non-labour income and their likely wage rate. Non-labour income might include any earnings from other members of the household or financial support from the state (welfare payments). When this source of income increases it is possible to consume more goods

and more leisure[2], so that hours of work will decrease (Kosters, 1969; Killingsworth, 1983). The theory predicts that when reservation wages (the lowest wage at which an individual is willing to work) are high, then individuals will be less likely to participate in the labour market (Brown et. Al., 2011). Different factors might influence the reservation wage level for an individual, such as unemployment duration, marital status, health and wealth (Jones, 1988). It might also be influenced by the number of children or the age of the youngest child. Through the effect of reservation wages, labour market participation might be sensitive to these factors. For instance, if a female has young children she may place a higher value on her leisure time, which would increase her reservation wage and make her less likely to join the labour market (Becker, 1993).

According to the theory, one can analyse household labour supply by considering each individual within the household. When each individual of the family can maximise their utility depending on their leisure time in addition to the family consumption, the utility function that faced by each family member is $U = U\ (L_i, C)$, where U represents the family utility, C family consumption and L is an individual's own leisure time subject to the family budget constraint: $PC \leq R + \sum_i WH$. Whereas P is the price of one unit of a good, C is the consumption, R represents the amount of exogenous income received by the family, W is the wage and H is hours of work of a family member. H could be represented as $H = T - L$, whereas T is the total available time and it is allocated amongst leisure and labour ($T = H + L$) By adapting this approach, members of the family (for example, husband and wife) are acting as firms in a duopoly model where both attempt to maximise their utility bearing in their minds that their behaviour will impact the other partner's labour supply (Killingsworth & Heckman, 1986), as each partner's utility is derived from family utility. In the traditional model, the higher the wage for the male relative to the female, the less likely she will participate in the labour market, as the male has a comparative advantage in market labour. According to another interpretation, a similar effect might occur when one partner's wages increase (the husband, for instance), income and substitution effects will be generated for the husband. If the husband chooses to increase his labour supply (substitution effect), the household income will increase further and will therefore affect the wife's supply decision, making her working hours change accordingly, decreasing her working hours and increasing her leisure. This effect is referred to as the "indirect income effect". In addition, the "direct income effect" might also occur if the husband

[2] Assuming that leisure is a normal good which imply that when there is increase in income, consumption of this goods will be higher.

chooses to decrease his labour supply when his wages increase. That could also be translated as increase in household income and will affect the wife's labour decision through an income effect.

According to human capital theory, human capital acquisition involves costs and benefits. Costs can be direct, such as education or training tuition fees, or indirect, such as foregone pay during learning periods, represented by opportunity cost which referred to as the cost of not pursuing the best alternative (Becker, 1981). Benefits are related to higher potential lifetime earnings and better health outcomes for the individual and other additional benefits for society, such as less crime and lower unemployment rates in a society. Certainly, as the length of the working life increases, gains from high earnings increase as well. Hence, females who drop out of the labour market, either for childrearing or housework responsibilities, decrease their potential benefits from human capital acquisition, which may result in the reduction in the return of any human capital investment. On the contrary, those who participate in the labour market for long periods of time during their lives can gains or reap the highest benefits of their human capital investment. Generally speaking, the less time spent working in one's lifetime, the lower are the returns to investment and there is therefore less incentive or motivation to invest in education or training (Fouarge, 2010).

Economies experiencing a development of their oil industry register a significant impact on their labour demand, through the creation of jobs related to construction work and extractive infrastructure (Wise & Shtylla, 2007). It is generally assumed that males and females' employment in the oil productive activities are imperfect substitutes, as the oil industry usually target male workers as they are better suited to engage in physical labour (Bennett et. al, 2021). Therefore, developments in the oil sector may not help in increasing females' employment. Nevertheless, the development of oil industry may generate economic spill overs toward other sectors in the economy. This may enhance job creation and employment expansion in the labour market and benefit both male and female workers (Bennett et. al, 2021). For instance, the income generated from the oil industry could be used to build more schools, universities, and hospitals. It could be also used to invest in service and manufacturing sectors, which in turn generate more employment opportunities in the country (Bennett et. al, 2021). The overall effect of the development of the oil industry on female labour supply depends on individual choices as well as on intrahousehold decisions. Due to higher demand for male employment in the oil industry, male wages increase. However, the impact on females' employment decisions

is ambiguous. Female labour supply is usually determined based on intrahousehold decisions (Becker, 1981). Hence, due to substitution effects, females could choose not to participate in paid work due to the increase in their partners' income. However, there might be greater substitutions effect in terms of labour demand and labour supply in the long run. This due to possible change in norms and the society's culture (Bennett et. al, 2021; Ross, 2008).

According to standard economic theory, individuals are rational and make rational choices as discussed earlier in the context of labour supply and human capital theory. This assumption might be true in explaining a variety of economic problems. However, there are some phenomena where this assumption can be unhelpful, or insufficient, in explaining human behaviours and choices made by individuals. Behavioural economics, which combine aspects of economics as well as aspects of psychology to understand how individuals perceive and behave in real world, provide very important insights for this thesis. Theories of planned behaviour suggest that individuals use information and reasoning to guide their behaviour (Ajzen, 1991). The theory uses three variables to predict individuals' behavioural intention, which then used to predict the individual actual behaviour. The first variable is personal attitudes, these are the sum of all of the individuals' knowledge, attitudes and prejudices (whether positive or negative) that individuals consider when choosing how to behave. The second variable is the subjective norms, referring to individuals' perceptions of the attitudes held by others. Third variable is the perceived behavioural control. This is the extent to which individuals believe they can control their behaviour.

In addition to these theories, there are theories of social norms which have been also used to explain individuals' behaviour and practice in the labour market. The key element is that individuals care about what are considered to be appropriate actions. Researchers have differentiated between two types of norms that may impact individuals' behaviour and beliefs, which are comprised of descriptive and injunctive norms (Cialdini et al., 1991). These social forces impact behaviour through the formation of an individual's preferences (Posetlewaite, 2011). The descriptive norm refers to what is typical or normal within a certain social setting, and most individuals tend to follow it as it is viewed as effective or efficient. The main feature of the descriptive norms is providing a decisional shortcut for individuals when deciding how to behave in a certain situation (Cialdini et al., 1991): everyone is doing it, then it must be the right thing to do. Therefore, individuals use descriptive norms to inform their actions. On the other side, the injunctive norm refers to beliefs about what is morally approved or disapproved

action or behaviour. The main difference between descriptive and injunctive norms is the social sanction that occurs when deviating from the injunctive norms (Cialdini et al., 1991). Similarly, Bicchieri (2006) refers to descriptive norms as "empirical expectations", and argues that for this to exist, it has to be followed by a sufficient proportion of the population. Bicchieri (2006) refers to injunctive norms as "normative expectations" and argues that "normative expectations" exist when a sufficient proportion of the population expects to conform the norm in certain situations. Deviation from the injunctive norms may imply sanctions (which can be both positive and negative). Individuals follow norms for different reasons: avoiding sanctions, desire to please others, or based on the expectation that these norms are well-founded (Bicchieri, 2006). However, individuals might privately hold different beliefs that contradict what others expect. That is, one might privately reject the norms but "incorrectly" believe that others accept it, hence deciding to follow it. This behaviour is labelled "pluralistic ignorance" (Katz & Allport, 1931).

2.2 Culture and its components

Many researchers have attempted to define culture; however, there is no clear consensus (Jahoda, 2012). For instance, Kroeber & Kluckhohn (1952) stated that *"culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action*" (P. 181). However, Geertz (1973) defined culture as *"the set of (usually implicit) norms and habits of behaviour shared by the actors in the relevant system"* (P. 89). Geertz emphasised the "implicit" elements of culture, unlike Kroeber & Kluckhohn, who stated that the sets of culture could be implicit and explicit. Hofstede (2001) refer to culture as shared mental software, "*the collective programming of the mind that distinguishes the members of one group or category of people from another*". Others have defined culture in the simplest form, they refer to the word culture "*as the values, attitudes, beliefs, orientations, and underlying assumptions prevalent among people in a society*" (Harrison & Huntington, 2000). Furthermore, Guiso et al. (2006) included the notion of religion in the definition of culture, as he defined culture as

"*those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation"*.

Whatever definition of culture is taken, beliefs, norms, attitudes and values can be considered as the main components of culture (Harrison & Huntington, 2000).

Beliefs are defined as fundamental, inflexible, absolute and generalised ideas that individuals hold about themselves or/and others (Beck, 2011). **Values** are defined as "*broad desirable goals that motivate people's actions and serve as guiding principles in their lives*" (Sagiv et. al., 2017). **Attitudes** are defined as "*states of mind, and/or feelings toward a specific object or social interaction*" (Saucier, 2004; Stankov, 2011). **Norms** refer to regularity and can be classified in two ways. Legal norms are formal laws and are enforced by the state. Violation of these laws will result in punishment from the government. Social norms, which are considered informal and unwritten laws, are enforced by society. Deviation from social expectations could result in social sanctions, which are basically forms of "shame" (Mackie et al., 2015).

All of these concepts, beliefs, values, attitudes and norms are somehow interrelated. However, norms have been expressed as the foundation of culture, as the imitation factor works as shared ground between norms and culture (Mackie et al., 2015).

Social norms are defined as what people believe to be normal in a group, and what they believe to be acceptable, favourable, compatible or typical actions in a certain environment (Paluck and Ball, 2010). It is important to distinguish between two types of social norms: doing what other people do, known as descriptive norms (i.e., males using male-only restrooms), and doing what other people believe one should do, injunctive norms (i.e., apologising when one has made a mistake, Mackie et al., 2015). Social expectations can set the boundaries of how males and females think and how they act. Males' larger and stronger bodies compared to females may be perceived as a signal of power, strength and therefore entitlement over decision making on behalf of females. Additionally, according to gender norms ideologies, a "good" man is one who takes the role of the breadwinner, acts as the head of his family, and is viewed as the main decision maker. His wife acts as homemaker and can be a secondary earner; her main tasks being childrearing and household activities (Marcus et al., 2015; Eagly and Wood, 2012).

Two dimensions can explain how culture may impact behaviour and shape individuals' actions; these dimensions are economic and psychological dimensions. From the economic point of view, norms might be viewed as a rational behaviour. Since acting against norms may result in sanctions and shame, individuals opt to follow a particular norm; therefore, their utility is maximised because they avoid the sanction. Additionally, because actions were confirmed by other people who have followed it before, this confirmation makes that action or norm a rational choice. The individual will imitate the action of other individuals who have faced a similar situation in the past. It might be seen as an efficient and effective approach as it has been examined by previous individuals and was socially accepted therefore will be followed. "*If everyone is doing it, it must be a sensible thing to do*" (Cialdini et al., 1991, P. 1015). From a psychological perspective, Planned Behaviour Theory states that "the intention to perform a behaviour drives behaviour" (Reynolds et al., 2014, based on Ajzen, 1991). The intention is controlled by three factors: normative beliefs (how likely is the society to (dis)approve of certain behaviours), people's attitudes and perceptions toward this performed behaviour (whether it is desirable or not) and how the individual's confidence and certainty in performing this behaviour will result in certain outcomes. Psychologically, an individual gives more attention to the aspect of importance of how others may view his/her behaviour (Reynolds et al., 2014).

Due to the strong bond between culture and religion (Geertz, 1973), one cannot study culture without mentioning the concept of religion. Religion is defined as *"a system of symbols which acts to establish powerful, pervasive and long-lasting moods and motivations in men by formulating conceptions of a general order of existence and clothing the conceptions with such an aura of factuality that the moods and motivation seem uniquely realistic"* (Geertz, 1973, p. 90). Some researchers believe that culture is the product of religion while others believe that religion is part of the culture (Hill et al., 2000; Zinnbauer & Pargament, 2005) and hence culture can be influenced by religion. However, others believe that religion represents culture, and it is difficult to distinguish the boundaries between religion and culture (Hill & Pargament, 2003; Guiso et al., 2006). Others argued that the relation between religion and culture can be represented in several ways, one of which is that religion can shape culture, or it can interact with culture in influencing cognitions, emotions, and actions and social behaviour (Saroglou & Cohen, 2011).

Although religion and culture can overlap, they are two different concepts. In order to understand or study the impact of culture on any phenomena, religion cannot be dismissed, and vice versa. One important point is that religion seems to function in identical ways across different cultural contexts as it produces universal motivations behind certain actions and behaviours (Saroglou & Cohen, 2011). However, different interpretations of what it means to be religious and how religion may govern life may exist within a given faith and within a given culture.

In countries characterised with low FLFP, as in the Arab countries in general, and in Saudi Arabia in particular, culture, social norms and religion overlap. Social norms represented by men as breadwinners and women as homemakers, traditional and early marriage (Singh & Samara, 1996), male control over females (Heise et al., 1994), may affect females' decisions to work or participate in the labour market. It could justify females' dependency on males and their non-employment. It could also limit females' employment preferences to certain jobs, such as working in single-gender environment or working in daytime only jobs as females attempt to reconcile between their assigned roles as homemakers with their preference to be employed outside the house. In some Muslim countries, such as Saudi Arabia, where there is adherence to "male guardianship" religious laws, there are strong beliefs of the breadwinner and homemaker norms (Karshenas & Moghadam, 2001). Hence, social norms could be viewed as supported by religion, which produce strong motivation for these norms to be followed.

There are a literature referring to informal institutions as social norms (Jutting J. et al., 2007), hence, to provide more clarity for the reader, the concept of institution must be discussed.

2.3 Formal and informal institution

There is no commonly accepted definition of the concept of institution. It can have different meaning depending on the research area whether, economic, anthropology, politics or sociology. Hence, the term "institution" could carry varied meanings for different individuals. Institutions can be perceived as rules, rules and behavioural practice, or as organisation. Institutions may be defined as "humanly devised constraints that structure political, economic and social interaction" (North, 1990: P. 4). These rules can be formal and informal. The formal institutions refer to law and legislations that imposed by the government. Whilst informal

institutions refer to customs, tradition, and social norms (Jutting J. et al., 2007). However, in this thesis, the term institution refers to rules and behavioural practice. Researchers have different views around the relationship between culture and informal institutions. Some believe that these two concepts are complementary while others believe that informal institutions are part of culture. However, they agreed that these two concepts interact and evolve in a complementary way and have mutual feedback effects (North, 1990; Alesina and Giuliano, 2015). Several studies have explored the relationship between informal institutions and female work and found that institutional characteristics have a key role in formulating attitudes toward females' employment and can impact female participation rates in the labour market (Giavazzi et al., 2013). Bisin and Verdier (2015) stated that even with introducing new policies to affect economic outcomes, the impact of these new policies will depend on whether the corresponding cultural context is conducive to their effectiveness. Some researchers have attempted to provide answers for the question of why some females may support traditional informal institutions that may harm them or perhaps impact them negatively. They offered different suggestions; females may have no choice but to support these informal institutions, females may reproduce the informal institutions as they do not view them as negative ones, females might tolerate loss of control and agency for instance as they trade this off against economic support, negative informal institution may assure females' integration into social networks that is important to them (Jutting et al., 2007).

It is important to note that, in line with the definitions presented in this chapter, the terms "informal institutions" and "social and cultural norms" will be used interchangeably throughout this thesis.

2.4 The socio-economic context of Saudi Arabia

The low rates of FLFP in Saudi Arabia, along with its unique combination of religion and culture, are the main reasons for choosing this country to investigate the association between culture and social norms from one side, and FLFP on the other side.

Three words can be used to describe the Saudi society: tribal, patriarchal, and religious. In terms of tribal, most Saudi citizens define their identity by the region they belong to (geographically) and/or by bloodlines. People are divided into two groups: tribal *(Bedouin)* and non-tribal *(hadhar)*. The most recognised tribes in Saudi society are: Anaza, Harb, Utaybah,

Al-Murrah, Shammar, Mutayr, Qahtan, Dawasir, Yam, Ghamid, Al-Bani Hajir, Bani Khalid, Ajman, and Awazim (El Mallakh, 1982). Tribes in Saudi society refer to a social network of kinship and identity. People from different tribes, or belonging to non-tribal families, can live and cohabit together; however, there is always an invisible line that distinguishes the two groups (tribal and non-tribal) as each group has its own social rules and a different mentality.

Being a member of a tribe, large or small, noble or infer, does not guarantee wealth, success or political power; however, it provides the necessary backup in times of hardship, conflict and need. Even urbanised and tribal Saudis remember and cherish their kin network during these times. This kind of tribal solidarity and cohesion is called ***asabiya*** *as the most important ingredient and connector to organised societies. However, the same unifying factor is also criticised as being a racist, corrupt and elitist concept.* (Maisel, 2014, P104)

Although Islam opposes the promotion of tribe and origin, some people continue to consider them as reference points. One important element of tribalism still practiced in Saudi Arabia is that the daughters of members of a tribe cannot marry outside that tribe. Additionally, in tribal tradition, females are not allowed to mix or socialise with males who are not their relatives. Accordingly, all Saudi males and females are expected to act based on their tribal norms and rules.

Tribalism in Saudi represents shared values, beliefs and customs. Members who belong to tribes support each other and care about their reputation within the tribe. Individuals who belong to a particular tribe have same surname on their national identification cards. Tribes have different sizes, origins and influence. Their numbers are ranging from millions to hundreds. Tribes are originally located in different regions within Saudi. For instances, Shammar are in Hail (north region), Zahran and Ghamid are in AlBaha (South region), Utaybah and Bani Khalid are in Afif and Dawadimi (Centre region). One can notice that within large cities in Saudi, entire neighbourhoods can be dominated by a particular tribe (Maisel, 2015). Although individuals who belong to tribes consider themselves as superior to those who do not belong to tribe (claiming they have “pure Arab blood”), differences across tribes also exist. There are superior and inferior tribes. This is based on genealogy, origin and their occupational history (for example, some used to work as sheep herders, farmers and camel herders, Maisel, 2015). It is important to mention that there might be differences in behaviour and beliefs depending on whether members of a tribe live in the urban or rural area in Saudi. This observation is derived from the researcher's insights (based on lived experience in Saudi, not on this research), as there is currently no research that has delved into this aspect. It is worth

noting that there are studies which have identified variations in language and dialects used by members of the same tribe, contingent upon their geographical location, whether in urban or rural settings (Alrojaie, 2023). However, based on the researcher's observations, regional differences among tribes do not seem to impact their adherence to the social and cultural norms in general, as it is well known that members of tribes tend to hold more traditional attitudes than non-tribal members.

The Saudi society can be described as tribal but also as patriarchal, with patriarchy defined as "*a system of social structures and practices in which men dominate, oppress and exploit women*" (Walby, 1996, p. 20). In these communities, females are seen as powerless compared to males and males are seen as superior and dominant (Lerner, 1989). In most Arab countries, and in Saudi Arabia in particular, authority and power over females are in males' hands. In this type of society, this specific gender ideology shapes the controlling relationships within families (Moghadam, 1992). Traditional roles for females inside the family would be mothers and housewives as homemakers, whilst traditional roles for males would be breadwinners (Sabbagh, 1996). In Saudi Arabia, in particular, one of the obvious manifestations of the patriarchal system is the presence of the male guardianship system (Keene, 2003). Males' approval may not be required by the law, but it is required by social and cultural norms. Hence, it is socially expected that females abide by their guardian's judgements in any aspects of their lives. Prior to 2019, Saudi females were not allowed to travel, work or study without their male guardian's approval. New royal orders in 2019 allowed females to work and study without formal approval from their guardians; however, males' approval is still required for marriage. (Male guardians can be the father, brother or son, if he is aged above 18 years.) Therefore, all males and females are expected to respect and follow these cultural norms. For example, mobility of women in Saudi Arabia has been very limited due to legislation that prohibited them from driving. There were no religious or political reasons that prohibited women from driving; the legislation formalised social norms. From 24/06/2018 females were allowed to drive, as per the king's permission. For a woman to obtain a driving license, a guardian's approval is not formally required, but she must be 18 years or over. However, more than one incident has been reported from Saudi females who found their cars vandalised, while other females are not allowed to drive or apply for driving training due to their male guardian's disapproval. This could be taken as an indicator of the strong objection to giving women the right to drive amongst some Saudis.

The Saudi society can also be described as religious. Like other Arab countries, Saudi Arabia has a large Muslim population. However, Saudi Arabia is the only Arab country that fully segregates both genders in all aspects of life. Gender segregation can be seen across the public sphere, such as restaurants, universities, schools, banks and all of the governmental offices and sites. Saudi Arabia demands more adherence to Islam than any other Arab or Islamic country, as the Custodian of the Two Holy Mosques resides within Makah and Madinah. Islam was born within Saudi land and witnessed prophet Mohamed's birth as well.

Conservative and religious groups in Saudi Arabia view females as a temptation that could guide males to sin; therefore, full segregation between both genders is always desirable to ensure the society is safe and clean (Doumato, 1992). However, gender segregation in Saudi Arabia did not exist until what is known as the *Sahwa* Movement, which took place during the 1980s. This refers to the Islamic Awakening movement, which believed that Saudi society had become Westernised and that Muslim communities were ignoring all of the important religious rules. Hence, this movement was seen as necessary to put the society back on track (Meijer, 2010). The majority in Saudi Arabia accepted this "wake-up call" and believed that it would help them return to true Islam. Many believed that it changed the society for better and saved Islamic rules. During this time, the Saudi society became very conservative. One of the most significant implications of this movement for women is that society became more extreme and prohibited females driving cars (at that time) and unveiling (Al-Ghathami, 2015).

Historically, early education focused on religion because Saudi Arabia follows 'Salafiah', which implies adherence to early Muslim orthodoxy. Most Saudis have been educated in this school of thought. Thus, Muslims in Saudi Arabia differ from Muslims in other countries in terms of their thoughts, beliefs, and perceptions (Sidani, 2005). Under this Islamic school, there is a belief regarding females' engagement in jobs that involve working with males as dangerous for Muslim communities, because it will result in moral decay. This school believes that the best place for females is their 'kingdoms' (their houses) and females may only work under restrictions such as working with females only (Sidani, 2005). Based on the conservative interpretation of *Quran* (God's words) and *Hadeeth* (prophet Mohamed's words), mixing or mingling between females and unrelated males is prohibited. However, more liberal religious groups in Saudi Arabia believe that mixing between men and women existed in prophet Mohamed's era and hence should not be forbidden.

In Saudi Arabia, positive changes related to the rights of Saudi females have started since the 1960s (as indicated in Figure 2.1), however, since 2015, Saudi Arabia has gone through structural changes. Dramatic changes in the social, political and economic sphere have been undertaken. Additionally, the historical decision made by King Salman in 2017 that gives Saudi women the permission to drive their own cars can be seen as a huge step toward fulfilment of gender equality in the country and symbolic of change leading females to be more independent. This decision was thought to be supportive in enhancing females' presence in the public sphere and to advocate for their participation in the labour market (Chara, 2018). Relaxing some of the constraints on women's mobility should facilitate more females in joining the labour market and gain relatively more freedom. Furthermore, allowing women to study abroad in various fields has contributed to a measurable increase in women's education in terms of quantity and quality. Based on statistics from 2018, Saudi women account for 27 percent of the total Saudis studying abroad (Ministry of Education, 2018).

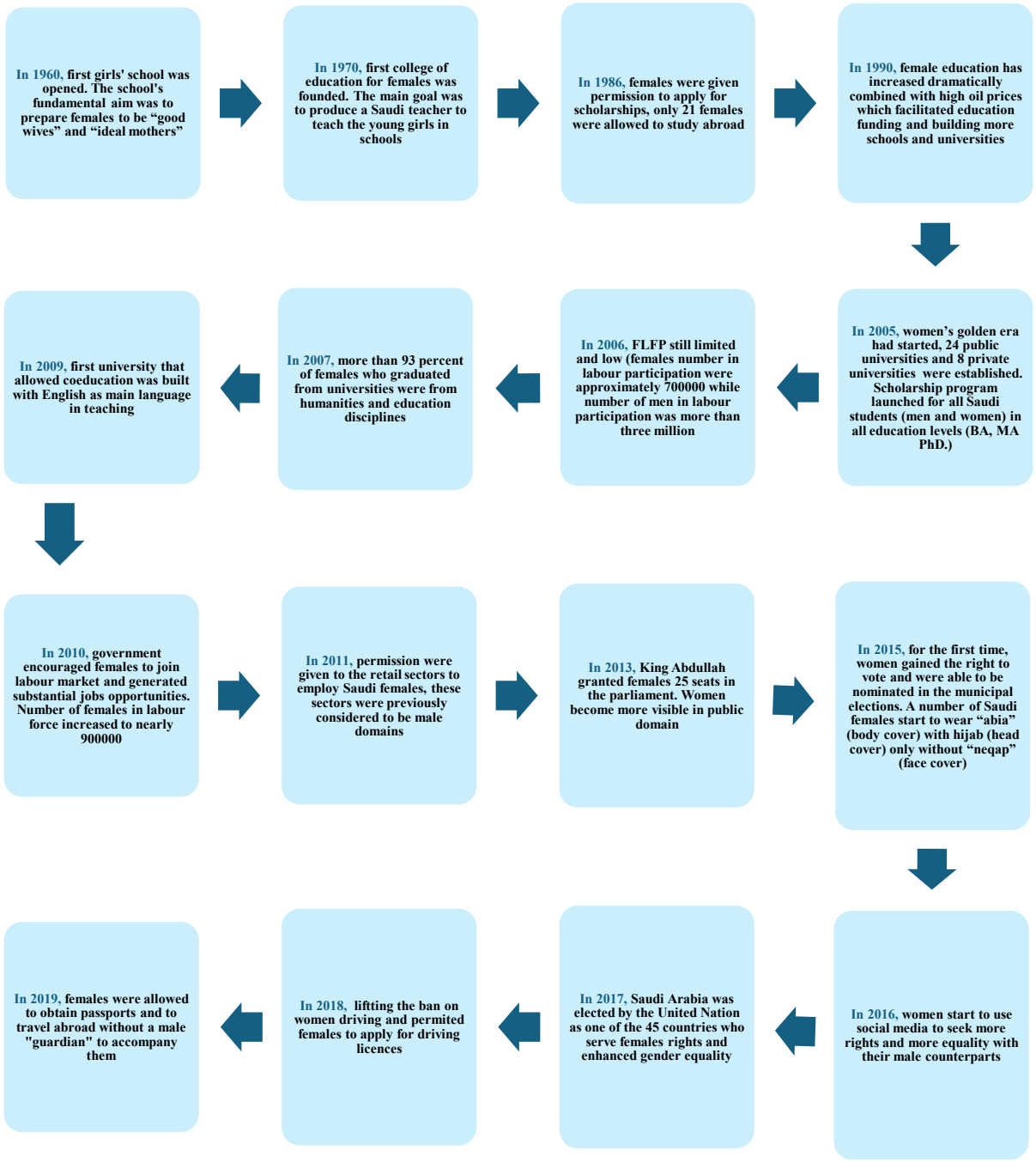
Since 2018, the Saudi government has re-established some rights for females, such as allowing females to obtain their own passport. The introduction of "Vision 2030", which plans reform to the Saudi economy through economic diversification[3] was not only expected to impact the economic sphere but also the social one, including equal opportunities for all Saudis in all aspects of life, including jobs, training and acknowledging the importance of females' roles as productive economic assets. In fact, one of the main objectives for the 2030 Vision plan for the Kingdom of Saudi Arabia is enhancing women's economic presence by increasing FLFP from 22 percent to nearly 30 percent and providing additional job opportunities for women in different fields such as the service and retail sectors (Saudi Arabia: Political, Economic & Social Development Report, 2017). The enhancement of the service sector and the creation of more job opportunities is expected to impact the Saudi economy positively as the country seeks to diversify and be less dependent on oil returns.

Although the Saudi government is seeking change and actively attempting to empower females by giving them more rights, large sections of society resist these orders and are not allowing their mothers, daughters, or sisters to access these rights. They believe that the guardianship system is a religious rule and cannot be changed by the government.

[3] Saudi Vision 2030 (2018)

According to the recent Global Gender Gap report (2020), Saudi Arabia is ranked 146th out of 153 countries. This means that Saudi Arabia has the eighth worst performance amongst all countries in the report (Global Economic Forum, 2020). This may indicate that, regardless of the attempts that have been made by the Saudi government during the last few years to enhance females' position in society, the gender gap persists. This also may suggest that the gender inequality problem in Saudi Arabia is more complicated than expected.

Figure 2.1 Timeline for the important events linked to the Saudi females in Saudi Arabia



2.4.1 Policies targeting Saudi females to increase their participation in the labour market:

Several programs were introduced by the government to enhance female employment in Saudi Arabia. One of the programs is called "Saudization". "Saudization" means replacing foreign workers with Saudi workers. The Saudization program was initially launched in the 1990s with no specific policy linked to Saudi females. The main aim from this program was to increase the number of Saudis in public and private sectors, decrease number of unemployed Saudis and decrease dependency on foreign workers (Fakeeh, 2009). The Saudi government promoted Saudization through demand and supply side policies. On the demand side: by increasing the cost of hiring foreign workers and introducing expatriate dependent fees and tax on foreign residents. On the supply side: by offering job training programs, which provide Saudis job seekers with the required skills and training. However, it is believed that this program was not successful and did not increase the FLFP (Al-Asfour & Khan, 2014; Alothman & Mishra, 2014). One reason for the failure is the lack of specific policies for Saudi female workers (Alothman & Mishra, 2014).

Later in 2011, the government launched the "Nitaqat" program, imposing sanctions on firms not compliant with Saudization and giving incentives to compliant businesses. Under this program, each firm is required to hire a certain percentage of Saudi employees depending on the firm's size. The program prescribes that firms in the private sector must employ Saudis and increase the minimum wages (Harvard Kennedy School, 2015). Increasing the share of female participation in the labour market was one of the goals for this program. The program succeeded at increasing females' employment and feminising sectors that used to be male dominated, such as cosmetics and lingerie retail. Moreover, to attract more females to the private sector, in 2013 the government issued regulations and policies asking firms that have mixed gender environment to provide a private space for their female workers and to build walls (at least six feet high) to ensure segregation between males and females within the workspace (Alfarran, 2016). It is important to mention that the "Nitiqat" program has broken down some barriers relating to attitudes toward females' work in unusual workplace and toward gender segregation in workplace. By unusual workplace we mean work in shopping centres and supermarkets or working in cosmetics and lingerie retail (females were not allowed

to work in these jobs by the law). However, the program was unsuccessful in decreasing the number of unemployed Saudi females (Marsh, 2016). The program has resulted in many firms closing and exiting the market due to the significant cost of hiring Saudis. Most importantly, some firms managed to survive by illegally increasing the number of their Saudi workers through "ghost Saudization". This means the firm would register a Saudi worker as an employee, but this Saudi "ghost worker' would not be required to go to work. These workers receive monthly payment for their service. The firms would then benefit from increasing their Saudization rates and benefit from the incentives given by the government. Significant number of Saudi females (18000 females) were registered as "ghost workers". In 2014, the government implemented heavy financial sanctions for firms who hire "ghost workers" (Marsh, 2016). Moreover, the "Nitiqat" program was criticised for focusing on increasing the percentage of females' employment without focusing on the nature of the jobs offered (Azhar et. al., 2018; Peck, 2017). Recent studies have shown that Saudis who were employed in restaurants and in shopping centres have reported dissatisfaction with their jobs. They take these jobs as temporary as they consider them as "bad" and "low image" occupations (Sobaih, 2023).

Although the Ministry of Civil Service does not differentiate between males and females in terms of employment (Al-Shamlan, 2008), before the implementation of the Saudization program, employment opportunities for Saudi females were restricted in field such as nursing, medicine, and teaching. Teaching allows full segregation of males and females as the education sector is fully gender segregated. Nursing and medicine necessitate working in mixed environment. However, it was documented that females working in the health sector usually suffer from negative social image and there is always shortage of the number of Saudi nurses (Alharbi et. al., 2019). It is worth mentioning that gender segregation in the workplace was forced by law (The Embassy of the Kingdom of Saudi Arabia, 1969). Recently, and after the introduction of the 2030 Saudi Vision (in 2016), a large number of jobs were created. The Saudi Labour law was amended, and several articles modified. One of the important amendments was related to the removal of "*in no case may men and women commingle in the place of work or in the accessory facilities"* (Human Resource and Social Development, 2023). Now, Saudi women can work in airports or as investigators, can join the armed forces, and they can work for the Ministry of Justice as Islamic jurisprudence researchers, social researchers, and administrative assistants. It is important to mention that, while some of these jobs provide private work areas for females' workers only, all these jobs have a mixed working environment. Firms and organisations that hire females are required by the law to provide comfortable and

separate areas for females' workers to work from, to rest, and to pray during working hours. According to the new regulations, Saudi females can work in any job except for cleaning services but are not permitted to work in jobs where the expected customers are only males. However, a female worker must not be alone with a male worker during work times (The Ministry of Labour and Social Development, 2022).

Additional policies have been introduced to increase Saudi females' involvement in the labour market. Table 2.1 lists 7 polices aiming specifically at increasing female employment in the private sector. As can be seen, these policies' main goal is to increase female employment in the private sector by making this sector more attractive for female workers, providing childcare centres, and solving any transportation challenges. From the employer side, these policies aim to encourage employers to hire female workers, by reducing hiring costs through wage subsidies and paying for training costs.

Table 2.1: Policies introduced to increase Saudi females' participation in the labour market

Policy date	Policy name	Description and objectives
2012	Productive families, work from home	This policy was designed to target those females who intended to work from their home, by starting a business that operates from home. It provides those females with the needed training (the government pays the cost for training courses). It also provides interest-free loans for females to help them with starting their projects. The main goals from this policy were to help females to balance work-family duties and to solve the unsuitable work environment for females in the private sector. (Targets all Saudi women).
2012	Women's jobs in factories	To increase females' employment in the private sector. Based on this policy, financial incentives are provided to factories hiring female workers. Females training costs are also paid for by the government. (Targets all Saudi women).
2013	Telework, Distance work program	To increase female employment in the rural areas for those facing transportation challenges. This policy encourages firms to use a software platform to help employees working remotely. This also provides wage subsidies for teleworkers (50 percent of the salary). (Targets 20-35 years old Saudi women).
2013	Female employment in the retail sector	Under this policy, shops that sell products of primary interest for women, must hire Saudi females only. The government would provide financial support for wage and training. (Targets all Saudi women).
2014	Day-care centers	Firms hiring 50 or more of Saudi females are required by the law to provide an on-site childcare center. (Targets all Saudi women who work in the private sector).

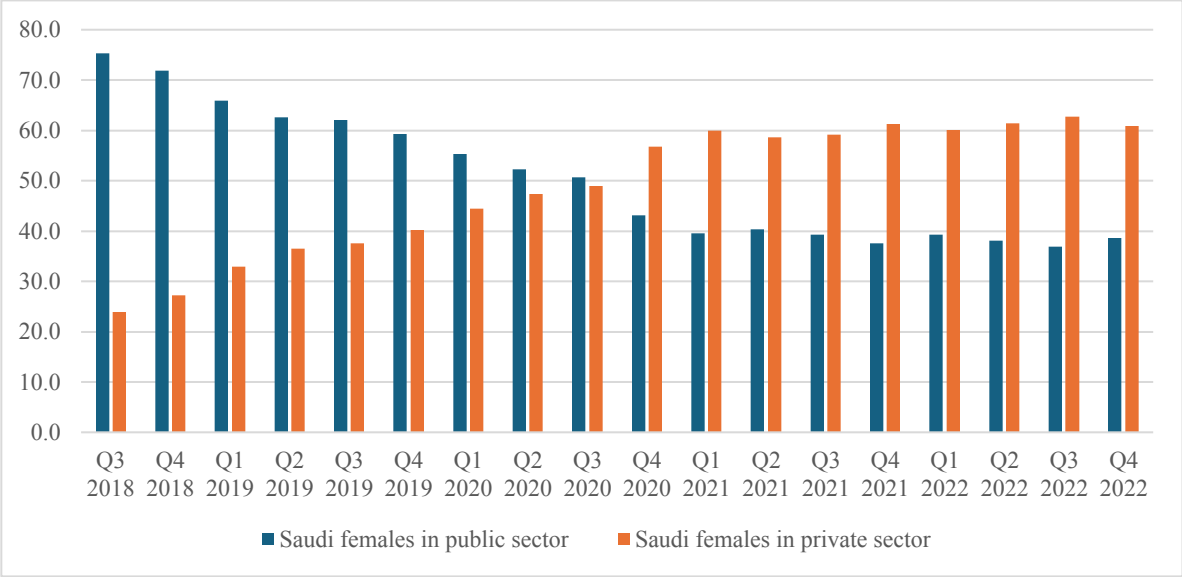
2015	Part-time work	To encourage female to balance life and work duties and to increase their employment in the private sector. The working hours should be between 20 and 24 hours per week. (Target all Saudi women).
2015	Female transportation	This policy is meant to encourage employers who are unable to provide transportation for their female employees. (Targets all Saudi women).
2018	Advancement reforms to increase female employment	This legislation allowed women to work in the military, passport controls and public prosecution office. (Targets 18-40 years old Saudi women).
2019	Flexible work	To enable females to have flexible work contract, the wage is paid on hourly basis. The policy aims to engage female jobseekers and to improve their skills and experience. (Targets all Saudi women).

Source: Harvard Kennedy School, 2015; The Embassy of the Kingdom of Saudi Arabia, Washington, DC, 2019.

These policies may help in solving the problem of incomplete or asymmetric information about female workers' ability and productivity. Employers may evaluate a female worker based on the average productivity among Saudi female workers, rather than incurring additional search cost to assess the female worker potential. Due to the low involvement for Saudi females in the labour market in the previous years, females maybe subject to employers' discrimination. This is due to females' strong preference to work in certain occupations (such as in the education sector) and certain work environment (female-only work environments).

According to recent statistics, the share of females employed in the private sector has increased from 24 percent in the third quarter (Q3) of 2018 to 61 percent in Q4 2022. Whilst the percentage of female workers in the private sector is increasing, the percentage of female workers in the public sector is decreasing, which is what the Saudi government is aiming for.

Figure 2.2: percentage of Saudi females in public and private sectors



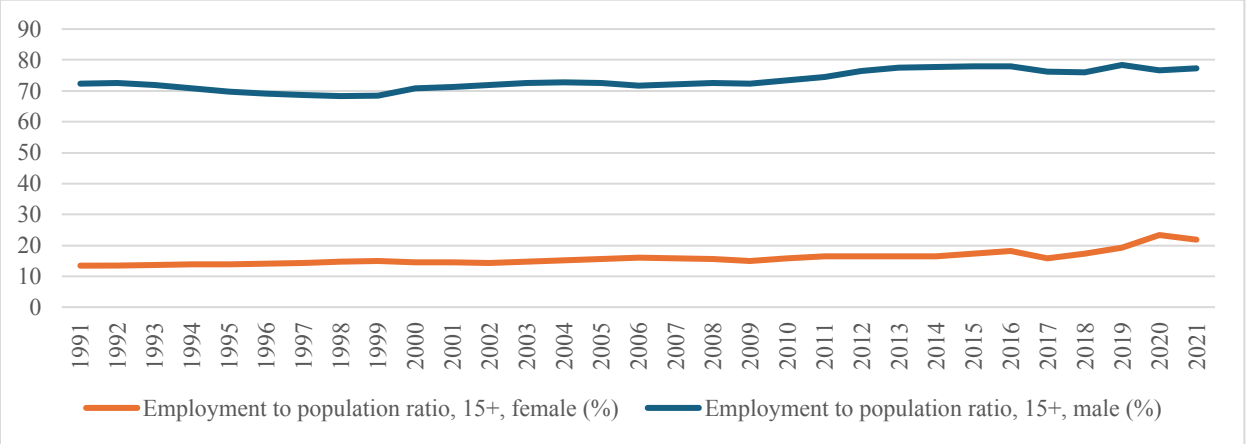
Source: General Authority of statistics, 2018 Q3 and 2022 Q4.

While these policies have succeeded in increasing females' involvement in the labour market, there are several challenges that limit their effectiveness (Fakeeh, 2009; Peck, 2017; Ramadi, 2013; Saudi Hollandi Capital, 2012). One of these challenges is the high cost that comes with hiring female workers. The high cost comes from the higher wages that a Saudi female worker takes compared to the lower wages that used to be given to foreign workers. Moreover, some firms believe that the subsidies (for wages and training courses) provided by the government is not high enough. Additionally, one of the studies conducted interviews with employers (Fakeeh, 2009), revealed that most of them complained about the policy that force them to hire Saudi females. They believe that policies should consider the profitability of their firms and not just focusing on increasing female employment at the cost of their profits (Fakeeh, 2009). Additionally, it is also acknowledged that employers face difficulties in finding female workers who have the required skills. This skill-mismatch problem could be related to females' education choices. When females made their education choices, they were not aware of the occupations that become available to them after their graduation, as these reforms and policies were recently have been introduced. This could result in females being employed in occupations that do not match their qualifications (Fakeeh, 2009; Harvard Kennedy School, 2015).

2.4.2 Gender Inequality in the Saudi Labour Market

According to the most recent publicly available statistics, Figure 2.3 shows the employment rates for males and females in Saudi Arabi. Although females' employment rate slowly increased over time, from 14 percent in 1991 to nearly 24 percent in 2021, it is still much lower than males' employment rate of around 77 percent in 2021. (World Bank, 2021). Despite the increase in females' employment rate in Saudi, it remains low compared to the average of OECD countries (48 percent) and the world average (43 percent) (World Bank, 2021).

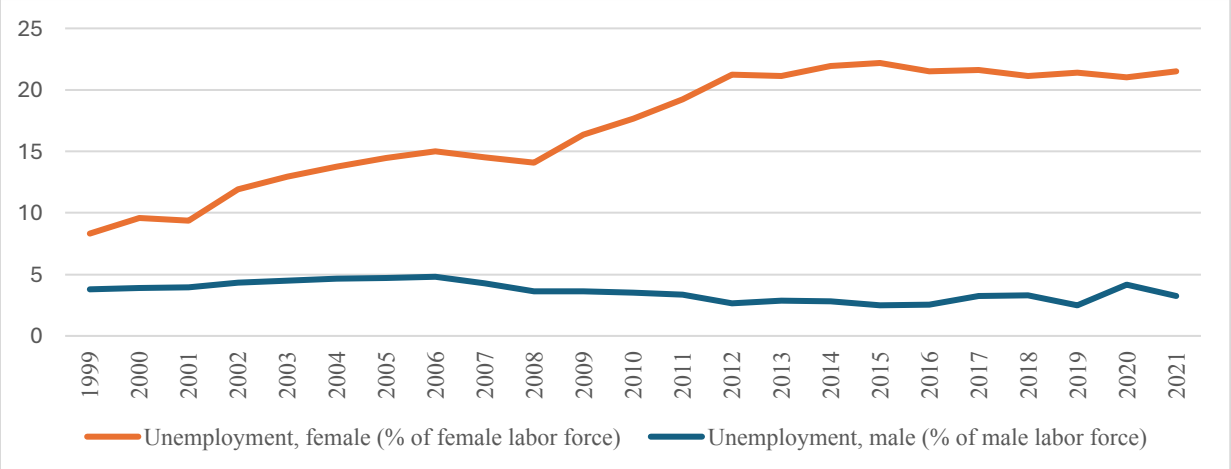
Figure 2.3 Employment rate for males and females in Saudi Arabia



Source: World Bank, World Development Indicators, 1991- 2021. Employment to population ratio is the proportion of a country's population that is employed. Employment is defined as persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period

More tellingly, the total unemployment rate for males in Saudi remain slightly at the same level at 3.7 percent during the period 1999 to 2021. In contrast, the female unemployment rate was 8.5 percent in 1999 and increased to 22 percent in 2021. As shown in Figure 2.4.

Figure 2.4 Unemployment rates for males and females in Saudi Arabia



Source: World Bank, World Development Indicators,1999-2021. Unemployment rate refers to share of the labour force that is without work but available for a job and seeking employment.

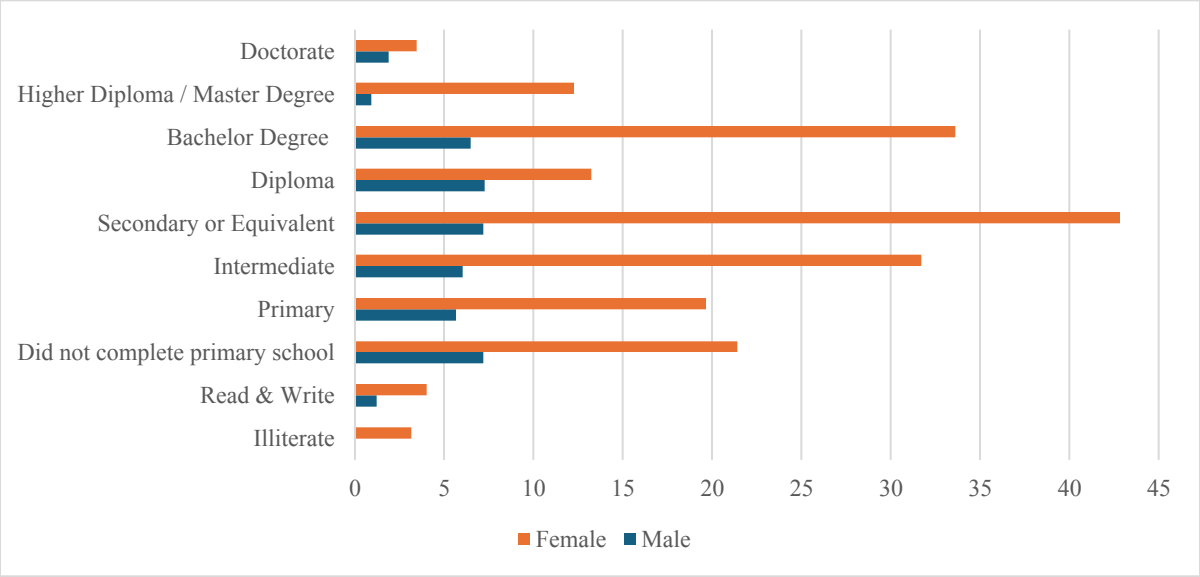
FLFP was 16 percent in 1999 and increased to 30 percent in 2021. However, males' labour force participation rate was 74 percent in 1999 and increased to 80 percent in 2021 (World Bank, 2021). Hence, despite the improvement in different aspects of women's lives, both socially and economically, women's opportunities are still limited.

2.4.3 Proposed Explanations for the Gender Gap in the Saudi Labour Market according to Economic Theory

Several factors could account for the disparity in men and women's employment rates. According to economic theories, this can be related to educational levels, wages, presence of children and additional earner, social and religious factors.

According to the Human Capital Theory, women with higher levels of education are more likely to be employed and to occupy better positions in the labour market (Yousefy & Baratali, 2011). Figure 2.5 shows the percentages of unemployed Saudi males and females according to their educational level. The highest percentage of female unemployment is registered among those who have a secondary education (43 percent). These figures indicate that level of education may play a key role in explaining high female unemployment in Saudi Arabia. However, there are significant differences between the percentage of unemployed males and females across all levels of education, with females displaying higher levels of unemployment at each level - 34 percent of unemployed Saudi females hold a university degree, compared with 6 percent of unemployed Saudi males. Even females with high levels of education are suffering from higher levels of unemployment, compared with males, which is not consistent with economic theory's predictions.

Figure 2.5 Percentage of unemployed Saudi males and females by educational level



Source: General Authority Statistics, Labour Force Survey, 2019

Furthermore, not only is Saudi Arabia ranked 148th out of 153 in terms of inequality between men and women in economic participation and opportunities (Global Economic Forum, 2020); the limited employment of women that exists is also highly segregated – for instance, nearly 83 percent of working females are employed in the education sector (AlMunajjed, 2009).

Another possible explanation for the inequality in the Saudi labour market is related to differences in wages across sectors. Average monthly wages in the public sector are almost double compared to those in the private sector. The gender wage gap in the private sector is three times higher than the gender wage gap in the public sector (the difference in wages in the private sector is around SR 2722 while in the public sector the difference is around SR 688 between males and females' wages). Unsurprisingly, most Saudi females would prefer to work in the public sector. Table 2.2 shows that Saudi females form about 39 percent of the total workers in the public sector compared with only 6 percent of workers in the private sector (General Authority for Statistics, 2018). One of the reasons for the preference for the public sector is that it usually offers higher salaries for females, shorter hours, more flexibility and greater employment security to workers. Based on recent statistics, around 44 percent[4] of unemployed Saudi females limit their main method of job search to registration with the Ministry of Civil Service (that manages employment in the public sector). Recruitment to the public sector normally occurs on an annual basis, the number of unemployed Saudi females

[4] Compared to 16 percent of unemployed Saudi males (General Authority of Statistics, 2018).

will become higher over time and the gap between males and females in the labour market will persist (General Authority of Statistics, 2018).

Table 2.2 Percentage of Saudi workers in the public and private sectors and Average monthly wages

Gender of the workers	Public sector	Private sector	Average monthly wages in the public sector	Average monthly wages in the private sector
Males	57%	14%	SR 11229	SR 10541
Females	39%	6%	SR 7661	SR 4939

Source: General Authority for statistics (2018). The average weekly working hours for females is 42.4 and it is 44.9 for males. Note: one GBP= SR 4.64 (25 April 2020)

According to labour supply theory, **the presence of children and the presence of an additional earner** may impact FLFP. It has been noted that availability of childcare, combined with flexible work hours, are associated with higher female labour participation. In some developed countries, the employment rate of part-time working females with children is substantially higher than those without children (European Statistics, 2021). For instance, in Germany the employment rate for part-time working females with children is 66 percent comparing to 31 for those without children. The same is true for Italy (38 percent comparing to 27 percent) and for the Netherlands (70 percent comparing to 42 percent). There are no official statistics for Saudi working women with or without children. However, in Saudi Arabia, nearly 37 percent of females disagree on the statement that 'A working mother can establish just as warm and secure a relationship with her children as mother who does not work' (World Values Survey, 2003). This may indicate that caring for children is one of the reasons that prevents mothers from joining the labour market.

The socio-cultural factors affecting Saudi society attribute to mothers more responsibilities toward children and housework compared with males. Thus, mothers may prefer to work in specific types of jobs, such as those with daytime hours which are easier to reconcile alongside motherhood duties. In Saudi Arabia, formal working hours in daytime jobs are between 7.30 a.m. and 2.30 p.m. while school starts at 7 a.m. and ends at 1.30 or 12.30 p.m. This is in contrast to night-time jobs, which usually start after the school day at 2.30 p.m. (General Authority for Statistics, 2018).

A further explanation for gender inequality in the labour market in Saudi Arabia **relates to social and cultural norms**. Social expectations and traditional gender roles may prevent females from taking particular jobs or positions simply because some of the jobs offered do not fully segregate males and females, or because they are not perceived to be compatible with women's nature. Additionally, the expectations that women prioritise their families and their children may have a fundamental role in decreasing the female labour market supply. In Saudi Arabia, these social and cultural norms include the view that a woman's place is in her home and that men are responsible for their family's needs, which is likely to impact upon female employment (Doumato, 2010). Additionally, in Saudi Arabia, the Islamic principles that subjugate a woman to be financially dependent on her male guardian, reduce the incentive for females to work (AlMunajjed, 2009). In Saudi Arabia, females experience financial dependency in many forms: when young, dependent on her father; when married, dependent on her husband; and when old, dependent on their sons (Doumato, 2010). The percentage of unemployed married females was 57 percent in 2016 and remains high for unemployed and never-married females at 38 percent (General Authority for Statistics, 2016).

It has been argued that there are factors related to institutional and individual preferences which may hinder female employment. According to Institutional Theory, social structure, social expectations and norms work as guidelines for social behaviour (March & Olsen, 1998). Acker (1990) argues that there is a linkage between male dominance and masculinity of a society and also rules and norms, and between institutional and organisational structure. Similarly, Mintz and Krymkowski (2010) argue that males may have greater opportunities to access the labour market and obtain subsequent job training at a higher frequency than females due to male-stereotyped perceptions about skills and employment stability. In terms of Saudi Arabia, one can clearly see a maximally male-dominated society. First, this is due to the guardianship system: until recently, regardless of female's age, the male guardian's approval is needed when females show the desire to be educated or to be employed. This approval may not be required legally, but it is required socially. Second, Saudi labour laws emphasise that females can only work in fields considered suitable for their nature, which in turn is based on religious law. The most suitable work for females is considered to be in teaching and nursing, where the work environments are fully segregated (Moghadam 2003; Ramady, 2010). Third, the traditional gender rules widespread in Saudi Arabia limit females' roles to being mothers and wives (Almunajjed, 2009; Manea, 2008). Given all these constraints and restrictions on females, which are embedded in institutional practices, Institutional Theory is useful in explaining the

Saudi context and the social factors that exclude females from the labour market or hinder their labour market participation. While this theory outlines how the social context can impact females' employment status, it cannot explain how each individual female might be influenced by these factors. Furthermore, this theory ignores the role of females' preferences when making their employment choices.

According to Preference Theory (Hakim, 2000), females' behaviour in the labour market can be determined by their 'natural' preference for particular types of job opportunities. Hakim argues that there are three main types of preferences concerning labour market participation. First, there are Home-centred females, who prefer to not participate in the labour market, giving priority to their family life and their children. These females obtain qualifications to gain cultural capital only. In contrast, Work-centred females prioritise work and career. They have high commitment to work and seek high qualifications as well as training for cultural capital and employment. Finally, there are Adaptive females, who reconcile labour market work with household labour, these females, who combine work and family, seek qualifications with the intention to work (Hakim, 2000).

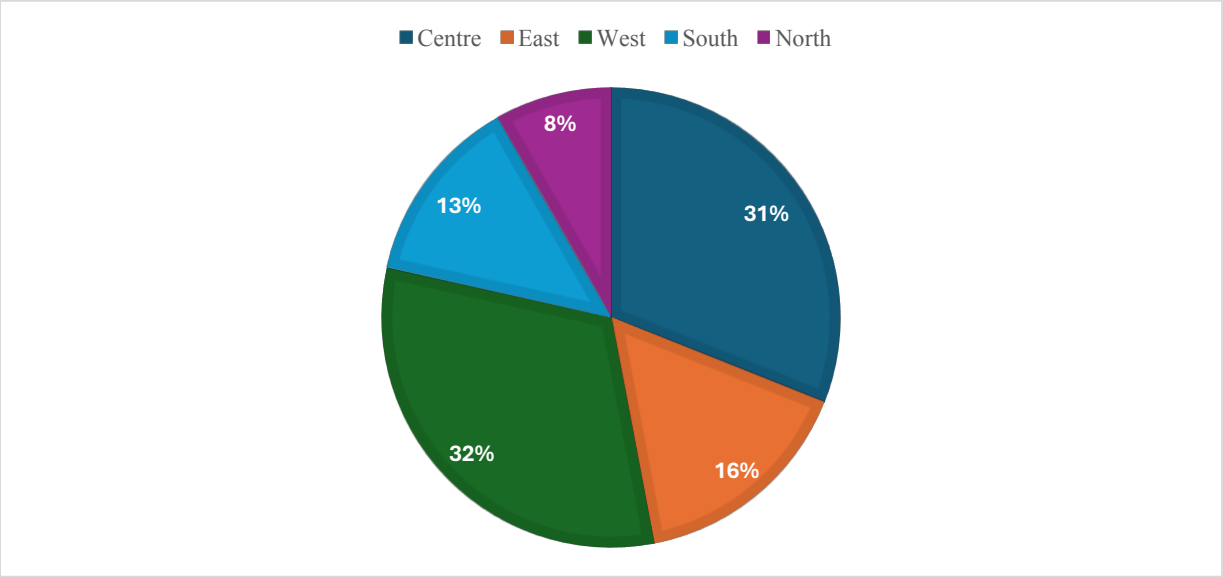
However, Preference Theory has received considerable criticism. First, the theory ignores the role of constraints that may impose outcomes and impact females' choices (Kangas & Rostgaard, 2007). It also assumes that all females share similar motivations and interests, and this cannot be realistic or sustained due to the diversity of females' interests in different social contexts. In terms of Saudi females, the presence of the male guardianship system limits females' autonomy. Females therefore do not have the full right to decide whether to engage in the labour market or to accept a particular job opportunity (Almunajjed, 2010).

2.4.4 Regional differences in terms of economic activities

The Centre and West region together contain more than 60 percent of the population in Saudi while the North region has the lowest share of the population with only 8 percent of the total population in Saudi (as figure 2.6 shows). However, the Western region has the highest number of non-Saudis (with around 4 million) (General Authority of Statistics, 2022). This could be related to the presence of the holy mosques in this region. The Eastern province is where the oil extraction and gas production main activities are located. It is the second largest region for

generating employment opportunities after Riyadh. The Centre region is considered as the economic powerhouse in Saudi. It has more than 9 business districts", more than three thousands of factories and 19 public and private universities (Ministry of Investment, 2023). The different economic structure and different infrastructure of each of the Saudi regions lead to different economic activities and different contributions to the country's income level. It is found that more than 70 percent of the Saudi economically active population are located in, the Eastern province, Riyadh (Centre) and Makkah (holy city in the West) (Hector et al., 2019).

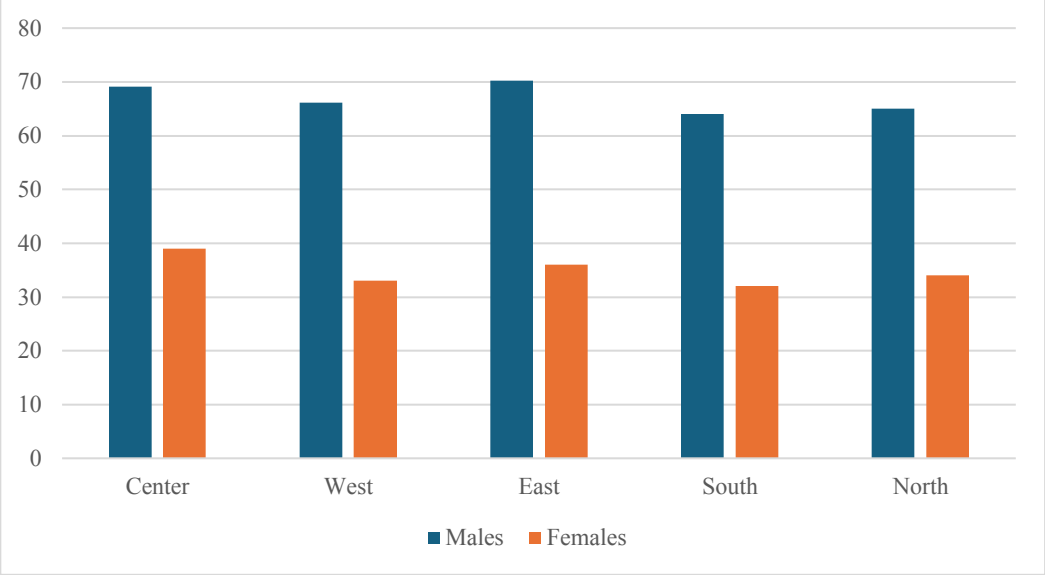
Figure 2.6: Population distributions across regions in Saudi Arabia



Source: General Authority for statistics (2022)

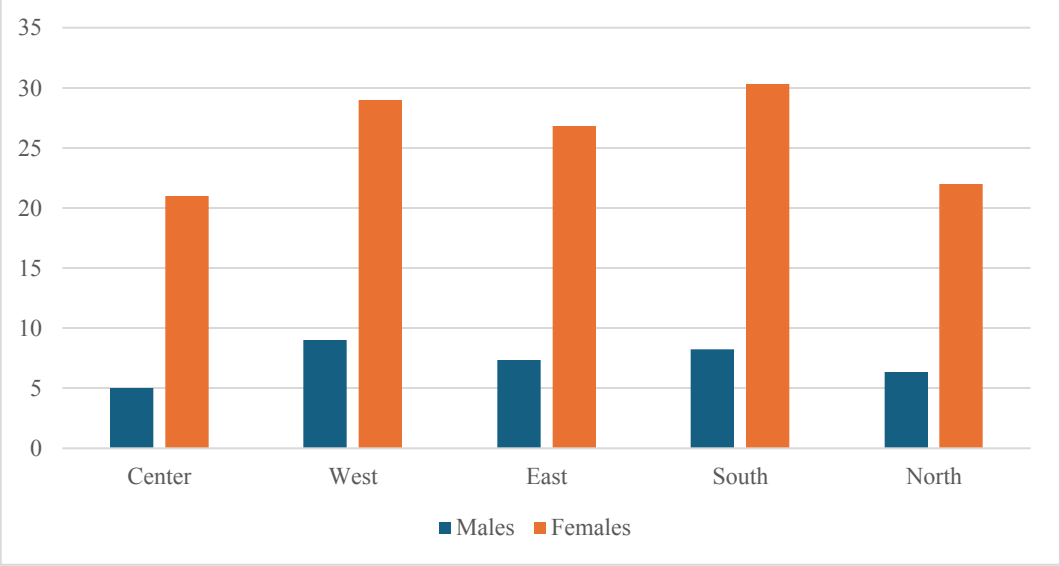
Figure 2.7 shows the labour force participation rates for Saudi males and females. In addition to the large differences in rates, it shows that the highest participation rates for Saudi males are in the East region. This could be due to the presence of the oil extraction activities, usually dominated by males. The highest participation rates for females are in the Centre region. The Centre region is the main target of the government's policies and reforms aimed at increasing female' participation rates. Accordingly, FLFP could be higher due to the implementation of these policies and reforms in this important region. However, the differences in females' participation rates are not large across regions. Figure 2.8 shows the unemployment rates for Saudi males and females across regions. The same trend applies here in terms of large differences in unemployment rates between males and females. However, the highest rates of unemployment for Saudi females are registered among those in the South region. While the lowest is in the Centre region.

Figure 2.7: Labour force participation for Saudi males, females by region



Source: General Authority for statistics (2023)

Figure 2.8: Unemployment rates for Saudi males and females by region



Source: General Authority for statistics (2023)

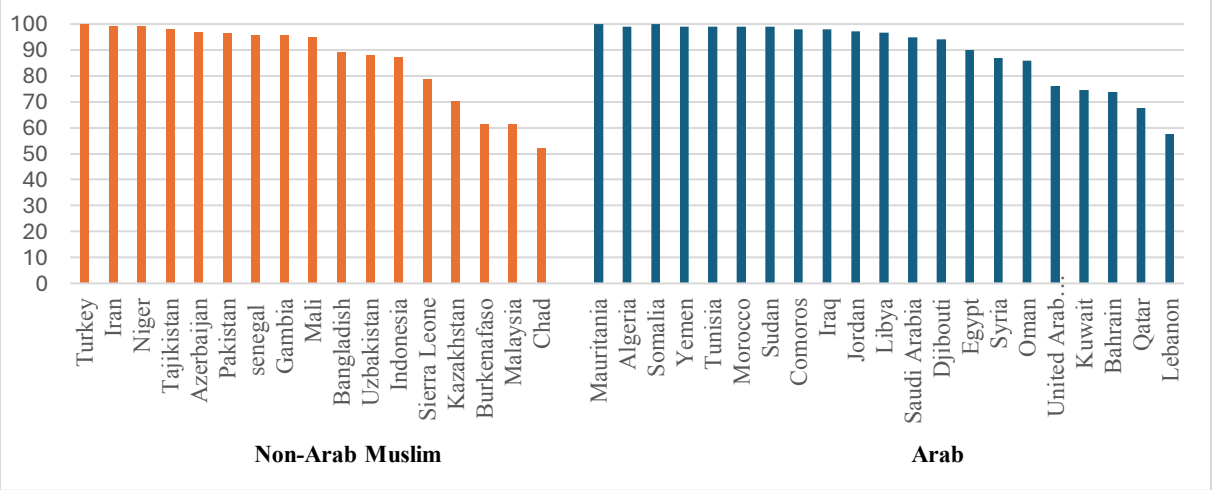
2.5 Arab and non-Arab Muslim majority countries context

This section addresses the important differences and similarities between the Arab and non-Arab Muslim majority countries in terms of geographical location, level of economic development, religious thoughts, cultural attitudes, and gender inequality. It is important to stress that the focus is on the Arab countries; the reference to non-Arab Muslim majority countries stands as a benchmark for comparison.

The 22 Arab countries, as defined by membership in the League of Arab States, Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Somalia, Tunisia, United Arab Emirates and Yemen are mostly located in the Middle East/North Africa (MENA) region. All 22 countries have Arabic as the main and official language and have large Muslim populations. However, Arab countries differ in factors such as oil dependency, level of cultural conservatism and level of economic development.

Whilst Arab countries are mostly located in the Middle East (except for Sudan, Comoros and Somalia, which are located in Sub-Saharan Africa), non-Arab Muslim majority countries are far more geographically spread (World, Bank, 2019). The percentage of Muslims is very high in some of these countries, as Figure 2.9 indicates. The highest shares of Muslims in non-Arab countries are found in Turkey, Iran and Niger. In the Arab region, seven countries have nearly 99 percent of their population as Muslims. Although, all of these countries are Muslim majority, there are differences in levels of religious diversity. The average value for the Religious Diversity Index (RDI), which is calculated based on each country's population that belong to different religious group (Muslim, Christian..etc) in the non-Arab Muslim majority countries, is slightly higher (2.40) than in the Arab countries (2.00) (Pew Research Centre, 2018). This suggests that there is a higher level of religion diversity in the non-Arab Muslim majority countries comparing to the Arab countries.

Figure 2.9 Percentage of Muslims in Arab and non-Arab Muslim majority countries



Source: The World Factbook, Central Intelligence Agency (2018)

Not all Muslims have the same religious thoughts and beliefs – see Table 2.3. There are two main religious approaches formed under Islam, which are Sunni and Shia. Between 85 to 90 percent of Muslims are Sunni and the remainder are Shia. The main difference between these two beliefs is that under the Shia faith, Muslim people should be governed by a person who is a descendant of the Prophet, while the Sunni believe that the Muslims' leader should be elected by consensus and not necessarily from the Prophet's descendance (Guidere, 2012).

Table 2.3 Sunni and Shia in selected Arab and non-Arab Muslim majority countries

School of thought	Arab countries	Non-Arab Muslim majority countries
Majority of Muslims are Sunni	Algeria, Comoros, Djibouti, Egypt, Jordan, Kuwait, Libya, Mauritania, Morocco, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen	Bangladesh, Gambia, Guinea, Indonesia, Kazakhstan, Mali, Malaysia, Niger, Pakistan, Sierra Leone, Tajikistan, Turkey, Uzbekistan, Nigeria
Majority of Muslims are Shia	Bahrain and Iraq	Azerbaijan and Iran

Source: US Department of State, International Religious Freedom Reports (2018). Lebanon has 31 percent Sunni and 31 percent Shia. Statistics unavailable for Palestine, Oman and Qatar.

Under the Sunni religious approach, there are four mainstream Islamic schools, which are Hanbali, Hanafi, Maliki and Shafiai. Each of these schools has a different interpretation for Quran and Sunnah texts (God's words and Prophet Mohamed's words), and all interpretations are considered valid. The most dominant doctrine in the Islamic world is Maliki, followed by Hanafi, Shafai and Hanbali (Bernards & Nawas, 2003). Some of these Islamic schools encourage high conservatism, as in Hanbali, while others are considered more liberal, as in Maliki (Middle East Institute, 2012). Table 2.4 shows Arab countries and the dominant Islamic school of thought in each country. For example, Saudi Arabia is the only country where the majority of people follow the Hanbali doctrine, while most of the other Arab countries follow either the Shafai or the Maliki doctrines. This variation in religious thought is believed to be responsible for cultural differences between Arab countries (Middle East Institute, 2012).

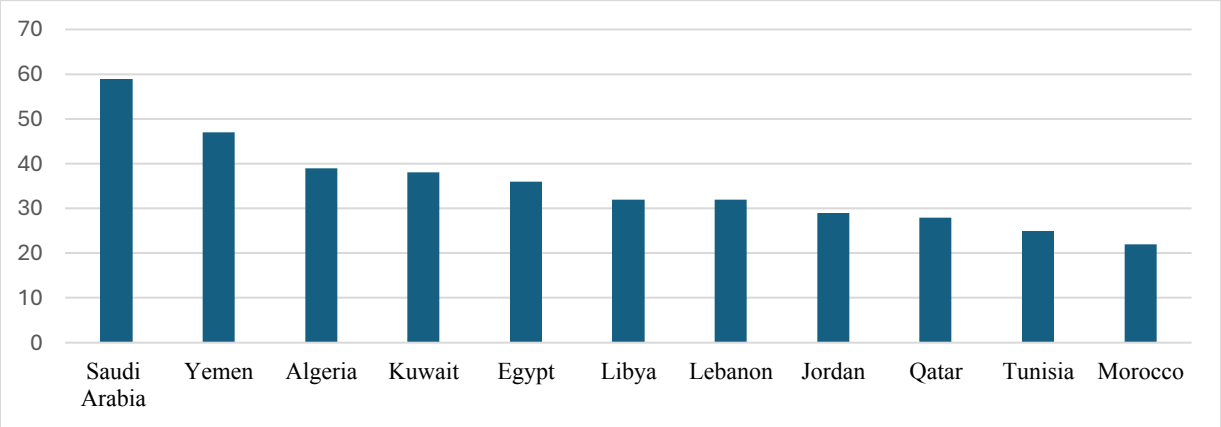
Table 2.4 Islamic Doctrines in Arab and non-Arab Muslim Countries

Islamic School	Arab Countries	Non-Arab Muslim countries
Hanafi	Iraq, lower Egypt	Bangladesh, Kazakhstan, Tajikistan, Turkey, Pakistan, Uzbekistan
Shafai	Parts of Syria and parts of Yemen, Jordan, part of lower Egypt, Djibouti and Comoros. Lebanon, Somalia, Palestine	Malaysia, Indonesia
Maliki	Mauritania, Sudan, upper Egypt, Tunisia, Algeria, Libya, Morocco, Kuwait, Qatar, United Arab of Emirates, Bahrain, Oman, parts of Syria, parts of Yemen	Niger, Mali, Nigeria, Chad
Hanbali	Saudi Arabia	-

Source: Centre for European studies (2018).

The Arab countries may share similar cultural concepts as it is widely accepted that language and religion can shape culture (Jiang, 2000; Heineck, 2004). Beliefs around females' rights and duties, for instance, certain tasks, such as childcare and food preparation, are viewed as women's duties (The Arab World, 2007). However, the intensity of these beliefs varies among the Arab countries. In the World Values Survey (Figure 2.10), respondent from Arab countries were asked about their opinions on the importance of females' education compared to males' education.

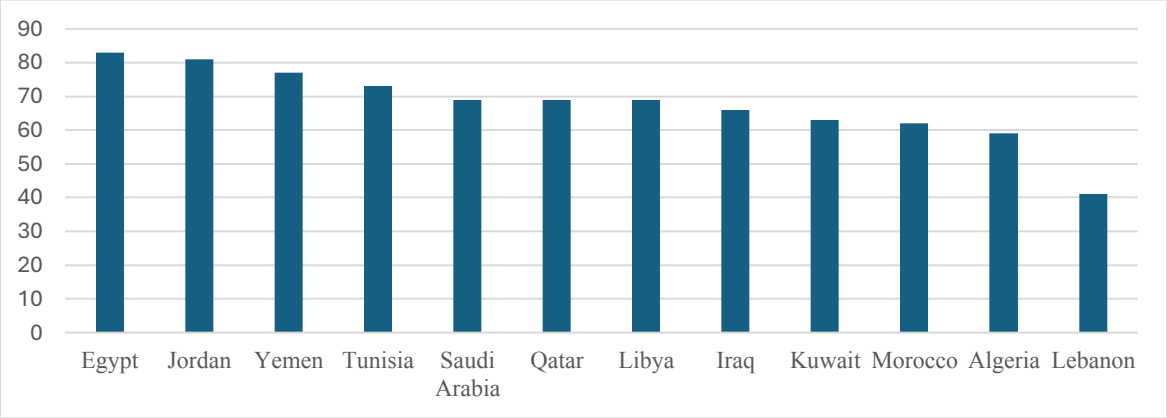
Figure 2.10 Agreement (%) with the statement "University education is more important for a boy than for a girl" in selected Arab countries



Source: author's calculation, combining 'agree' and 'strongly agree' based on data from the World Values Survey. All countries' data are from wave 6 (2010-2014); only Saudi Arabia data are from wave 4 (2000-2004). Sample sizes: 1193 for Algeria, 1200 for Iraq, 1198 for Jordan, 1256 for Kuwait, 1164 for Lebanon, 2096 for Libya, 1198 for Morocco, 1060 for Qatar, 1202 for Tunisia, 1523 for Egypt, 998 for Yemen and 1502 for Saudi Arabia.

The highest percentage (60 percent) of agreement on the statement "university education is more important for a boy than for a girl" was in Saudi Arabia, while the lowest percentage of agreement (22 percent) was in Morocco. A similar attitude question was asked concerning prioritising male employment when jobs are scarce; the lowest percentage of agreement was in Lebanon (41 percent) while the highest was in Egypt (83 percent).

Figure 2.11 Agreement (%) with the statement "When jobs are scarce, men should have more right to a job than women" in selected Arab countries

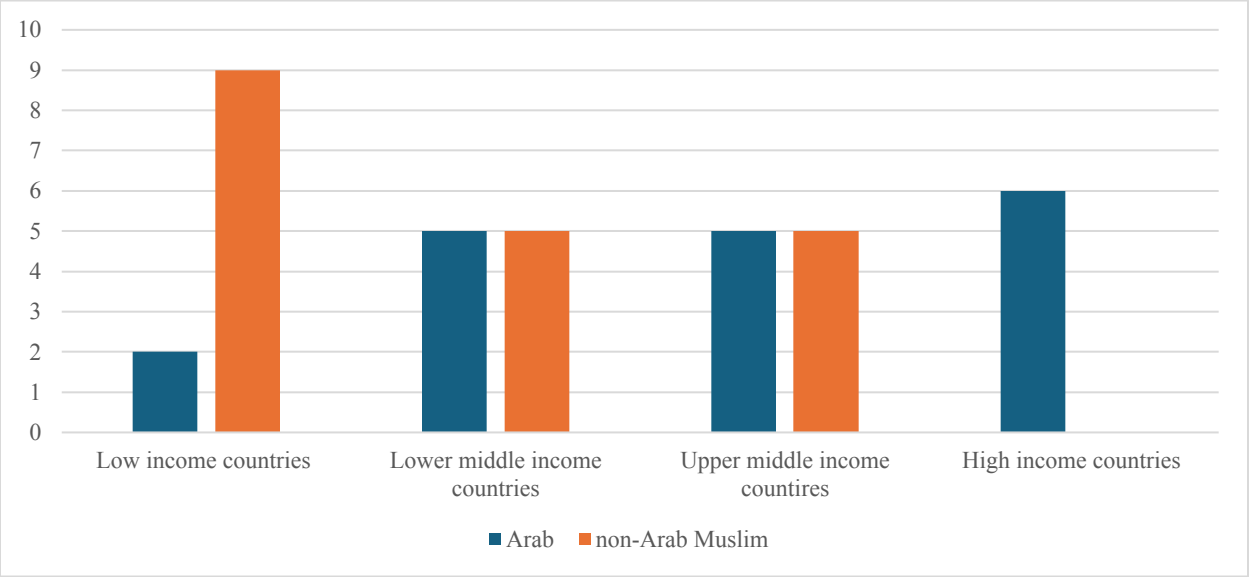


Source: data from the World Values Survey. All countries' data are from wave 6 (2010-2014) except data for Saudi Arabia, which are from wave 4 (2000-2004)

The Gender Inequality Index can provide evidence of how females are treated differently from males in terms of education, empowerment, or employment. These differences may reflect the presence of particular social norms and may indicate how people in these countries believe and behave. For example, the share of young females (15 to 19 years old) who are married and have children may indicate acceptance of early marriage for females. The importance of saving the family honour may signal the level of conservatism within a country. Furthermore, in a society where females marry or have children at a younger age, they are also most likely to leave education or drop out of school earlier due to childbearing duties (Fahimi & Ibrahim, 2013), which ultimately impacts on their participation in the labour force. Additionally, gender inequality tends to be high in patriarchal societies where social norms do not endorse equal treatment between males and females in terms of access to education, employment, empowerment, and decision making (Ferrant, 2010). In these societies, females are given fewer rights than males. According to the Human Development Reports (2020), six of the non-Arab Muslim majority countries (Azerbaijan, Turkey, Tajikistan, Uzbekistan, Malaysia and Kazakhstan) have relatively low gender inequality compared with other non-Arab Muslim countries. On the other hand, eight of the Arab countries (Saudi Arabia, Qatar, Oman, Kuwait, United Arab Emirates, Libya, Tunisia and Bahrain) have relatively low gender inequality compared with other Arab countries.

In terms of the level of economic development, Arab and non-Arab Muslim majority countries display interesting differences. According to the 2019 World Bank classification, Arab countries are more likely to be characterised as high income, whereas non-Arab Muslim majority countries are more likely to be low income, see Figure 2.12.

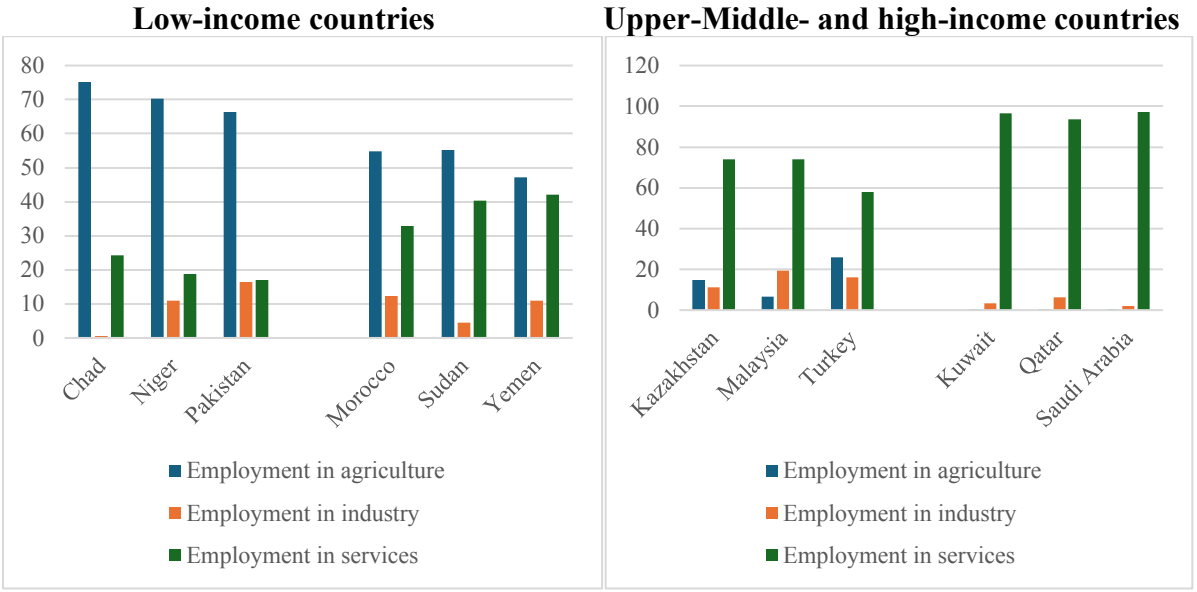
Figure 2.12 Number of Arab and non-Arab Muslim countries by income group



Source: World Bank (2019). Classification is based on GNI per capita.

An important similarity between these two groups of countries is the distribution of females' employment across different sectors. Some of the low-income countries, such as Chad (non-Arab) and Morocco (Arab), females' employment is concentrated in the agricultural sector. In contrast, in the upper-middle- and high-income countries, such as Malaysia (non-Arab), and Kuwait (Arab), have a high share of females working in the service sector – see Figure 2.13. We observe that females' share of employment tends to be the highest in the service sector in rich countries (high-income and upper-middle-income countries), while female employment is more heavily concentrated in the agricultural sector in lower income countries.

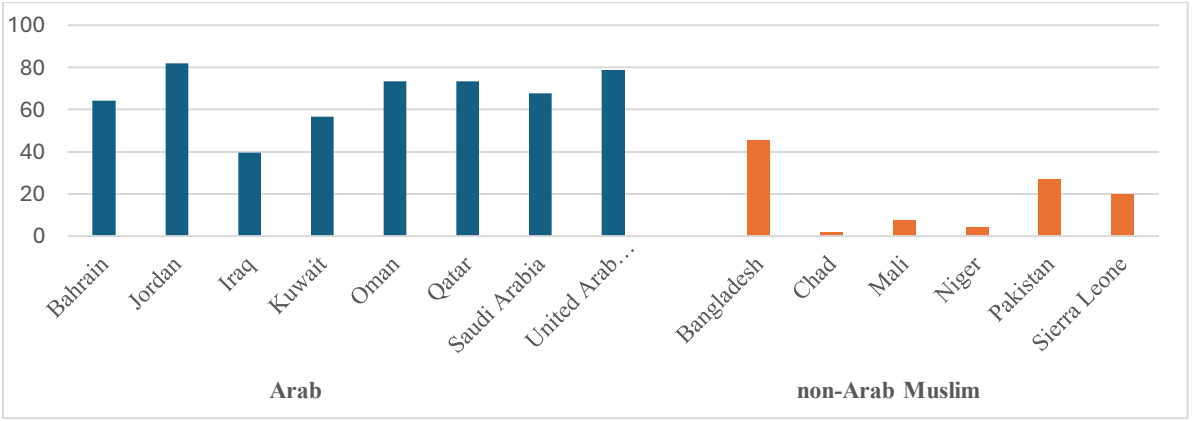
Figure 2.13 Females' employment in selected Arab and non-Arab Muslim majority countries



Source: World Bank (2020). In both charts, countries on the right side are the Arab countries and on the left side is the non-Arab Muslim majority countries.

There is also evidence that female education is higher in Arab Muslim countries, Figure 2.14 shows that in the non-Arab Muslim majority countries the percentage of population with at least secondary education is very low compared to the Arab countries.

Figure 2.14 Percentage of females with at least secondary education in selected Arab and non-Arab Muslim majority countries



Source: United Nations Development Program, Human Development Report, GII, Population with at least secondary education (2010-2018). Blue bars refer to the Arab countries and the orang ones refer to the non-Arab Muslim majority countries.

2.5 Conclusion

This chapter provided an overview of the context for the studies conducted. Opening with an introduction to relevant theoretical frameworks. The chapter discussed how labour supply

theory, human capital theory and behavioural approaches can be applied to explain low FLFP, with considerations given to the role played by the oil industry. The chapter highlighted how standard economic theory may be unhelpful in explaining how individuals behave and believe. To this extent, adopting approaches from behavioural economics, such as the theory of planned behavior and social norms, can provide a more insightful understanding and explanation of female employment decisions. Thus, the chapter provided definitions of culture and its components and highlighted the role played by cultural and social norms in explaining low FLFP. It also provided definition of institutions (formal and informal) and the role of informal institution in building traditional society that impact women employment decision negatively. Research presented in Chapter 4, Chapter 5 and Chapter 6 was developed within the context of Saudi Arabia; a country where the impact of cultural and social norms on FLFP is believed to be particularly strong. For this reason, particular attention was devoted in describing the main features of the Saudi context. The discussion covered possible causes for gender inequality in the Saudi labour market based on theory. It presented the policies and reforms implemented by the Saudi government to enhance FLFP. It also highlighted the reason behind the focus on Saudi Arabia, outlining that culture in Saudi has a very unique combination of social norms and religion that contribute to producing powerful informal institutions. The chapter also provided a brief account of similarities and differences between Arab and non-Arab Muslim majority countries in relation to differences in FLFP and the relative context for research presented in the following chapter (Chapter 3).

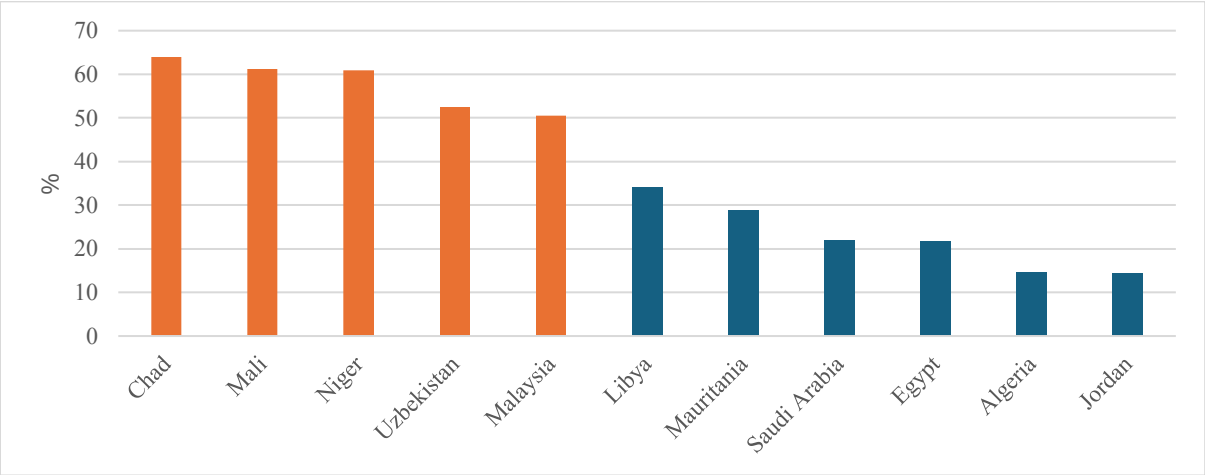
Chapter 3: Factors Influencing Female Labour Force Participation in Arab and non-Arab Muslim Majority Countries: Empirical study

3.1 Introduction to Study 1

In the last few decades, female participation in the labour market has increased globally, yet differences in the female share of the labour market across countries remain. Arab countries in the Middle East have the lowest female labour participation rate at 19.6 percent (World Bank, 2020). Although Arab governments have been attempting to increase female participation, progress has been slow; the average female labour force participation (FLFP) in the Arab world was 19 percent in 1990 and only increased to 19.6 percent by 2020, compared with a rise in the OECD from 47 percent in 1990 to 52 percent by 2020 (World Bank, 2020). It seems that more effort is necessary and new policies must be considered.

It is suggested that the Arab region has certain characteristics that act as strong barriers to female labour participation. Factors such as the social and cultural context may have played a role in explaining the low rate of female labour participation. Some researchers (for instance, Burton & Reitz (1981) believe that Islam, which is the majority religion in the Arab region, is the main hindrance to female participation. However, not all Muslim countries have low levels of female labour force participation (FLFP) (see Figure 3.1). Other countries with a majority Muslim population, such as Malaysia, Chad and Uzbekistan, all have FLFP greater than 50 percent (World Bank, 2018). If Islam is one of the main causes, then, *ceteris paribus*, we should expect similar trends of FLFP across all Muslim countries. These figures raise the possibility of a relationship between the FLFP, and other more specific social and cultural characteristics related to the Arabic culture or the level of conservatism within the Arab region. For instance, countries regarded as highly conservative with a strict commitment to traditional values (Dahms, 2014) may tend to have a lower FLFP as they place more emphasis upon the traditional values related to the role of females as mothers, housewives and homemakers.

Figure 3.1 Female Labour Force Participation in selected Arab and non-Arab Muslim countries



Source: World Bank, (2018) World Development indicators. Labour force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labour for the production of goods and services during a specified period. Muslim majority countries defined as having more than 50 percent of their population as Muslims. Arab countries are defined as all the countries who are members of the Arab League (Hatinger, 2009).
Note: orange bars refer to non-Arab Muslim majority countries and the blue bars refer to the Arab countries.

Muslim majority countries vary in terms of the density of their Muslim population. It follows that some Muslim countries have greater religious diversity than others. Diversity in religions may result in social and culture differences within these countries and, therefore, differences in attitudes and perceptions towards FLFP. This could influence the rates of FLFP. The potential role of religious diversity has never been explored in relation to the FLFP as the literature has tended to focus on type of religion (whether Islam or any other religions) (Jayachandran, 2015; Karshenas & Moghadam, 2001; Morrisson & Jutting, 2005; Sordellini, 2009), and not on the diversity in religions or density of the Islamic religion within a country.

It is also argued that oil production in Muslim countries is a possible hindrance for female labour force participation and their political empowerment Ross (2008). This could be through the income effect on females, as males in high oil producer countries have high income, which may impact the female labour supply decisions. It could also relate to the nature of the employment opportunities which tend to be in more male-dominated jobs related to oil which may be considered culturally unsuitable for females. However, there are some Muslim countries, such as Qatar, who are oil producers but with high rates of FLFP (56 percent in

2018). It seems that oil production itself may not fully explain the low rate of FLFP in Muslim countries, whether Arab or non-Arab Muslim.

Instead, the role of social and cultural factors in affecting FLFP could emerge from the combination of oil production and the level of conservatism. To this extent, this characterisation could evidence stronger links with FLFP than a simple differentiation between Muslim and non-Muslim countries. These social and cultural factors include female empowerment, early marriage for females, contraceptive use and adolescent fertility rates; a combination of these may give an indication for the overall level of the cultural conservatism of the country that may eventually influence the rates of FLFP.

In light of labour supply theory as well as economic theories discussed in the context chapter (Chapter 2), this study will investigate the relationships between these factors and FLFP in these two groups of countries (Arab and non-Arab Muslim majority countries). Whilst there are two studies (Verme et al., 2014; Caris & Hayo, 2012) that investigated the determinants of FLFP for some of the Arab countries, to our knowledge, there is no single study investigating the determinants of FLFP across a large number of the Arab countries, or that compare Arab and non-Arab Muslim majority countries, as this study will do. Additionally, there is no single study investigating the impact of the combined effect of oil dependency and cultural conservatism on FLFP. Furthermore, this study will investigate the impact of other factors on the FLFP that have never been explored before in the context of Arab and non-Arab Muslim majority countries, such as religious diversity and inequality in education.

The following research questions will be addressed:

- What are the significant determinants of FLFP in Arab and non-Arab Muslim countries?
- Do oil dependency, conservatism, religious diversity, and Arabic culture have a negative impact on FLFP in these countries?
- How does the impact of oil dependency and conservatism on FLFP differ between Arab and non-Arab Muslim majority countries?

A quantitative approach will be followed, and regression analysis will be conducted.

This chapter is structured as follows: the first section reviews the empirical literature concerning determinants for FLFP. This is followed by the methodology section, which outlines the empirical estimation strategy. The third section presents and discusses the regression results. This is followed by a discussion of the consistency of the finding with economic theory predictions (as discussed in Chapter 2), the study policy implications and finally, the conclusions.

3.2 Literature review concerning factors affecting FLFP

Different factors are thought to be responsible for the low levels of female involvement in the labour market, such as level of development (Goldin, 1995; Kaur & Tao, 2014; Lechman & Kaur, 2015), social context and religion (Fernández, 2013; Wolch & Dear, 2014) alongside human capital, including education in particular (Gaddis & Klasen, 2014).

One of the most influential theories in the economic literature that provides a possible explanation for differences in FLFP rates between countries is the U-shaped hypothesis (Goldin, 1995). The U-shaped hypothesis suggests that, at first, with low level of development, most females engage in agricultural jobs (as unpaid workers), fertility rates are high, and levels of education are low in general and low for women in particular. In the second stage, the economy moves away from agriculture to manufacturing, female participation in the agricultural sector decreases, levels of female education improve and there are relatively lower fertility rates. However, social and cultural constraints limit females from participating in manufacturing jobs as they require separation between housework and labour, whereas agricultural jobs allow for an easier combination of the two. In the third stage of development, women obtain higher education and there is greater use of contraception, which leads to a decline in fertility rates. The economy transitions to a service sector economy in which more job opportunities (paid work) are generated (Goldin, 1995).

According to Lechman & Kaur (2015), most of the Arab countries are located at the turning points of the U-shape where fertility rates are falling, and female education levels are increasing. However, considering the variations in economic development levels among Arab countries, the relationship between FLFP and economic development might be more complex than presented by the U-shaped hypothesis. There is a large variation in FLFP across Arab countries,

reflecting variations in the economic and social indicators of these countries (Verick, 2014). Furthermore, women's participation in the labour market does not seem consistent with the U-shaped hypothesis. This is because over the last ten years, levels of female education have increased significantly in Arab countries, and fertility rates have decreased, yet FLFP rates remain low. Some of the Arab countries perform well in terms of economic development, but they still experience low FLFP, and participation rates may be considered moderate compared with other countries, such as the OECD countries. For example, Saudi Arabia, which is considered to have high economic growth rates, has very low FLFP at 21 percent (World Bank, 2018).

In the Middle East and North Africa (MENA) region, there are mostly Arab countries, where traditional beliefs and conservative religious culture are widespread due to the strong presence of Islam. This region includes countries with the highest share of Muslim populations, and they share similar cultural aspects, such as the role of males as breadwinners and females as a houseworkers. Therefore, these social norms and social contexts must be considered when investigating determinants of FLFP in such countries (Lechman & Kaur, 2015). Robinson (2005) investigated determinants for FLFP focusing on the MENA region, including five sets of cross-sectional data using multiple linear regression for each year (1960, 1970, 1980, 1990 and 2000), including all countries for which data were available (in 1960, the sample size was 95 countries, 84, 89, 98 and 100 countries in 1970, 1980, 1990, and in 2000, respectively). Robinson (2005) used FLFP as the dependent variable and gross domestic product (GDP) per capita, illiteracy rate of adult females, total fertility rate (births per woman), and urban population (as percentage of total). Robinson (2005) included a MENA dummy variable to control for any socio-cultural factors that may characterise this region. Results from a linear OLS regression showed that the GDP coefficient was not significant in all years, although this may be due to omission of a quadratic term for GDP and thereby ignoring the curvilinear relationship between GDP and FLFP. The coefficient for the female illiteracy rate had a positive and significant correlation with the FLFP only in 1970 and 1980. Urbanisation and fertility rates displayed a negative and significant correlation with the FLFP. Most importantly, the non-MENA dummy variable had a positive and significant impact over time, and it became the most significant explanatory variable in 2000.

Ross (2008) used panel data across a large number of countries but employed different estimation techniques, including fixed effects. This study investigated the impact of different

factors on FLFP, such as oil wealth and political characteristics of the countries considered. Ross argued that oil wealth may reduce female labour supply due to the increase in unearned income, which in turn increases females' reservation wage levels through higher male wages or high governmental transfer to household. Ross tested the hypothesis that the increase in oil production and the value of oil production will decrease female labour participation using data from 169 countries between 1960 and 2002 and employed first difference with a fixed effects estimator. Ross (2008) regressed FLFP on the log of GDP and log of the GDP squared, percentage of working age population, dummy variables for the countries in the Middle East and Muslim populations. The results indicated that oil rents had a significant and negative effect on FLFP, that Islam has no impact and that the inclusion of the variable for oil rents decreased the Middle East variable coefficient by one-quarter. That may indicate that oil wealth alongside the regional culture are both important factors in determining FLFP in this region. The author argues that, whilst Islam has no significant impact on FLFP, some of the economic (oil dependency) and cultural characteristics of the oil dependent countries considered can explain the low FLFP in the MENA region. However, it is worth noting that, in this study, Ross (2008) omitted very important factors that have been found and proven to have an impact on FLFP, such as education and urbanisation (Robinson, 2005; Tsani et al., 2013). Furthermore, Ross did not account for cultural and religiosity variation within the MENA countries.

Another study that also investigated the relationship between FLFP and economic growth is Lechman and Kaur (2015). In their study Lechman and Kaur (2015) included 162 countries over the period of 1990 to 2012. FLFP for females aged 15 years and above was used as the dependent variable and the log GDP per capita was used as a proxy for the level of economic development. They also included the log of the GDP square and used four different estimation techniques: OLS, fixed effects (to capture time-invariant country-specific effects) and fixed effects with IV estimator (to control for endogeneity of the independent variables by using lagged values for GDP per capita). Additionally, to account for the dynamic effects in the dependent variable, Lechman and Kaur (2015) applied the Arellano-Bond estimator (Arellano & Bond, 1991) by including the lagged values for the dependent variable (FLFP). Their results indicated that the estimated coefficient for the log GDP is negative while that for the log GDP square is positive across all models, which supports the U-shaped hypothesis advanced by Goldin (1995). Lechman and Kaur (2015) clustered countries based on their income levels and re-examined the U-shaped hypothesis. These results confirmed the presence of a U-shaped relationship between FLFP and GDP in high income and upper-middle income countries when

using the non-dynamic estimators, but these effects were not statistically significant when the dynamic model was used. In lower-middle income and low-income countries the relationship did not hold – regardless of which estimation technique was used. Lechman and Kaur argued that, although Arab countries (high income and upper-middle income) have a high GDP, they have very low FLFP over the specified period, which could be attributed to some cultural and institutional factors that act to exclude females from the workforce. However, Lechman and Kaur (2015) did not specifically test this.

Chapman (2015) studied the determinants of FLFP focusing only on MENA countries. The paper used panel data from the World Bank's World Development Indicators database for 20 MENA countries for the period between 1990 to 2012; this is an unbalanced panel data due to some missing values. Chapman (2015) only uses the fixed effects model, controlling for education (the enrolment of females in secondary school), fertility rates, unemployment, urbanisation and economic growth (log GDP and quadratic log GDP). The results indicated the presence of the U-shaped relationship between FLFP and economic development in MENA countries. Fertility and unemployment had a negative impact, as expected. Urbanisation had a small positive effect. However, education had a negative impact on FLFP. Chapman suggests that this result may imply that the increase in female education levels in these countries has not supported a growth in FLFP. Chapman also argued that a significant increase in females' education in these countries was not translated into an increase in participation in the labour market, which might indicate that there are other important factors that limit the impact of female education on female employment such as traditions and regional culture. Although Chapman (2015) used fixed effects to estimate the model, thereby controlling for the important role of culture in determining FLFP in MENA and particularly Arab countries, this approach does not provide an estimate of the size or significance of the effect. The paper uses secondary school enrolment as a control for female education, but this is contemporaneous and does not necessarily capture the skill composition of the current workforce which is likely to include less well qualified women amongst the older generations.

Given the conservative social context for Arab and non-Arab Muslim majority countries, findings from the above studies call for further investigation and better understanding of the barriers and obstacles to female participation. This includes consideration of a wider set of factors that might be related to the social and cultural background. For example, based on household survey data, female labour participation in the MENA region tends to decrease when

females get married and particularly when they have children. One possible explanation is that social norms that promote the perception of the male being the sole breadwinner of the family are widespread in these countries. This norm relates to authority and control, as the male is financially responsible and norms around guardianship mean that men can give orders and justify his control regarding his wife's employment decisions. Furthermore, norms that relate to family honour, which attaches importance to the reputation of the female, may impose restrictions on female employment as working outside the house may involve interaction with other males. The relationship between FLFP and cultural characteristics was examined in an earlier study by Tzannatos (1999) using 1980s data for 128 countries, the researcher regressed FLFP on five religion dummy variables (Hindu, Buddhist, Muslim, Catholic and no religion), using religion as a proxy for key cultural characteristics, and found that religion can explain 36 percent of the variation in FLFP. He found that Islam has the largest coefficient (-26) among the other religions. However, Tzannatos (1999) used only one aspect of culture, that of religion, and argues that it can be a primary reason for low FLFP; he did not control for other aspect of the culture such as traditions and values (cultural characteristics).

Bayanpourtehrani and Sylwester (2013) argue that some cultural features may strengthen the impact of religion on FLFP, but that religion itself is not mainly responsible for the lower FLFP in Muslim countries. They used cross-sectional data (for all countries between 1985 and 2005) and found that the association between FLFP and Islam (percentage of Muslims in the country) diminishes once they added further explanatory variables accounting for the percentage of rural population, oil exports and workers in agriculture. They believe that countries with a high percentage of workers in the agricultural sector, as well those with a large rural population, are less likely to be modernised, which in turn will impact the share of females in the workforce. Interestingly, when the researchers included dummy variables for regions, they found that the MENA coefficient was the largest (-24) but diminished when controlling for the other variables (-17). This may suggest that other cultural characteristics for this region are also important in determining FLFP and must be considered. However, it has been argued that estimates from the cross-sectional data are more likely to be biased due to the countries' specific effects that cannot be measured or controlled for with this type of data and estimation approach (Tam, 2011).

One more recent study Korotayev et al. (2015) investigated the role of Arabic culture. The researchers used data from across the world with available data for FLFP (183 countries) for

2013. Variables used include the percentage of Muslim population; a dummy variable for Arab countries; fertility rates; school enrolment in primary, secondary and tertiary education; female life expectancy; and oil dependency (measured by oil rents). This research uses correlation analysis with control variables added through multivariate regression models. Results show that the estimated coefficient for dummy for being an Arab country is negative and significant (-27), and the size of the impact is larger than the impact of being an Islamic country (-0.13). All education variables display a positive impact. The fertility rate has a positive impact and female life expectancy has a negative impact. Interestingly, a positive and marginally significant ($p = 0.08$) relationship between oil rents and FLFP was found. Therefore, the researchers argue that Ross's (2008) arguments regarding a negative impact of oil on FLFP in Islamic countries is not accepted, as most Arab countries with high oil rents have higher FLFP compared to other Arab countries that have lower oil rents. However, the study concludes that being an Arab country is by itself mainly connected with the low FLFP in this region, which could be related to the Arabic culture.

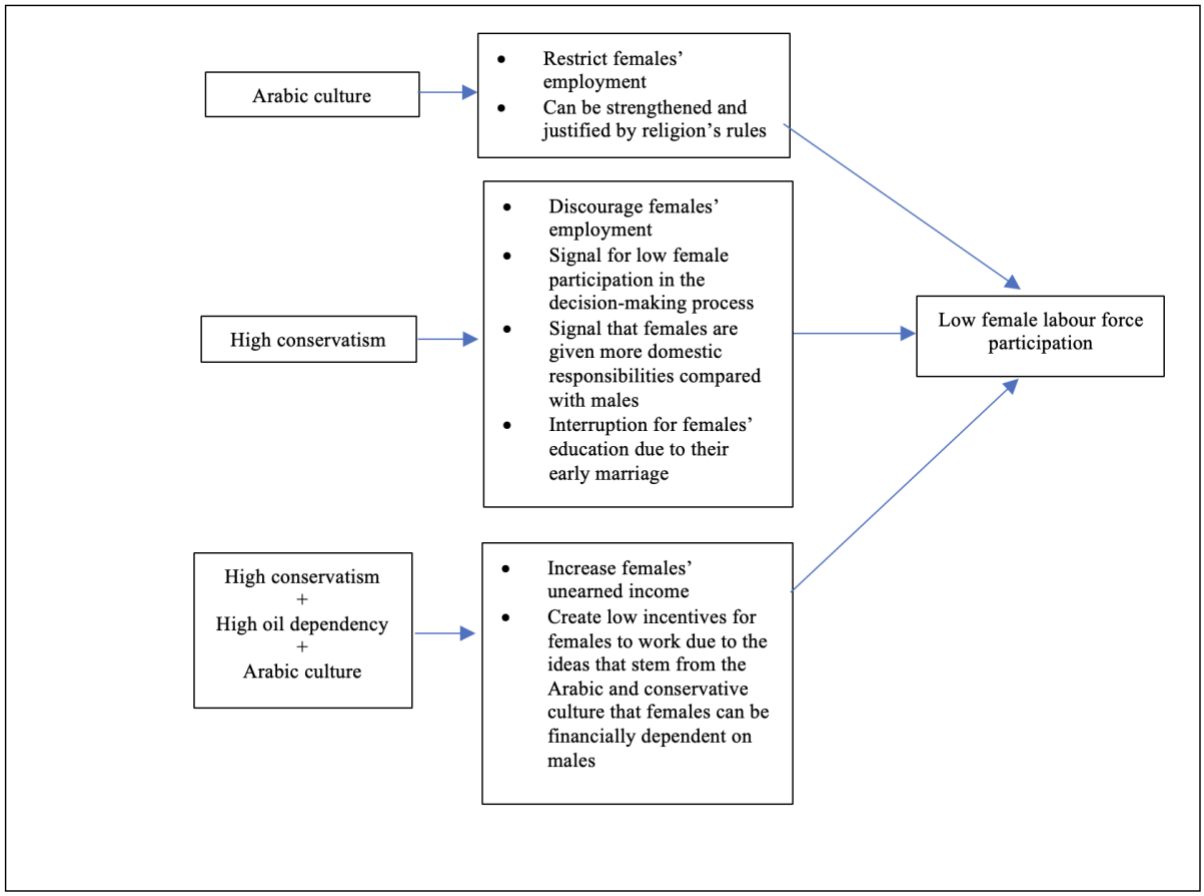
In terms of empirical literature investigating FLFP determinants in Arab countries specifically, there are very few published studies. One discussion paper, Caris and Hayo (2012) investigated the impact of identity on FLFP at the micro-level (individuals). The focus was on the effect of cultural and religious practices on female labour market participation decisions. They utilised two waves from the World Values Survey for 56 countries (including 6 Arab countries) for the years 2000 and 2005. The dependent variable was a dummy variable that indicated females' employment status. Independent variables were: level of education (secondary and tertiary), presence of an additional earner, marital status, region, number of children and their age, dummy variables for religious groups (Muslim, Buddhist, Hindu, Orthodox, Protestant, Christian and Roman Catholic), another dummy variable for degree of religiosity and another set of dummy variables that indicate traditional identity (based on their responses to different questions such as "being a housewife is just as fulfilling as working for pay", etc.), employing a probit model. Their results show that females in the Arab region (dummy variable for Arab region) have significantly lower probability of participating in the labour market. Traditional females (who display more traditional beliefs) have a lower probability of entering the labour market. However, the impact of females' religiosity was insignificant. The interaction between Arab region and traditional identity shows that females have a 13 percent lower probability of entering the labour market.

There is another working paper by Verme et al. (2014) using quarterly data for 1999-2012 for different regions in Morocco that employed an OLS estimator in addition to a GMM estimator. They also used another set of individual panel data (60,000 households) for 2007-2011 and employed both fixed effects and random effects to compare the results. The results show that GDP level and its squared term have an insignificant impact on FLFP (suggesting that the U-shaped hypothesis does not hold for Morocco). Middle education (diploma) has a negative and significant impact on FLFP in Morocco, while upper education (university) has a positive and significant impact. In terms of individual level regression analysis, both fixed and random effects show a negative and significant impact from marriage, secondary education, presence of more than one inactive female (not participating in labour market) and presence of elders (60 or more years old) in the household. Similarly, another working paper investigated the impact of education and social norms on FLFP in one of the Arab countries, namely Jordan, at the micro-level. Chamlou et al. (2011) used household data for 8,233 adult male and females (age 15-64) collected in 2008 and employed a probit model to analyse the data. The dependent variable and independent variables were similar to those used in Verme et al.'s (2014) study. The results show that having a high level of education (post-secondary and university education) has a positive and significant impact on female employment status. Traditional social norms are negatively and significantly correlated with female labour supply; however, causality could not be established.

From the above review and discussion of the literature, one point can be made concerning the measurement of cultural characteristics. Some researchers used dummy variables for Middle East countries (Bayanpourtehrani & Sylwester, 2013) to measure the impact of culture, some used the percentage of Muslims in the country (Tzannatos, 1999) to measure the impact of religiosity, while others omitted this important variable completely (Chapman, 2015). It is worth noting that, although there are some similarities across Arab countries, as presented in the previous chapter, differences in terms of their conservative culture and religious practices are also observed. Hence, using a dummy variable (region) for all Arab countries might be misleading as not all have the same level of conservatism. Additionally, using religion as a proxy for culture may not be the optimal measure, as this variable covers only one aspect of the Arab culture. Therefore, bearing in mind that measuring cultural characteristics is a difficult task, especially in Arab countries as availability of data is always a concern, this study uses social conservatism as an indicator that is built based on four measures: female empowerment, early marriage, adolescent fertility rates and contraceptive usage.

The main argument for the study (as shown in Figure 3.2) is that regardless of the Islamic religion, there are specific features of Arabic culture that lead to discouragement of FLFP, which do not exist in other Islamic countries. Furthermore, Arabic culture is highly conservative which may discourage FLFP further. For instance, a low level of females' empowerment within a country may signal gender inequality and that females in this country are not given equal rights to participate in the decision-making process. This gender inequality could lead to another form of economic inequality in terms of labour market. In addition to being highly conservative, having high oil dependency could also result limit FLFP. This is because of the double effects that come from being highly conservative and highly oil dependent. As high conservatism discourages FLFP, being highly oil dependent may further reduce females' incentives and desire to work in these countries (Ross, 2008). However, in this study, we test whether this combined effect of high conservatism and high oil dependency might exist only in the Arab countries. This is because the norm of female financial dependency is supported by religion as well as by the Arabic culture, so that these two effects may combine to generate a greater reduction in FLFP.

Figure 3.2 Relationship between FLFP and variables of interests

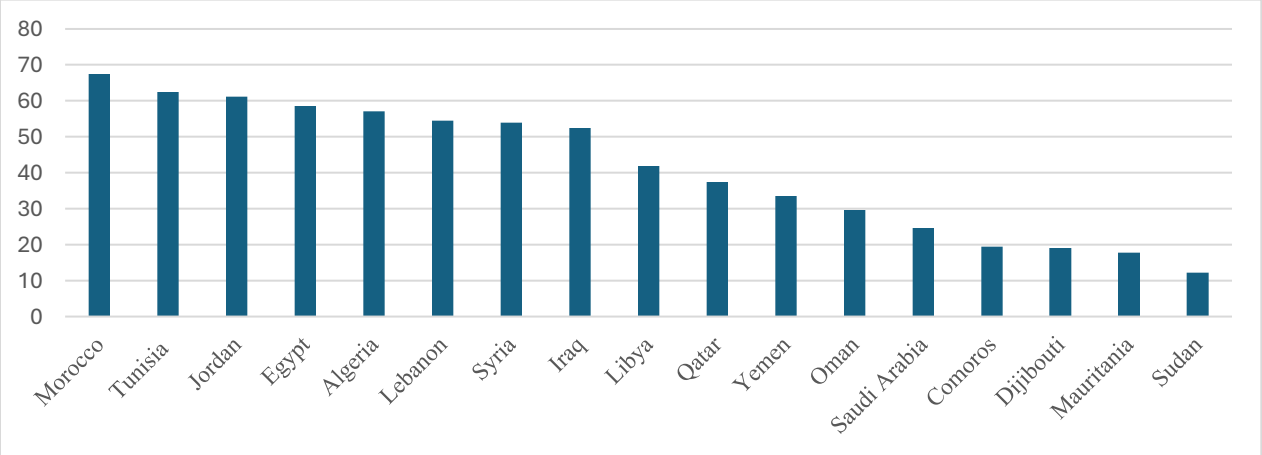


The study will extend previous research in the following ways; first, the study classifies the Arab and non-Arab Muslim majority countries based on their level of conservatism (more details in the methodology section). This should allow for better understanding of the differences in the FLFP, rather than treating all the Muslim (Arab and non-Arab Muslim) countries as homogenous due to their religion or geography. Second, the study uses a new variable, the Religious Diversity Index (RDI) (Pew Research Centre, 2019). This should allow for deeper understanding of the impact of religion and obtain a more accurate understanding of the impact of religion on FLFP. Third, the study explores the impact of the combination of being a conservative country as well as being an oil-dependent country. Fourth, this study includes a longer period of time and a larger number of the Arab countries, in addition to conducting a unique comparison between the Arab and non-Arab Muslim majority countries.

Differences in the level of cultural conservatism can be explored by using indicators related to early marriage, adolescent fertility rates, contraceptive use, and level of female empowerment.

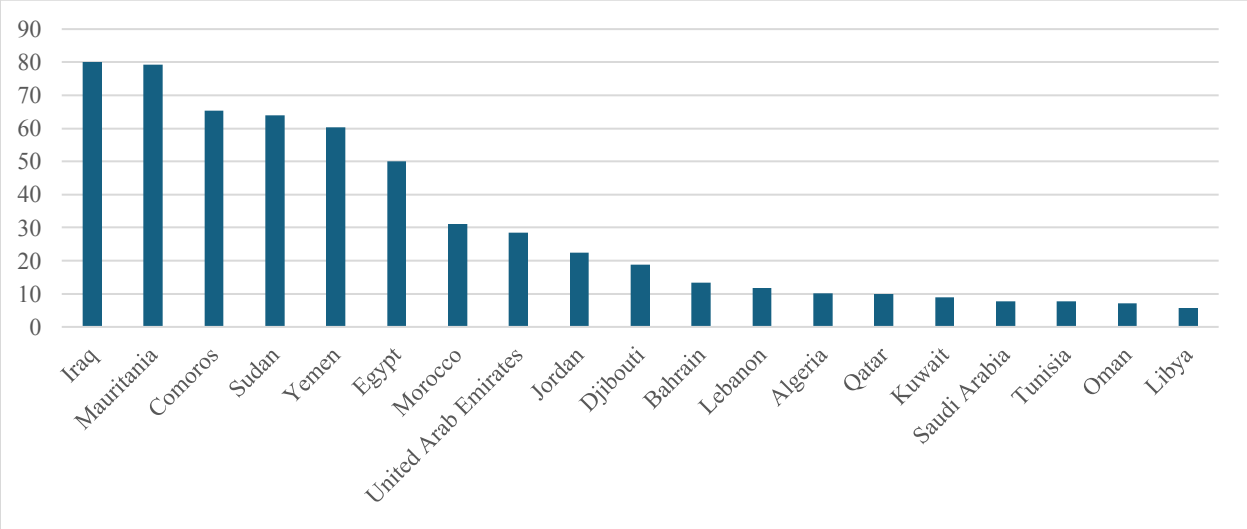
These indicators will form an important element of the study by signalling to what extent a country is culturally conservative. For example, it is expected that in highly conservative countries, early marriage would be more widely accepted, because early marriage is thought to protect girls' purity and honour. In terms of contraceptive use and adolescent fertility rates, as depicted in Figure 3.3 and Figure 3.4, there are huge differences in rates within the Arab countries. These differences may reflect the cultural differences within these countries.

Figure 3.3 Use of Contraceptives in selected Arab Countries



Source: United Nations Development Programme, Human Development Report. Contraceptive prevalence: any method: Percentage of married or in-union women of reproductive age (15-49 years) currently using any contraceptive method using data for the period 2007-2017.

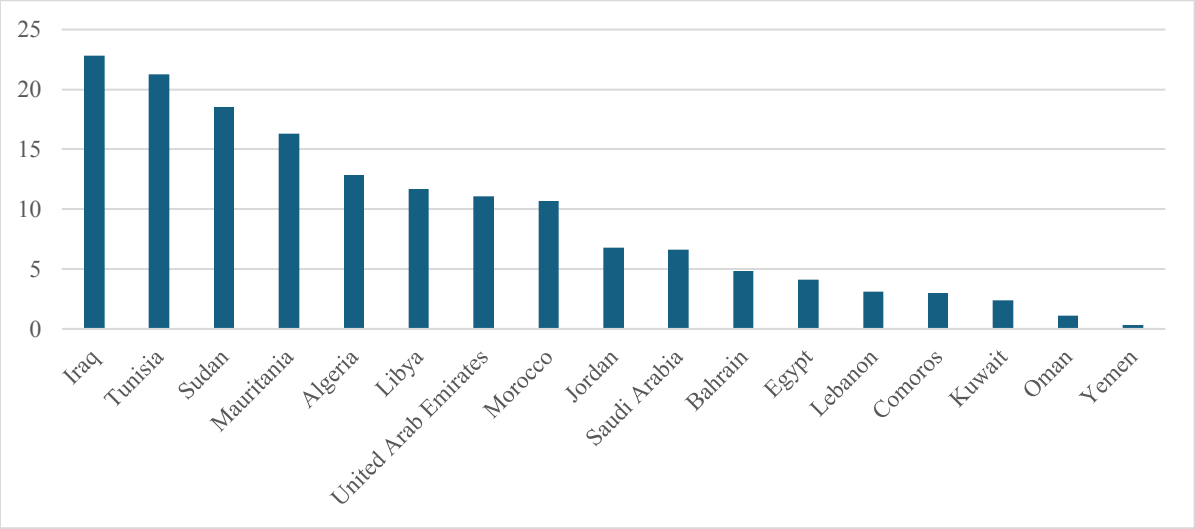
Figure 3.4 Adolescent Fertility Rates in selected Arab Countries



Source: The World Bank (2018)

Differences in levels of female empowerment can be explored by looking at share of seats in parliament. This measure indicates to what extent females can participate in the decision-making process. As Figure 3.5 illustrates, females in some Arab countries have slightly higher levels of empowerment (above 20%) as in Iraq, Tunisia and Sudan, while other countries have a female share of seats in parliament below 5 percent.

Figure 3.5 Share of seats in parliament (% held by women) in selected Arab Countries



Source: World Bank average values (1990- 2018). No data available for Palestine (West Bank and Gaza)

3.3 Methodology

This is a panel data study, covering 28 years (from 1991 to 2018) in 34 countries. According to panel data estimation practice, the Hausman test indicated that fixed effects is preferable[5]. However, random effects were employed for two reasons: first, we believe that differences across countries may have some influence on the dependent variable (FLFP); second, we are interested in exploring the impact of some variables that are time invariant. Furthermore, Breusch and Pagan's Lagrangian multiplier test for random effects (a test on the significance of the country's heterogeneity level compared to the whole variation in the data) was employed, and the result indicated that there is evidence of significant differences across countries. Therefore, using random effects is more appropriate than the use of simple OLS[6]

[5] chi2(6) = 26.5, P value (0.0002).
[6] Chibar2(01) = 10027.54, Prob > Chibar2 = 0.0000.

Accordingly, the following equation was estimated using the random effects estimator:

$$\boldsymbol{Y_{it} = \alpha + X_{it} + \mu_i + \epsilon_{it}}$$

Y is the dependent variable (FLFP), *i* refers to the country and *t* to time, and α refers to the intercept. *X* refers to all of the independent variables included in the model, μ_i refers to the cross section, or country specific error and ϵ_{it} refer to the combined time series and cross section error term. (See Appendix A, Table A.1 for source and definition for each variable used in the analysis)

The independent variables included are log of real GDP per capita and the log of real GDP squared to test the curvilinear relationship between FLFP and the level of economic development, as well as fertility rates, lagged unemployment (to detect the effect of discouraged workers), urbanisation and religious diversity (RDI). All of these variables are continuous and change over time, except RDI which has constant values. These values were calculated using 2010 data (Pew Research Center, 2019).

Furthermore, additional dummy variables were introduced. First, inequality in education is measured by a dummy variable that equals one if the country has male literacy rates higher than that for females and zero otherwise. Second, a dummy variable for Arab countries equals one if the country is Arab and zero if the country is from the non-Arab Muslim majority countries. To construct a measure of conservativism, we employ four indicators: adolescent fertility rates, percentage of early marriage, contraceptive use and females' empowerment, measured by proportion of seats held by women in parliament. We created a dummy variable named high conservative that is equal to one if the country has the following: lower contraceptive use compared to the world average, lower female empowerment compared to the world average, higher adolescent fertility rates compared to the world average, and higher percentage of early marriage compared to the world average. For oil dependency, we created a dummy variable named high oil dependency equal to one if the country has average (from 1991 to 2018) values of oil rents that are 20 percent or higher, and zero otherwise (For a robustness check, we used 25 percent as alternative definitions for highly oil-dependent countries; we also used another set of measures to define conservatism. For more details see Appendix A).

It is important to mention that the formation of social conservatism measures was inspired by previous studies (Fortin, 2005; Heineck, 2004; Morrisson and Jutting, 2005; Seguino, 2007; Seguino, 2011) and from the Social Institution and Gender Index (SIGI) (Organization for Economic Co-operation and Development (OECD), 2007).

At the individual level, previous studies have formed indices based on the agreement with specific statements reflecting social norms or importance of religion amongst survey participants (Fortin, 2005; Heineck, 2004; Morrisson and Jutting, 2005; Seguino, 2007; Seguino, 2011). Since these are based on the participants' responses to these statements, one can classify them based on their level of being traditional or being socially conservative. The SIGI index was developed by the Organization for Economic Co-operation and Development (OECD) in 2007. It is the only measurement tool that incorporates traditions, culture, social norms, legislation and links these to gender inequality. Low values for the index indicate greater gender equality and high values mean greater inequality. The SIGI classifies 108 countries into five groups: very low, low, medium, high and very high inequality. It is formed of five main indexes, which consist of multiple sub-indexes. The first index is a discriminatory family code, measured by legal age of marriage, early marriage (percentage of females married between 15-19), parental authority, and inheritance. The second index is restricted physical integrity, measured by violence against women and which includes several indicators, such as percentage of females who have undergone female genital mutilation, attitudes toward violence, laws on domestic violence and rape, laws on sexual harassment, percentage of women who have faced sexual violence, and family planning (use of contraception). The third index is son-bias (as in some countries there are notable favouritism towards baby boys) measured by the share of males as the youngest child of a mother who does not plan to have an additional child. The fourth index is restricted resources and assets, measured by access to land and access to financial services. The fifth and last index is restricted civil liberties, measured by the share of females in national parliaments, political voice, access to public space. Some studies have used the SIGI to investigate its impact on female participation in the labour market. They have found that there is a significant negative association between the SIGI and female labour market participation (Jutting et. al., 2014). This suggests that societies that experiencing gender inequality, females' activities in labour market are decreasing.

Accordingly, we have taken the idea of classifying countries based on their social conservatism from research that classified individuals based on their level of holding more/less traditional beliefs. Moreover, the use of the early marriage measure was inspired by the SIGI index, which

uses the percentage of females married between the age 15-19. The use of the other three measures was inspired by studies that have investigated the link between conservatism from one side and fertility, use of contraceptives and female's empowerment on the other (Vogl & Freese, 2020; Strikanthan & Reid, 2008). It is suggested that in traditional and socially conservative societies, females are given lower power in decision making comparing to males. Based on data analysis (data taken from World Values Surveys including 61 countries) it was found that in more conservative societies, where individuals favour more traditional division of home duties, female's empowerment and involvement in decision making was low (Norris, 2020). Hence, these studies have linked social conservatism to these four measures. In our study, we investigate the link between these four measures (as proxy for social conservatism) and FLFP.

The possible explanatory role of RDI, inequality in education, being Arab, and the interaction term between being Arab, high conservative and high oil dependency upon FLFP are the main focus of this study. Accordingly, there are four hypotheses that will be tested: H1: religious diversity is positively associated with FLFP; H2: lower literacy rates for females compared to males is negatively associated with FLFP; H3: Arabic culture has a negative association with FLFP; H4: being an Arab country, highly conservative as well as highly oil dependent is negatively associated with FLFP. It is important to mention that the analysis can tell us if these key variables in the model are statistically correlated with FLFP. It cannot tell us about the causal mechanisms behind the correlations.

3.4 Regression Results

Table 3.1 includes random effects regression estimates for 34 countries, 18 of which are Arab and 16 of which are non-Arab Muslim majority countries.

Table 3.1: Random Effects Regression Results

	(1)	(2)	(3)	(4)	(5)
Log GDP	3.615 (0.812)	1.721 (0.902)	2.017 (0.886)	2.197 (0.876)	2.172 (0.878)
Log GDP^2	-0.301 (0.721)	-0.232 (0.772)	-0.248 (0.758)	-0.258 (0.749)	-0.258 (0.749)
Log Fertility rate (Fertility rate, total births per woman)	-6.672** (0.004)	-7.231** (0.001)	-7.240** (0.001)	-7.247** (0.001)	-7.210** (0.001)
Lagged Unemployment (% of total labour force)	-0.226** (0.002)	-0.270** (0.004)	-0.270** (0.004)	-0.271** (0.004)	-0.269** (0.004)
Log Urbanisation (% of total population)	-12.40 (0.058)	-14.08 (0.065)	-14.09 (0.066)	-14.24 (0.067)	-14.18 (0.069)
Inequality in education	-11.81* (0.017)	-11.57* (0.024)	-12.78* (0.017)	-13.52* (0.010)	-8.825 (0.132)
Religious Diversity Index (RDI)	4.310*** (0.000)	4.395*** (0.000)	4.046*** (0.000)	3.430*** (0.000)	3.474*** (0.000)
High oil dependency (15% and higher)	2.478 (0.608)	3.534 (0.451)	7.156 (0.263)	2.133 (0.816)	-9.381 (0.109)
High conservatism	3.697 (0.493)	2.288 (0.706)	5.293 (0.316)	11.90* (0.045)	7.519 (0.240)
High oil dependency × High conservatism			-11.31 (0.212)	-7.633 (0.287)	18.92* (0.037)
Arab (dummy variable for Arab countries)	-8.001* (0.048)	-5.867 (0.240)	-6.117 (0.238)	-0.611 (0.930)	-4.945 (0.485)
Arab× High oil dependency				3.717 (0.687)	19.67* (0.013)
Arab× High conservatism				-15.32 (0.067)	-7.241 (0.408)
Arab× High conservatism × High oil dependency					-37.53** (0.002)
Time	0.186** (0.002)	0.244* (0.010)	0.244* (0.011)	0.245* (0.012)	0.245* (0.011)
Time × Arab		-0.0778 (0.365)	-0.0778 (0.368)	-0.0785 (0.367)	-0.0781 (0.370)
Constant	84.94 (0.181)	102.7 (0.071)	103.5 (0.069)	103.4 (0.068)	101.2 (0.074)
Observations	918	918	918	918	918
F/Wald	202.51 (0.0000)	216.27 (0.0000)	288.70 (0.0000)	339.96 (0.0000)	339.98 (0.0000)
R-square Within **Between** **Overall**	0.40 0.61 0.60	0.40 0.59 0.58	0.40 0.61 0.61	0.40 0.65 0.64	0.40 0.69 0.68

Note: p-values in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, standard errors clustered at the country level

Factors associated with a higher FLFP: We start with factors that showed a positive and significant association with FLFP, particularly diversity in religions. A 1-unit increase in religions diversity is associated with an approximately 4 percent increase in FLFP. Hence **H1 is accepted**. This result may explain why FLFP is low in some of the Arab and non-Arab countries that have lower religious diversity where Islam is the dominant religion. This result is one of the original contributions of this study as most of the other studies investigated only the impact of different religions (Tzannatos, 1999), or tested the impact of Islam only (percentage of Muslims) such as Ross (2008) and Korotayev et al. (2015), who found that Islam

has a negative impact on FLFP. However, by using the RDI, we further investigate the reasons behind variation in FLFP within Muslim countries themselves. It appears that, even if a country has a high percentage of Muslims and is considered a Muslim country, when people live alongside others with different religious thought, certain attitudes may be more open and encouraging towards females participating in the labour market. On the contrary, FLFP is found to be low in countries that are known for their religious homogeneity and have one dominant religion (Jayachandran, 2015; Karshenas & Moghadam, 2001; Morrisson & Jutting, 2005; Sordellini, 2009). This result allows us to understand more clearly the differences in FLFP within Arab countries. For instance, Saudi Arabia, which has a low rate of diversity in religions, has low FLFP compared to Qatar, which has a higher rate of religious diversity.

Results show that, in isolation, high conservatism has a positive association (but not statistically significant) with FLFP. However, the interaction term of high conservatism and high oil dependency is associated with an 18.92 percent increase in FLFP in the non-Arab Muslim majority countries. These results indicate that for the non-Arab Muslim majority countries, high conservatism does not discourage FLFP, regardless of whether the country is highly oil dependent or not. This result can be explained by the nature of job opportunities. For instance, the majority of the highly conservative countries from the non-Arab Muslim majority countries have very high percentages of females' employment in the agricultural sector; for instance, 75 percent, 60 percent and 53 percent of females in Chad, Bangladesh and Sierra Leone work in the agricultural sector, respectively (World Bank, 2018).

The interaction term between Arab and high oil dependency has a positive and significant association with FLFP (19.67: P value = 0.013) but only for the less conservative Arab countries. For the Arab countries with heavy oil dependency, oil rents are a major source of revenue for the governments. In these countries, government transfers tend to be high, wages are high, and according to labour supply theory this attracts more females to enter the labour market as females' labour supply becomes more responsive to wage changes. In these less conservative countries females may face fewer restrictions or less discouragement on their employment in these job opportunities. These results clearly explain why FLFP is high in some highly oil-dependent Arab countries and low in other Arab countries who are also highly oil dependent.

Furthermore, the indicator variable for time also shows a positive and significant association with FLFP, suggesting that over time, FLFP is increasing. Although the interaction term between time and being Arab has a negative sign, it is insignificant.

Factors associated with a lower FLFP: The regression results revealed that fertility rates, unemployment, inequality in education, being Arab, interaction term of Arab, high oil dependency and high conservatism have a negative effect on FLFP.

Some of these results confirm the negative impact of fertility rates and unemployment have been detected in previous studies (Robinson, 2005; Chapman, 2015). For instance, the negative effect of unemployment on FLFP indicates the presence of a discouraged worker effect, which means that the higher the unemployment rate, the less likely women are to enter the labour market. The economic cost for searching for a job is high when unemployment rates are high; therefore, large numbers of females will not enter the labour market.

Inequality in education is associated with 12 to 13 percent decrease in FLFP, hence **H2 is accepted**. This variable captures the impact of lower literacy levels for females compared to males, and this result implies that equality in education has an important role in increasing FLFP. Both male and female economic contribution is important for economic growth in any country. As education levels and economic participation rises, economic growth increases (Klasen & Lamanna, 2009). However, in countries where females receive less education than males, the economic growth rates are low and slow (Barro & Lee, 1994). More tellingly, when girls receive less education than boys in a given country, that might be a signal for low efficiency (due to relying on males only and providing more education to them and neglecting female education), which impacts the level of development in that country and consequently impacts FLFP.

For Arab culture, as expected, the coefficient shows a significant and negative impact on FLFP. FLFP in Arab countries is estimated to be lower by 8 percent compared to non-Arab Muslim majority countries; hence, **H3 is accepted**. This result confirms the study's hypothesis that – all other relevant factors considered – FLFP is low in Arab countries compared to non-Arab Muslim majority countries due to Arabic culture. Certain aspects related to the Arabic culture tend to hold back female labour force participation. Here, the impact of Islam is controlled for, as all of the countries included are Muslim. Hence, the effect of Arabic culture clearly explains

why FLFP is low in Arab countries compared to non-Arab Muslim majority countries. This result is in line with Korotayev et al. (2015), which argues that Arab countries have certain elements not necessarily connected with Islam that are responsible for low FLFP.

The interaction term between being Arab, high oil dependency and high level of conservatism rates shows a large, negative, and significant association with FLFP as expected; hence, **H4 is accepted**. For example, it is estimated that being Arab, highly oil dependent and highly conservative is associated with a 37 percent decrease in FLFP. This result may provide further explanation along with the Arab culture for why FLFP is low in Arab countries compared to non-Arab Muslim majority countries. Furthermore, this result also provides explanation for why some (oil wealthy) Gulf countries such as Oman and Qatar have high FLFP where other countries, such as Saudi Arabia and Libya, who also have oil wealth have low FLFP. This suggests that in countries where females' employment is not encouraged or welcomed (due to the Arabic culture and high level of conservativism), females may also have high unearned income coming from the financial support provided by their fathers, husbands, or sons (due to being highly oil dependent while financial support is also justified by the Arabic culture). The combination of these two factors (restrictions or discouragement and financial support) creates an environment with lower incentives for females to participate in the labour market. On the contrary, in countries with high oil dependency and lower conservatism, females may face lower restrictions on their employment and even if their unearned income is high, they have more freedom of choice than those females who live in highly conservative countries.

It is important to mention that for this interaction term (Arab × High conservatism × High oil dependency) the percentage of countries falling under this classification is 6 percent (three countries). This is a small number. However, in this study we needed to provide an estimate for the impact of this dummy variable on FLFP regardless of the number of countries involved. We run a robustness check using a second measure of social conservatism (see appendix A p.148 for more details). When this alternative measure is used, the percentage of countries covered by Arab × High conservatism × High oil dependency is around 18 percent, and our findings are robust to the change in measurement (see appendix A Table A.4 for countries classification and A.6 for regression results).

Overall, the original contributions of this study can be summarised as follows. There is a positive association between religious diversity and FLFP in both Arab and non-Arab Muslim majority countries. All other relevant factors considered – differences in FLFP between Arab countries and non-Arab Muslim majority countries can be attributed to Arabic culture. Furthermore, in terms of differences in FLFP within Arab countries who are highly oil dependent, we found that being highly oil dependent has a positive association with FLFP, but only if this country has a low level of conservatism. However, we found that FLFP is negatively and significantly impacted when the Arab country is considered as highly conservative as well as highly oil dependent.

3.5 Findings' consistency with theoretical predictions and policy implications

All of the important findings in this study are consistent with predictions from economic theories discussed in the context chapter (Chapter 2). First, the negative impact of inequality in education on females' participation in the labour market is consistent with human capital theory. Low education for females compared to males, implies relatively lower levels of human capital amongst women which hinders their chances of being employed, as discussed in the Chapter Two. Second, high oil dependency, also discussed in Chapter Two, is associated with increased labour demand and labour income for men which may affect females' employment decisions. The overall effect of the development of the oil industry depends on the individual choices as well as on intrahousehold decisions. This can clearly explain why the impact of oil is different in countries with higher levels of social conservatism. Whilst each female in countries that are high oil dependent face similar scenario when making employment decision. Their eventual employment decisions and outcomes depend on range of factors, not only their preferences. Female labour force participation can be influenced by the social expectations or based on the social and cultural norms surrounding those females. Third, the positive impact of religious diversity on FLFP is consistent with insights from behavioural economics. Employment choices are impacted by what people believe, and how strong these beliefs are in each of these countries, which, in turn, affect how individuals view the importance of females' employment. Thus, this study, reflecting the heterogeneity of the Muslim world - provides a better account for the impact of factors affecting FLFP.

Accordingly, policy makers who target an increase in FLFP in these group of countries (Arab and non-Arab Muslim majority countries) should consider these differences. For instance, a successful policy in one high oil dependent country may not be successful in other oil dependent countries. This is due to the differences in the level of social conservatism and differences in the religious diversity levels. For instance, empowering females through increasing their presence in the parliament would be successful in Saudi Arabia or in Qatar but will not be successful in Iraq or Iran. Policy makers in highly conservative countries should focus on creating job opportunities that enable females to reconcile their household duties and work duties within that context. This can be done by providing for instance, more part time jobs, jobs that can be done remotely, jobs with decreased working hours for married females, or those with children.

3.6 Conclusion

Informed by an economics framework, this study investigated the possible factors that impact FLFP using panel data for 18 Arab and 16 non-Arab Muslim majority countries over the period of 1991 to 2018. In this study we did not treat Muslim (Arab and non-Arab) countries as if they were homogenous. Additionally, we did not treat all Arab countries that are highly oil dependent as homogenous; rather we differentiated between them based on their conservatism level. This approach allows for better understanding of the variations in FLFP between these two groups of countries and within these Arab countries. Based on the empirical results, diversity in religion has a strong positive association with FLFP. This suggests that FLFP is high in countries where people live amid different combinations of religious thought. Furthermore, apart from Islam, one of the possible factors that results in a lower FLFP in Arab countries compared to non-Arab and Muslim majority countries is the Arabic culture. The Arabic culture could magnify negative perceptions or beliefs towards females' employment and hence cause lower FLFP in these countries.

Being Arab, highly oil dependent and with a high level of conservatism has a large and negative association with FLFP. This suggests that this combination of factors result in low FLFP. High conservatism and Arabic culture may suggest high levels of restriction and discouragements on FLFP, and the high oil dependency would result in high unearned income for those females represented by the financial support given to those females by their male relatives, which

ultimately decreases females' motivation to work and therefore their participation in the labour market.

Shedding light on the differences between Arab and non-Arab Muslim majority countries, and differences within Arab countries in terms of FLFP is a very important implication of this study. These two groups of countries should not be treated as homogenous just because they are Muslim. In particular, studies that tackle the issue of FLFP should recognise the difference in the impact of factors such as oil dependency and conservatism levels in order to provide a better and clearer understanding of the research issues.

Chapter 4: The Impact of Social and Cultural Norms on Non-Employed Females in Saudi Arabia

4.1 Introduction to Study 2

As discussed in Chapter 2, the Saudi labour market is affected by gender inequality. Females have lower levels of participation in the labour market and have higher unemployment rates than males (World Bank, 2021). Study 1 in Chapter 3 has explored empirically the relationship between social and cultural norms and FLFP. This study investigates this relationship in further detail; it takes the perspective of Saudi females, and considers the barriers faced by non-employed Saudi females toward their employment. The study mainly focuses on how social and cultural norms may impact gender inequality by conducting in-depth interviews to gather insights from the lived experience of non-employed females. 35 interviews were conducted with non-employed Saudi females to explore their perceptions of social factors that influence their employment status.

Thus, this study enhances the empirical investigation conducted in the previous chapter by employing a qualitative methodology. This method facilitates the exploration and investigation of concealed aspects inaccessible through quantitative methods. Through exploring of females lived life experience. Qualitative approaches help in addressing the "Why" and "How" questions, thereby enriching understanding of how social and cultural norms shape females' attitudes and perspectives regarding employment.

This chapter is structured as follows: the first section presents recent studies conducted in Saudi Arabia that focus on the barriers faced by females in the labour market. This is followed by a discussion of methodology, composition of the interview sample, the thematic analysis of the data collected. This is followed by a section explaining the findings' consistency with theoretical predictions discussed in the context chapter and assessing policy effectiveness in light of these findings. Then the chapter concludes with the main implications of the study.

4.2 Recent Literature concerning Studies conducted in Saudi Arabia

Social and cultural norms are often thought to generate inequality in the labour market in Saudi Arabia. AlMunajjed (2009) argues that, despite the growing awareness of females' economic roles, stereotypes and traditional gender norms are widespread within Saudi Arabia. Alattas (2016) explored the effect of socio-economic factors on females' employment outcomes, using a questionnaire with a sample of 402 unemployed females and 366 employed females in Jeddah, a city in Saudi Arabia (West). The results indicated that the factors associated with higher female unemployment include the presence of younger children and higher husband's income. The study concludes that government policy should pay attention to increasing female labour participation through more family-friendly policies that would contribute positively to female employment.

Alfarran et al. (2018), focuses upon unemployed females to explore institutional barriers to Saudi females' employment in the private sector, as well as evaluating the effectiveness of a government programme aimed at addressing this issue. Researchers conducted in-depth interviews with 13 unemployed females in Jeddah. They found that women believed that the available jobs were unsuitable for them, either because of the mismatch between the job-specification and their qualifications, or because the jobs were in a mixed-gender environment. Furthermore, some found that low wages and long working hours offered by the private sector made the jobs unviable financially. Females frequently talked about a mixed working environment and its impact on their unemployment. The findings seem to imply that governmental programmes to enhance Saudi females' employment generated very limited impact.

Syed et al. (2018) conducted 21 in-depth interviews with employed Saudi females and analysed the factors that impact gender equality at different levels. At the macro level, they identified barriers to female employment related to religious and cultural norms alongside traditions, such as: the guardianship system, the priority of employment for men and the habit of assigning household and childcare responsibilities to women. Wasta, the social convention establishing that workers are employed on the basis of their social network, rather than their qualifications and skills, also adversely affected females' career development. Females might need the

support of a male family member, as males usually control key networks that facilitate access job vacancies and career progression. At the micro level, the lack of family-friendly workplaces and childcare policies (maternity leave and day-care facilities) hinder female employment. Furthermore, gender segregation in organisations may require major restructuring of the buildings (employment locations), which generate additional expenses for employers and therefore limits female employment. Issues related to the individual identity, social class and internalisation of gender and social norms by females are also relevant. Saudi females internalise social and cultural norms and, as a consequence, their actions are in line with these norms.

All of these studies attribute low female labour market participation to social and cultural barriers. Some contributions attempted to describe the social barriers that Saudi females face from their own point of view, and based on their observations (AlMunajjed, 2009). Some other studies empirically tested different social factors that may have an impact on female employment (Alattas, 2016). The current study will build on these previous contributions to this literature in the following ways: (1) it will conduct a relatively larger numbers of interviews, generating in-depth insights; (2) it will focus mainly on unemployed females; (3) it will focus on the impact of social and cultural norms, and (4) it will identify differences in females' perceptions and link these to their background.

4.3 Methodology

This research is exploratory, and it investigates non-employed females' perceptions of social and cultural norms. Exploratory research can be defined as activities "conducted into a research problem or issue when there are very few or no earlier studies to which we can refer for information about the issue or problem" (Collis & Hussey, 2009, P. 5). In this way, this study will provide a more comprehensive answer to the question of how and why those social and cultural norms have led to low attachment of females to the labour market. A thorough investigation on how each individual respondent perceives social and cultural norms enables a better understanding of how females' decisions are influenced by these norms. The study will shed light on the effect of factors, such as marital status, age, level of education, alongside the neglected factor of tribalism, on females' attitudes toward employment and their perceptions of social norms in Saudi Arabia. Findings from this study will be examined in terms of its

consistency with the predictions of various economic theories discussed in the context chapter. It will highlight important policy implication in terms of increasing FLFP in Saudi.

As Creswell (2013) argues, in order to obtain full and deep understanding of a social phenomenon, the use of a qualitative method is the optimal approach as it assists in exploring and investigating hidden areas that cannot be reached if a quantitative approach is used. A qualitative method would contribute to understanding by addressing "Why" and "How" which form the main questions of this study. Furthermore, qualitative interviews give the opportunity for the researcher and the participants to clarify their point of view, and it also allows the researcher to analyse the ideas and thoughts of participants, which in turn helps the researcher to describe their situation with better understanding (Williams & Heikes, 1993). Interviews are an effective approach in collecting data about beliefs, views and perceptions. They also allow the interviewees to elaborate, especially when probed through open-ended questions. Therefore, this study applies a qualitative method (interviews) to identify and analyse the relationship between low female employment and social and cultural norms, with emphasis on the impact of the male guardianship system that exists only in the Kingdom of Saudi Arabia - See Appendix B, Table B.1 and Table B.2 for the participant consent form and the interview questions. Ethical approval was granted by the University of East Anglia in July 2019. The researcher conducted a pilot study with 10 participants in order to test the questions and to practice interviewing skills. After the pilot study, additional questions were added and some of the questions were removed. For example, a question about region of provenience was added to explore any differences in attitudes and perceptions of females.

Primary data were collected in this study by conducting semi-structured interviews with 35 non-employed Saudi females. Interviews were conducted through phone calls, as well as face-to-face. Females were selected through two channels. The first group (12) of non-employed females was chosen through a snowball sampling technique, which has an advantage of obtaining easier access to participants that might otherwise be difficult to reach. This was started by identifying potential participants (from the researcher's social network, targeting females with low level of education); participants were then asked if they could provide information about other potential participants, and so on. This procedure was re-iterated until 'saturation' was reached, implying that, at this point, no additional information would emerge from the data (Patton, 2002).

A second group (23) was included to ensure covering perceptions of females who have different levels of education. Those non-employed females were chosen randomly from the Nora University (which is located in Riyadh) database for graduated females from the business school. Females were contacted through phone calls and asked to volunteer and be interviewed. Overall, 29 interviews were conducted through phone calls and 6 were face to face interviews.

Interviews were recorded with the permission of the interviewee and transcribed. Thematic analysis was then employed to reduce and summarise the data for interpretation (Marshall & Rossman, 1999). This was applied through the process as follows. First, organisation and understanding of the data was conducted through multiple readings of data transcripts. This step is regarded as the most important in thematic analysis. The second step, generating themes, involved finding patterns in the data. According to thematic analysis research principles, each category or theme should link and have common patterns with the data. At the same time, no theme should overlap with other themes. The third step focused on coding the data to ensure (i) appropriate grouping or classification to all data, and (ii) easier usage when making examples, such as grouping females based on their marital status and their ages. The fourth step consisted of establishing connections amongst themes and categories (what all the gathered data imply and mean). As this study applied an inductive approach, the process started with observations to develop a more general theory addressing the research questions. In the fifth step we analysed the data and considered alternative explanations for the patterns found in order to offer a reasonable and comprehensive answer to the research questions (Marshall, 1986). To improve consistency, the researcher also ran a cross-check of coding on a sub-sample of interviews with another PhD student who is conducting similar research.

4.4 Composition of interview sample

Table 4.1 displays the main characteristics of the sample. It shows that the majority of participants are single, educated and young. The majority of females in the sample view religion as “very important” in their life’s and they have neutral position with respect to the importance of social and cultural norms. The majority of participants are from the Centre region, and they stated that they belong to one of the Saudi tribes (See Appendix B, Table B.3 for more details about the interviewees).

Table 4.1 Descriptive statistics of the sample

Variable	Percentage
Marital status	
Married	34
Single	66
Education level	
University education and higher	77
High school education and lower	23
Age	
20-30	80
31-40	20
Importance of religion	
Very important	94
Important	6
Importance of social and cultural norms	
Very important	3
Important	31
Neutral	43
Not important	23
Region	
Centre region	85
Other regions	15
Belong to tribe	
Yes	68
No	21
Prefer not to answer	11

4.5 Themes

4.5.1 Leaving school early

This theme identifies factors that led interviewees to discontinue their schooling, with subsequent consequences for their employment status. The positive relationship between education and employment is well documented (Ince, 2010), education increases the chances of finding jobs and vice versa. Most females interviewed who reported low education level were aware of the negative impact on their employment opportunities.

Some interview participants faced social circumstances that worked as the primary barrier for discontinuing their education. Interrelated factors were identified, such as early marriage, presence of children, and parents' authority, acting either in synergy or isolation to cause some disruption to education.

Getting married at a very young age (for example <16 years old) and being responsible for the household would be difficult to reconcile with studying. Leaving school early was either based on personal decisions or on parental pressure, as stated by one of the interviewees:

"I really regret my decision regarding discontinuing my schooling and I would not have done so if my parents had not encouraged me to leave school." (Haya, married)

Furthermore, some women were forced to discontinue their education. Muna left school early due to her father's wishes - he needed her to stay home to care for her ill mother.

"I always wanted to continue my education, but I could not. When I was in the 7th grade my mother was in a very critical medical situation after a car accident. She was afraid to stay at home by herself in the mornings, so my dad decided to take me out of school in order to take care of her. After three years or so she became better than before, so I got married, and of course it was difficult for me to continue my studies." (Muna, married)

Kadi, one of the married females with a primary education level, told of how her schooling interruption was based on her parents' decision.

"When I was 11, my parents stopped taking me to school in order to help my mum taking care of my grandmother. My mother tended to do that with all of my sisters: we take turns in taking care of our grandmother, so every one or two years one of us stays home and helps my mum." (Kadi, married)

When she was asked why she did not continue her schooling at a later time, she said that she got married and became very busy with the children and house responsibilities.

In the context of parental authority, Shooq, a single female, graduated with a high school certificate, who has never been employed, narrated her story saying that:

"I am one of four girls and two boys. I am the youngest, my mum depends on me in everything; she does not want me to continue my education. She also refuses that I get employed or get married. I applied for an online university, so I can study remotely and at the same time can care for my mother, but unfortunately, they did not accept me." (Shooq, single)

When she was asked about the impact of her education level on her employment, she said,

"I totally understand that girls like me with this level of education have limited job opportunities and may have lower salaries, but I am not greedy, and I want any job that my mother agrees on." (Shooq, single)

Although she has been forced to discontinue her education, this 29-year-old single female tried to challenge her situation and thought about registering herself at the Saudi Electronic University.

Deem believes that marriage at early age was not an issue. However, pregnancy and caring for children was the major barrier that stopped her from continuing her education.

"I think mothers of very young children, like me, may find it difficult to focus on their children and their studies at the same time. I have two children and I was waiting for them to grow up more and to become less dependent on me, so I can continue university education. Unfortunately, when I applied for university they did not accept me, and now I am trying to take a diploma certificate in any major. At least I study something and increase my chances in employment rather than sitting at home." (Deem, married)

These interviews illustrate the social circumstances associated with leaving school at an early age and the links with marriage and motherhood. They demonstrate that household responsibilities and childcare have prevented these respondents from continuing their education. As a consequence, their employment chances have been limited and their employment decisions and opportunities were also affected. For some females, acknowledging that divorce or marital instability impacts females more than males in terms of economics outcomes (Leopold, 2018) which may motivate or encourage them to seek security by gaining a higher level of education to increase their employment chances in the future. The relationship between early marriage and education interruption was identified in the 2005 report from the United Nations Children's Fund (UNICEF), which analysed data for 42 countries. Furthermore, the accumulation of human capital can be negatively affected by an uneven distribution of household responsibilities for married females (Leopold, 2018).

4.5.2 Aversion to a mixed working environment

A second theme focuses on restrictions on females' employment that are either set by females themselves or by their families and may be reinforced by the types of job available. As discussed in earlier chapters, some females or their families have reservations about the type of jobs that they would be willing to apply for, such as working in mixed gender environment.

Parental factor

Working in a single sex environment was a restriction on employment set by families that was most frequently cited by the interviewees.

Samar, who has four children and has been non-employed for 12 years, was very happy when her application was accepted to work as a police officer. But she could not continue her employment paperwork when her father discovered that she would be working with men and would be trained by men.

Similarly, Nuha indicated that the restrictions imposed by her father were the main reason for her non-employment over the past three years. Her father is concerned about his reputation among his tribe.

"Every time I find a job, my father does not like it…. When I find a job, he always makes sure that there are other females from our tribe employed in similar jobs. Thank God, recently one of my relative's daughters (from my tribe) was just employed in one of the banks. My father was against the idea that females work in banks because there are always connections with men, but after he heard about this girl, he started to change his mind and now I can apply to bank jobs especially because my major is more related to these kinds of jobs." (Nuha, single)

The interviews with these females make it possible to identify what drives fathers' refusal of their daughters working in a mixed environment; they mostly care about what is more acceptable to society. Interestingly, females who place a greater value on their fathers' opinions and attitudes regarding their employment options, their parents share similar characteristics. Aside from the fact that they all have been non-employed for more than a year, their fathers and mothers have low education (either primary or elementary education level). Parental education levels may have a role to play in shaping their way of thinking and feeding their concerns about what is socially acceptable. This is consistent with Elamin and Omair (2010), which finds that males that are more educated have less traditional attitudes toward females' employment.

Some fathers are prepared to accept their daughters working in a mixed gender environment under certain conditions, such as working in large and prestigious companies.

"Although my father prefers that I work with females only, he said that if I can find a job in Aramco or Sabic (large petrochemical companies) he will approve it. He believes that working with Saudis always brings problems as they may misunderstand females' moves which will impact their reputation. My father has worked with Western people before, and he knows what he is talking about. He saw how they respect females and how they treat them. He believes that Saudi men are not used to interacting with unrelated women and that is why working with them may bring problems." (Noor, single)

Noor's father's opinion is different from the others; her father has a university degree and has work experience with Western people, and that may have an impact on his attitude toward a mixed working environment. This finding is consistent with those reported by Murenga et al. (2014) in Kenya who find that fathers who have high education levels, or have experienced different cultures, tend to be more open-minded in terms of their daughters' education choices. Similarly, Alwedinani (2016), who interviewed 100 Saudi females, also reports 'that fathers with higher degrees are more likely to accept their daughters working in mixed environments or in roles that might otherwise be seen as socially unacceptable.

4.5.3 Male Guardian

This theme refers to the importance of obtaining the permission of the male guardian and discussing job requirements with him. Male guardians might be fathers, brothers or husbands. A significant number of interviewees indicated that consulting with their male guardian is an essential step when choosing or applying for a job.

Females who believe in the importance of consulting with the male guardians have different and interesting reasons for doing so. For some, the attributes of guardians, such as their age and life experience, wider social network, and knowledge of regulations, have led them to believe that their male guardians may help them form better decisions regarding their employment. Others point to the positive encouragement they will receive from their husbands and fathers if they give their permission for the women to do these jobs.

"I hate the idea of doing anything without consulting with my father. I feel more relaxed and reassured if I discuss anything with him … especially anything related to my studies or my employment." (Mashel, single)

"Some females should not be given full rights to choose their jobs… You know why? Because some of them, and they are the minority in Saudi, do not respect themselves. I know some females who work in shopping centres and spend their day talking with men and their faces full of makeup and you can smell their perfumes from miles away…" (Asma, single)

Muna said that even though she has been searching for a job for almost four years, she will continue to wait until she finds the "right" job for her.

"Are you serious?! Of course, I have to ask my husband about his opinion about any job opportunity. I don't want any trouble with him, and I feel that God will reward me for being patient for all these years and for listening to my husband's words." (Muna, married)

The majority of married females pointed to the role of their husbands' opinion as a major restriction. Rahma, who has been non-employed for about 10 years, has managed to continue her studies after her marriage, and after having 7 children. However, when she finished her studies and graduated with a certificate of honours in Physics, she could not find an "appropriate" job that satisfied her husband's conditions.

Another married female said that her husband prevents her from working in any job that may require her to be outside the house for long periods of time. He prefers that his wife is at home before him, so she can prepare the food and take care of the children when they come back from school. These married females believe that their husbands constrain their employment opportunities. Sometimes husbands do not openly discuss their wives' employment with them, but rather impose restrictions in order to prevent them from thinking about employment.

"I have been non-employed for more than 12 years. My husband is okay with me working in a mixed working environment as long as I have my own office, but every time I apply for a job, he makes me feel reluctant, he makes me think about how tiring it will be and how I am going to manage the house and children's duties in addition to job responsibilities. That is what made me think of waiting for the annual registration for the educational jobs, as these jobs will be very convenient for me, for my husband and the rest of my family." (Samar, married)

Another married female, who holds a high school certificate, believes that obeying her husband and considering his opinion regarding her work means that she is following the Islamic rules

and therefore she will be rewarded by God. Her husband prefers that she works as a secretary in females' universities or schools only.

"When I search for a job, I have to make sure that it satisfies my husband's conditions. He does not want me to work with males and I totally understand his point of view. The reason why I am not employed yet is that I limit my search for female-only working environments" (Wafa, married)

On the other hand, a small number of females expressed their strong objection toward the need for consultation with male guardians. They believe that Saudi females should be given full right to choose their jobs and their careers.

"Come on, it will be only a few years and the term of 'male guardian' will disappear and you will see. I think Saudi females already know their limits and know what a respected job is and what is not." (Ebtisam, single)

"Look and I have to be honest, I do not like doing anything that is different from what others used to do. I like to walk in the same direction as most people do and not in the opposite direction, and my family knows that about me, and they know that my employment choices are similar to any normal Saudi girl in my age. I am not going to be a dancer or musician… Therefore, my employment choices concern me and me only." (Jwaher, single)

From these interviews, it can be seen that having to consult with male guardians, whether a father, brother or husband, restricts female employment. Female employment preferences must be filtered by male guardians. This suggests that the guardians' preferences must be given priority; as a consequence, opportunities might become very limited because of this need to satisfy a double set of preferences.

Interviews with married females suggest that husbands play a key role in limiting their wives' employment. Either directly or indirectly, husbands are not supporting their wives' employment. Regardless of whether those females agree with their husbands' opinions, they tend to obey their husbands in order to maintain good relations. This finding is supported by several studies on the topic, which found that wives' employment can be strongly predicted by their husbands' attitudes (Morgan et al., 1966; Astin, 1967). Since Saudi Arabia is a conservative country, the discouraging attitudes may not be surprising. One of the explanations offered is that husbands may feel that their masculinity is threatened by their wives' work and

their position as breadwinners will be lost (Staines et al., 1986). Hence, those husbands are protecting their positions in their families by following the traditional model that presents females as homemakers and males as breadwinners. A study investigating the role of men's attitudes toward working women found that women's participation is on an upward trend in countries in which men favour the idea of women joining the labour market (Antecol, 2003)[7], and vice versa.

4.5.4 Self-imposed restrictions

All females were asked what they would choose, if faced with the choice of working with females only or in a mixed-gender environment. The vast majority of females chose working with females only. One of the married females said,

"I limit my job search to jobs that do not involve any work with men. If I work with women only, I will not be worried too much about my moves and my words. You know how Saudis may understand, if a female looks at one of them or even smiles, he will think that she is flirting with him and she likes him. I like to work with females only because I feel more comfortable and more relaxed." (Nora, married)

Other females agreed that working with females only is more comfortable for them.

"Even if my father has no problem with me working with other men, I prefer not to, because I do not like to wear my niqab (face cover) all the time. I would have a headache all of the time and I would not be productive at all in my work." (Jwaher, single)

Similarly, Eman who worked for about one year in a mixed-gender environment, had to quit her job because she did not feel comfortable working with men.

"I was working as a sales manager in one of the malls. I thought I would be able to get used to it (working with men) but I just could not. There is always misunderstanding between myself and other male employees. I like to look good and take care of my appearance. I always put on perfume and things like that, but some men working with me think that I am looking for attention from them, and that annoyed me. I simply quit because I could not take it anymore." (Eman, single)

[7] Antecol (2003) included data for 1994 for 23 developed countries drawn from international surveys. He used a set of questions about men's attitudes toward family and gender roles.

Wafa is one of the married females who was born and lives in a small town near Riyadh city. She believes that avoiding working with men is a religious rule and therefore it should be followed without question.

"I cannot understand how those females who work with unrelated males can do that. They have no fear of God, their voices can be heard, and men can smell their perfumes and it is prohibited in Islam. If I have to work either I work with women only or I do not have to at all." (Wafa, married)

Some express no concerns about working in a mixed-gender environment. One of the females indicated that in a female-only working environment the level of jealousy and competition is very high, and therefore working with men might be more convenient. In addition, some females believe that males are better in training and helping females to obtain the necessary skills for the job, unlike female workers.

Another interesting reason mentioned by the group of interviewees who have no concern working with males is the high salaries compared to single gender working environments. They believe that the government tends to do that on purpose, in order to attract more females to these kinds of jobs. One stated:

"*I don't know if someone notices that in mixed working environments, the salaries are higher and the tasks that must be done by females are easier." (Ebtisam, single)*

Those females who prefer working in a mixed working environment tend to be younger; they are all are single, and their parents have better levels of education compared to those females who refuse to work in a mixed-gender environment.

4.5.5 Perceptions of new job opportunities

Many interviewees believe that some job opportunities that have recently become available to females, such as cashiers and reception staff in restaurants, are in a mixed working environment, and, as such, are not considered suitable for females for religious and cultural reasons. They view these as humiliating jobs for females. Deema, who lives in the west region of the country, has a father with a PhD in religious studies. According to Deema,

"These kinds of jobs are literally offensive to the dignity of females. It is like they are using females and taking advantage of them. Some employers use females and employ them just to attract more customers. I am against any work that involves being exposed to unrelated men whether men customers or men employees because some employers have bad intentions." (Deema, married)

Some females with a higher level of education expressed their strong personal objection to these jobs. They believe that females with a high level of education should not work in these environments, unless they seek work experience or to obtain certain work skills, hence their work should only be temporary. Wedad, who holds a university degree, said that:

"I studied hard and went through very hard circumstances during my studies, so I will never work in these kinds of jobs. You know how shameful it is to work in shopping centres, especially for a university graduate. I did not study hard to end up selling stuff or to be a reception worker." (Wedad, single)

Interestingly, a group of the interviewees believe that these jobs are designed for females who have low levels of education or have particular family circumstances that may force them to work there. Asma, for instance, believes that working in these kinds of jobs would be shameful for her and her family. She believes that females who are employed in these jobs have certain socioeconomic or demographic characteristics such as low income or dark skin.

"Those females are either poor and have no family to support them financially or they have low education levels, and their employment is necessarily … you can notice that most females who work in cashier jobs for example have dark skin and belong to a specific class of society." (Asma, single)

One interesting perspective is that females might only be employed in these jobs by concealing the fact from their family, because certain families would forbid that their daughters be employed in these jobs just for fear of their reputation.

"I see that females can work in these jobs if they need to, but they should make it as a family secret and no need that everyone in the family (cousins and so) know about it." (Samiah, single)

4.5.6 Children and household duties

This theme includes perspectives on how caring for children and household responsibilities hinder female employment. Most of the married females believe that childrearing requires spending considerable effort and time; therefore, they do not find it easy to combine work outside the house and childcare. Some of them waited until their children grew up but then felt that their employment chances became lower as they became older. A couple of females mention that it is difficult to combine housework, such as cleaning, cooking and clothes washing with employment outside the house.

Nora, who is a newly married female, stated that housework and cooking is time consuming, and she wishes that her husband would employ someone to help her with these duties.

"When I got married, I was not expecting that I would have to do all of this work by myself. We used to have a maid in my dad's house when I was single, and she does everything for me. I do not know how I can manage all of these duties with work responsibilities if I become employed." (Nora, married)

Similarly, Farah is a married female who is studying for a master's degree. She believes that combining studying with housework is a very difficult task and she is deferring her employment until she graduates and finds a job that allows her to afford employing someone to help her in the house.

Mothers stressed that caring for children forms a huge barrier to their employment and, consequently, they have strict conditions that need to be met, including short working hours and limiting their job search to daytime jobs only. As discussed in Chapter 2, school hours act as one of the constraints for mothers' employment, as the expectation is that a mother should be at home when her children return home from school. All of the married females interviewed strongly reject any job opportunities that involve working late (after 2 pm), or job opportunities that have two shifts. One of those married females, who has six children, said:

"I cannot leave my children to someone else to take care of them. They are my first responsibility. If I could not find a job that suites me as a mother, I do not have to be employed." (Haya, married)

Ghada, who has two children and holds a university degree, is married and had twins after her graduation. She postponed her employment until they were older and then found out that most of the employment opportunities, she was looking for asked for recent graduates.

"I thought it would be hard for me to work and look after the little ones as well - that is why I waited until they became two years old. But now all of the lecturer assistant jobs prefer recent graduates and every time I apply for these jobs they do not accept my application... I have to be honest; this job was my dream. I always wanted to work in a university." (Ghada, married)

It is clear that children and housework responsibilities have a significant impact on employment possibilities. None of the respondents ever mentioned their husbands' sharing housework or childcare responsibilities. This indicates that there is unequal distribution of these duties which can exclude women from the labour force or limit their involvement. Women are estimated to spend around 2.5 more time on housework than men in developed and developing countries (International Labour Organisation, 2017). In developing countries, several studies showed that the unequal division of housework limited women's access to labour market opportunities (Hirway & Jose, 2011; Floro & Komatsu, 2011).

4.5.7 Financial Dependency

This theme is concerned with the impact of the presence of an additional earner on females and their incentive to work at low levels of pay. Females show lower desire to work because their fathers and their husbands tend to support them financially. Most females claimed that males cannot be financially dependent on females as this is against the social norms in Saudi Arabia; however, it is acceptable for females to be financially dependent upon males. Most of the married females said that their husbands give them a monthly personal allowance, which makes them less committed to job-search activities:

"If my husband gives me enough money to support myself, and sometimes more than enough, tell me why I would go to work and wake up every morning." (Haya, married)

Similarly, one of the single females, who has a high school qualification and has been searching for a job for four years, mentioned that her father's financial support made her incentive to work very low:

"My father always tells me that I don't have to be employed to earn money because he will continue to give me money when I need it… That is what makes me feel that my employment is not that necessary." (Hanan, single)

All of the interviewees mentioned that they had received state support in the form of monthly unemployment benefits[8], at the time of the interviews 19 females out of 35 interviewees were still entitled to these benefits. Although none of the females mentioned that the unemployment benefits have affected their employment status, receiving this unemployment benefit (SR 2000 a month) may reduce their incentive to find work. For example, in Shooq's case, she mentions that she receives nearly SR 1500 every month from her family, and she is eligible for the unemployment benefit, together she receives nearly SR 3500 every month, which is higher than the minimum wage of SR 3000 set by the government. This could explain her low incentive to work.

Most married females indicated that their husbands give them everything they need, and they always tell them that they should not be worried about employment if they cannot find a job. In fact, two of those married females stated that they only started to search for a job after their husbands became non-employed (one retired and the other one was laid off). Furthermore, one of the single females also indicated that she never felt the need to be employed until her father retired and became sick.

The already low work incentives for Saudi women can be justified and reinforced by receiving financial support from their families (AlMunajjed, 2009; Doumato, 2010). Empirical studies conducted in Arab countries such as Morocco and Jordan found similar results (Verme et al., 2014; Chamlou et al., 2011). Using micro-level panel data, they found that female participation in the labour market is negatively impacted by marriage. This may suggest that presence of a husband discourages women form seeking employment and fosters financial dependency on their husbands.

[8] In Saudi Arabia, a Saudi individual is entitled to unemployment benefits (Hafiz) if the following conditions are met: aged 20-35, able and fit to work, should not be an employee in the government or private sectors, should not be a student or a trainee, should be residing in Saudi Arabia. The amount of subsidy is SR 2000 for a period of 12 months. After these 12 months if the individual is still not employed, he/she is entitled to a different form of benefits: SR 1500 per month during the first four months, then SR 1250 per month during the next four months, then SR 1000 per month during the next four months, which is the final disbursement (Human Resources Development Fund, 2019). It is worth noting that the average wage for females in Saudi Arabia is around SR 10000 in public sector and around SR 5000 in the private sector and the minimum wage set by the government is SR 3000 General Authority for Statistics, 2019).

4.6 Linking females' social background characteristics to their opinions and attitudes

In the previous section we highlighted how the preferences, and the choices of Saudi females are heavily influenced by social and cultural norms, which affect their employment status. However, when analysing and identifying similarities and differences between females' responses, it appears that there is a degree of heterogeneity in the way social and cultural norms exert influence on employment decisions and outcomes amongst the respondents to our interviews. Analysis across themes by demographic characteristics suggest that this heterogeneity can be explained by tribe-identity, marital status, age and level of education.

Tribalism

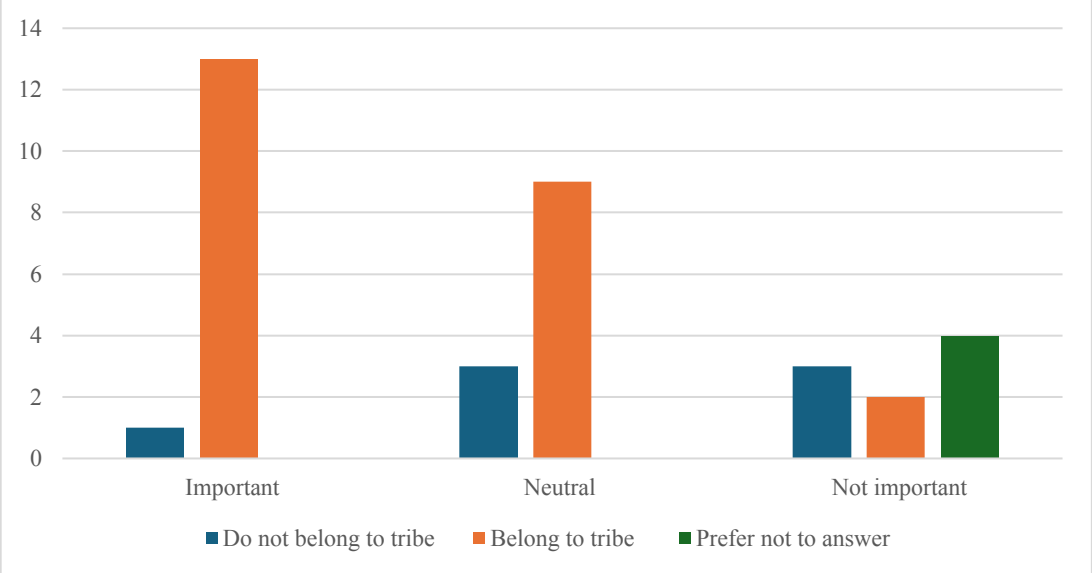
Females who believe in the importance of social and cultural norms, whether married or single, all have one common characteristic, which is belonging to a particular Saudi tribe. Being part of a tribe in Saudi Arabia necessitates abiding by all the tribe's rules and traditions as well as respecting and protecting the tribe's reputation. During the interviews, females from different tribal backgrounds consistently report their concerns about being judged by others. For example, they always mention that being employed in mixed jobs will make people talk about them, and that people will connect their choice to the way they have been raised, which will affect their family reputation within the tribe. Another example is related to working as cashier or seller in shopping centres: those females with tribal backgrounds refuse to work in these jobs because it is considered shameful or inappropriate for females. Consequently, they seek employment in professions that would not undermine their family's reputation; they are willing to prolong their search until they find a socially acceptable occupation. It is interesting to observe that some of those females do not hold respecting the tribe's reputation as a personal value, rather they are constrained by the preferences and the decision of their families.

When females were asked about the importance of social and cultural norms in their lives, females who belong to tribes were more likely to view them as important, regardless of their education levels and their marital status (Figure 4.1). Interestingly, only two females (Bushra and Sahar), who both belong to a tribe, indicated that social and cultural norms are "not important". Both are from the "South" region. They both have specific family circumstances that might contribute to their view – Bushra is estranged from her father and Sahar's mother is non-Saudi.

In terms of their social settings, Bushra's parents were divorced when she was 18 years old, and her father has no control over her life at all. Additionally, because she lives with her grandmother, and without the typical structure of a Saudi family, she might enjoy more freedom and more control of her own life and her own choices. She may also feel that she has no family reputation that she must care for or protect.

Sahar has a family background that could have resulted in her holding more liberal attitudes than the other females who belong to tribes. Although her father is Saudi, her mother is non-Saudi which may have a role in the formation of her personality and her identity (Knafo & Schwartz, 2010). Additionally, Sahar may evaluate the Saudi social norms from a different perspective because her father violated his family tradition by getting married outside the tribe, and to a non-Saudi woman. This also may suggest that her father does not place importance on the tribe's social expectations.

Figure 4.1: Intersection of importance of social and cultural norms with belonging to tribe



Source: data collected in interviews.

Marital status

During the interviews, married females were more inclined to adopt traditional views compared to single females. All of the married females, particularly those with children, were deeply influenced by social and cultural norms (Wise et al., 2010). They were more accustomed to being financially dependent and submitting to their husbands' will. This could explain the

longer duration of non-employment amongst married compared to single females (Marks & Fleming, 1998). Married females appear to adapt to their circumstances, attempting to reconcile their own and their husbands' needs. They identify with their roles in the family as being houseworkers. They view employment as a minor necessity. The majority of married females have no problem with being non-employed and being financially dependent. They believe this is supported by the law, religion and culture which makes their non-employment justifiable even if they remain outside the workforce for longer and longer periods of time.

In fact, married females (who have children) had the highest representation among respondents who ranked the importance of social and cultural norms in their lives, as "important". Having and caring for children may indirectly enhance the traditional character for "mothers" and therefore impact their attitudes. Wise et al. (2010) found that females become more traditional and have a higher tendency toward valuing social and gender roles when they have more than one child. This was attributed to psychological changes, which results in attitudinal changes to adapt with the "mother" role (Eagly & Wood, 1999). This could be the reason behind attitude differences between married females with children and other married females without children.

Age and education

Generally speaking, the combination of age and education was a determining factor for responses. In interviews, older women with lower levels of education expressed more traditional attitudes and a greater tendency to follow and respect social norms. Such females are limiting their employment chances by their own preferences (internalised social norms). For example, one of those females realised that a job opportunity for her level of education is limited; nevertheless, every time she finds a job, she considers her husband's or her father's opinions on that job. Some of those females stated clearly that they are willing to wait longer until they find a socially acceptable job. In fact, these females are facing double barriers toward their employment as, in addition to their low levels of education, they consider what is socially accepted and what is not.

In contrast, younger and better educated females were the only respondents who rejected certain social norms related to females' employment. For example, most of the females who disagreed with the norm of consulting with male guardians about job opportunities were younger and better educated. They also expressed more openness to the new jobs that have been recently created for Saudi females. Interestingly, very few females from this group

expressed a reservation about working in these jobs. If they rejected them, their rejection was not due to social or cultural norms but rather on their educational attainment, which should warrant better quality employment. These women often expressed scepticism about some of the social and cultural norms surrounding them, such as the pointlessness of consulting with a male guardian:

"It is the female who will be employed, not her father or her brother, so why should we (females) take their opinions?" (Sahar, single)

Furthermore, a high level of education may enable females to be more aware of their rights and their need to be empowered (Preston & Feinstein, 2004). Therefore, they might be more sensitive to any social or cultural norms that may take away their freedom. Additionally, one of the important differences between the responses of younger and highly educated females, compared to other groups of females, is their belief that there are other reasons for them not the employed. They link their situation to Wasta, job market requirements, and lack of jobs that are aligned to their qualifications.

The difference between these two groups was very clear when females were asked about whether they desire changes in social norms related to females' employment in Saudi Arabia. Younger and better educated females believe that changes are necessary. They mention that society's way of thinking is already gradually changing but it will take time for these changes to be observable. Those women mention the importance of trust and respect, in terms of how Saudi females already know their boundaries, and therefore their decisions should be trusted and respected. They argue that females should have full autonomy in choosing their job and that society should accept this. They also mention that social expectations can be changed because they are made by the Saudi society and Saudi people are able to create new social expectations. However, older and less well-educated females all agree on one point, which is that creation of jobs for females needs to be compatible with the Saudi social culture and respect the social values. In fact, one of the participants stated very clearly that if she would not accept to be employed in any of the jobs that are considered to be less respectable; she would prefer to be non-employed for the rest of her life.

4.7 Findings' consistency with theoretical predictions and policy implications

Findings from the interviews with the Saudi females are consistent with the predictions from economic theory as discussed in the context chapter (Chapter 2). First, one of the themes emerged from the analysis was the disruption to education that occurred for different reasons. This interruption resulted in females having low levels of education, and their diminished human capital is associated with lower chances of being employed and longer period of non-employment. These results were consistent with the predictions from human capital theory which state that more investment in training and education make individuals more productive, more likely to be employed and prone to receiving higher earnings. Moreover, some of the married females with children who hold bachelor degrees, have postponed their employment and this may cause them to lose their skills and reduce their incentives to participate in the labour market due to the long inactivity period after their university graduation. Second, according to labour supply theory, reservation wages could be higher for those females with children (or with younger children) and for those who have an additional earner within their families. Findings from the interviews were also consistent with these predictions. Those females experienced long unemployment spells comparing to other females who do not have children or to those who do not have financial dependency on someone in the family.

Accordingly, policy makers should consider specific policies designed for those females with high reservation wages. This can be done through providing childcare subsidies for any female worker with children, as this would act to reduce the reservation wages and encourage a higher number of females with children to work. As discussed in the context chapter (Chapter 2), there are policies designed only for females who work in the private sector, such as the policy "Day-care centres". For those policies to be more effective, the firms could be asked to provide childcare subsidies for any female worker with children, including females who work in the public sector. Based on current policy, firms must provide childcare centres if the number of female workers is 50 or more. However, small firms and middle-sized firms may not have this number of female workers. Hence providing childcare subsidies could be a more cost-effective policy than establishing childcare centres.

Based on the findings in this study, a large share of females has mention that childcare is one of the reasons that led them to postpone their employment. Hence, introducing specific policies

related to decreasing the number of working hours for females with children would be very beneficial and help in encouraging more females to enter the labour market. The Saudi government could benefit from the European countries' experience in increasing FLFP through the generation of part time jobs. This has been a successful approach for fostering females' attachment in labour market, particularly those females with children (OECD, 2022)

Findings indicate that there is a large share of Saudi females who do not find employment in private sector attractive, due to the culture of operating in a mixed gender environment. Various reasons were mentioned by those females to justify their reluctance. For instance, they feel shy, less confident, expressed fear of dealing with unrelated men, and they care about their own and their family's reputations. Thus, the introduction of policies that encourage females work in the private sector did not change those females' attitudes toward working in this sector. This could be due to lack of enforcement of these polices. For instance, as per regulation, separate and comfortable workspaces should be provided for female workers. Some firms and organisations may not comply with these rules, or it could be that broader society may not realise that these firms provided these workspaces. The same argument can apply to the other policies. For instance, providing childcare and transportation. Some females mentioned that there are long and complicated procedures which are needed to be fulfilled in order to benefit from these programs (Albelali, 2020). The policy makers should ensure that every aspect of labour policies and reforms are implemented and evaluated. Introducing policies to increase female participation in the labour market is a positive and important step, however, making sure that these policies have been implemented as planned is most important. Evaluating, monitoring, and modifying policies and reforms based on the feedback and based on the needs of the market is a crucial process to ensure policy effectiveness. It also essential in order to assess how well these policies deliver improvements in female employment.

The government should not force firms to hire Saudi females, instead firms should have the choice between a Saudi male or Saudi female. According to the tokenism literature, token refers to a group of people who are numerically minority in the group in which they belong. This occurs when a female employee is employed solely because of her gender in order to demonstrate anti-discrimination efforts, even if her qualifications are not sufficient for a male-dominated profession (Riemer, 1979). Employing females in a workplace where the majority are males may lead to negative work experience for those females. For instance, this may lead to lower chances for females being promoted. Compulsory recruitment prescriptions signal that

the focus is on increasing female employment rather than focusing on the value and the contribution that the Saudi female adds to the economy. Employers may not trust the productivity of a female worker, and this may lead them to hire male workers to do the job. Accordingly, hiring female workers is only done to fulfil policy requirements. Compulsory recruitment might be beneficial at the early stages of introducing the policies, as it gives females the chance to show their ability and productivity. However, after a certain time, it should be removed. Some females mentioned that they felt that female employment in restaurants and receptions was 'decorative' and that those females were not contributing to the job assigned to them, as they should be.

Knowing that females care about social acceptance, the findings suggest that policies targeting institutions would be effective. Holding awareness courses not only for the females who wish to participate in the labour market but also for those who females care about their attitudes (their fathers and brothers) may be effective in challenging informal institutions. This is important in order to make structural changes in formal and informal institutions that eventually should lead to structural changes in the labour market. These courses ought to emphasise the significance of women's rights and their diverse roles in society. These courses should clarify that women have roles beyond just being homemakers.

4.8 Conclusion

This study explored possible barriers for females' employment in Saudi Arabia. In light of economic theories predictions, the aim of the study was to understand the relationship between social and cultural norms on one side, and female employment in Saudi Arabia on the other, by exploring females' perceptions of social and cultural factors that influence their employment status. Furthermore, the study aimed to shed light on the effect of marital status, age, level of education, as well as tribalism, on females' attitudes toward female employment and perceptions of social norms in Saudi Arabia. Exploring how these factors impact females' economic decisions which is their employment. In order to achieve this aim, 35 interviews with non-employed Saudi females were conducted. Respondents came from different educational levels and different social backgrounds, with differences in age and marital status.

The study found several possible explanations for inequality in the labour market. Different factors impact females' non-employment in Saudi Arabia, such as low levels of education, females' aversion to mixed working environments, and females' financial dependency, which has resulted in discouragement for some females.

The findings of this study show that Saudi females are strongly affected by social and cultural norms. However, the impact of social and cultural norms on female employment is not homogenous. The findings of the study reveal that females who belong to tribes, are married, are older, or poorly educated, are the ones who are most significantly influenced by social and cultural norms, and therefore they may have a longer duration of non-employment. Those factors, either collectively or individually, have a great impact on those females' attitudes and perceptions.

The findings of this study have a number of significant and important implications for policymakers in Saudi Arabia that need to be considered in order to increase females' participation in the labour market. The recent initiatives by the Saudi government to change some of the social and cultural norms in general and those related to females' employment in particular, is showing limited results. The Saudi government is attempting to empower females and to increase their participation in the labour market by generating more job opportunities for Saudi females in new fields and in new specialisations. For these policies to be successful, some of the social and cultural norms that are embedded in Saudi society must change. Changing Saudi social and cultural norms might be difficult and requires well-thought-out policies. One of the possible reasons for the limited impact of those reforms and measures that target females' employment, is that all the changes are produced at once and implemented at a very fast pace. Changes in societies' norms need to be gradual in order to avoid society's rejection. Some of these policies, if implemented too hastily, may create backlash. In this study, although some younger females show more liberal attitudes and perceptions, they still hold some of the traditional attitudes toward female employment.

The study has policy implications. First, most females expressed their unwillingness to be employed in less attractive jobs – jobs in the private sector that involved mixed working environments and long working hours. Those interviewed feel that working in this sector may imply sacrificing their family's reputation and sacrificing some of their available time that needs to be spent with their families and children. The study suggests that this needs to be compensated by offering higher wages.

Policymakers need to take into consideration the social and cultural norms that may impact females' employment decisions. They should consider that, when it comes to increasing females' employment, there is no "one size fits all" policy that can be applied or followed. What other countries implement to enhance females' employment might not work effectively in such a country as Saudi Arabia.

The vast majority of Saudi females prefer to work in the public sector as it usually offers jobs that are compatible with the social and personal preferences for those females. Hence, policymakers should consider making the private sector more attractive to those females. This can be achieved by reducing working hours and provide fully segregated working environments for females. Saudi females are expected to wear their head and face cover during working hours if operating in a mixed gender environment. Providing a gender segregated environment would allow them to work at ease. Of course, this would also enable females' families and their male guardians to encourage and support females to work in the private sector.

Another recommendation for policymakers is to consider the creation of part-time employment opportunities for females. This option might be less expensive and more feasible. Part-time employment has been found to have a positive impact on increasing females' participation in labour market. Some countries – particularly European countries – tend to utilise part-time employment policies in order to increase labour force participation and decrease gender inequality in the labour market. In the Netherlands, for instance, which placed high in the rankings of gender equality in the labour market (Global Economic Forum, 2020), 66 percent of females work in part-time jobs.

Another important implication for this study is related to the definition of female unemployment in Saudi Arabia. In fact, based on the interviews with those females who consider themselves as unemployed, it appears that their self-definition is not consistent with ILO or other definitions of unemployment. Most of those females become discouraged for various reasons and therefore they have ceased their search for work. As a consequence, these females should not be counted as unemployed as they are not pro-actively searching for a job. Counting them as unemployed overestimates the number of unemployed females in the country, biasing labour market indicators. Thus, considering the conservative nature of Saudi Arabia, the definition for female unemployment needs to be revised.

One limitation of the study is that the number of females who came from different regions is very small. Having access to interview participants from different regions would help in identifying similarities and differences in perceptions and attitudes related to employment across regions. There are hundreds of tribes in Saudi, however, based on the number of their members, there are 28 tribes that can be considered as the most prominent (Mineta et. al., 2021). In this study, there are 24 participants who belong to a tribe. In terms of representativeness of the tribes, there are 17 females, each of them holds different tribe's name, hence, we can say the study sample could be representative (as 7 of females shared same tribe name). With that being clarified, results still need to be taken with caution.

For future research, an empirical analysis of data from female jobseekers' databases in Saudi Arabia could reveal interesting insights about the determinants of Saudi females' unemployment. For instance, it could highlight the impact of females' educational specialisations, provenience, and duration of job search. Most of the studies that tackle the issue of female employment or unemployment in Saudi Arabia have employed qualitative methods, such as interviews, due to lack of data availability. Hence, the Saudi government should put more focus on collecting reliable data for analysis and make these data available for researchers. Conclusions from empirical studies would produce guides about how to deal with low female participation in the Saudi labour market.

Chapter 5: Saudis' expectations and preferences in relation to employment decisions: A Vignette Study

5.1 Introduction to Study 3

From the interview analysis conducted in the previous chapter, it seems that some females who indicated that social norms are not important, were themselves adhering to some of these social norms as an explanation for their non-employment and for their preference to work in a specific type of job, such as a job with single gender working environments (SGWE). This may derive from a confusion between their own preference and the social influence on their preference. Furthermore, married females indicated that their husbands provide them with sufficient money to finance their needs; hence, their employment is not necessary. The matter of financial dependency seemed to be important when formulating the employment decisions for the Saudi females. Would the absence of this factor (financial security) influence females' employment preference? What is the males' preference in this situation? This study explores participants' own preferences in hypothetical employment scenarios and their expectations in relation to employment decisions. This study aims to provide a deeper understanding of the influence of employment characteristics, such as type of job, wage and financial dependency on participants' preferences and their expectations in relation to employment. The study will test the influence of revealing other participants' preferences on each participants' own employment decisions. In this chapter, the focus is upon the social norms represented by working in an SGWE. The main reason for this focus on perceived social norms grounds on the hypothesis that social norms limit or restrict females' employment options, and therefore decrease their chances of being employed. Thus, this study complements the previous studies in terms of using theories of behavioural economics that can explain females' choices and preferences within the labour market.

In psychology, preferences refer to an individual's evaluative judgment in the sense of favouring and disfavouring (Schere, 2005). Preference also can be defined as the individual's attitudes in relation to certain objects (Lichtenstein & Slovic, 2006). Individuals' preferences can be influenced by their surroundings through the socialisation process. Hence, preferences can be easily impacted by social norms (Kimbrough & Vostroknutov, 2016). Additionally,

based on the argument that social norms can be changed when providing incentives (Fuster & Meier, 2010), providing higher wages for mixed working environments compared to SGWE may have an impact on females' employment preferences, and may encourage them to deviate from the norm (working in an SGWE). Higher wages may work as compensation for those females by relieving them of negative associations with a mixed gender working environment (Rosen, 2005).

The results discussed in Chapter 4 outlined working preferences, whether related to working in an SGWE or employment with presence of sufficient money from the husbands, amongst women who were not employed. Compared to our previous research, this study includes a larger number of female participants, as well as considering the preferences of male participants. The study explores four domains: (i) males and females' expectations about others in terms of their employment decisions, (ii) males and females' personal preferences and (iii) participants' alteration of their employment preference when provided with monetary incentives (high wages) or (iv) when provided with information about other participants' preferences in relation to employment decisions. This study uses university students, hence investigating their decision process (represented by their employment decisions) is useful in understanding the impact of the social norms on the future of males and females' employment decisions. Although the focus of the study is on females' employment, male participants were included to test whether there are any differences in expectation and preferences in employment decisions based on gender.

Thus, the aim of this study is three-fold with respect to social norms: it explores differences between males and females' employment decisions; it tests the impact of providing higher wages (incentives) for mixed working environments on males and females' employment decisions; and it tests the impact of providing additional information that challenges what is considered the norm, on females' employment decisions.

To achieve these goals, an experimental vignette survey is used. The first and second goals will be achieved by exploring males and females' responses to different vignette situations in which they are asked to make an employment decision based on hypothetical scenarios. The third goal will be achieved by dividing female participants into two groups (treatment and control) to test the influence of the additional information provided to the treatment group.

Consequently, the following research questions will be addressed:

- In light of social norms, what are males and females' expectations about others' employment decisions when searching for new employment? Are there any differences in expectations based on gender?
- Can monetary incentives lead Saudi males and females to switch preference from SGWE to mixed working environments?
- Do females' employment decisions change when the preferences of other females are revealed to them?

This chapter is structured as follows: the first section reviews the theoretical and experimental literature that explains how an individuals' behaviour and beliefs are influenced by social norms. The second section explains the methodology used in the study. This is followed by the analysis section, which presents the tests used to detect differences between participants' responses. It then presents a robustness check of the results, using logistic regression and including control variables. The fourth, fifth and sixth sections look at participants' responses to the vignettes. Responses for each of the three questions about the vignettes are presented in separate sections. The seventh section presents the results of the experimental part of the study. It shows the differences between control and treatment group responses to the participation reward question. This is followed by a section that discusses the consistency of these findings with theoretical predictions discussed in the context chapter (Chapter 2) and presents policy implications informed by these findings. The final section derives the conclusions.

5.2 Theoretical and experimental literature review concerning the role of social norms and labour market decisions

Theories of social norms have been used to explain individuals' behaviour and practice in the labour market. The key element is that individuals care about what is considered appropriate actions. Researchers have differentiated between two types of norms that may impact individuals' behaviour and beliefs, which are comprised of descriptive and injunctive norms (Cialdini et al., 1991). These social forces impact behaviour through the formation of an individual's preferences (Posetlewaite, 2011). The descriptive norm refers to what is typical or normal within a certain social setting, and most individuals tend to follow it as it is viewed as effective or efficient. The main feature of a descriptive norm is that it provides a decisional shortcut for individuals when deciding how to behave in a certain situation (Cialdini et al., 1991), everyone is doing it, then it must be the right thing to do. Therefore, individuals use

descriptive norms to inform their actions. On the other side, the injunctive norm refers to beliefs about what is morally approved (or disapproved) action or behaviour. The main difference between descriptive and injunctive norms is the social sanction that occurs when deviating from the injunctive norms (Cialdini et al., 1991). Similarly, Bicchieri (2006) refers to descriptive norms as "empirical expectations", and argues that for this to exist, it has to be followed by a sufficient proportion of the population. Bicchieri (2006) refers to injunctive norms as "normative expectations" and argues that "normative expectations" exist when a sufficient proportion of the population expects to conform with the norm in certain situations. Deviation from injunctive norms may imply sanctions (which can be both positive and negative). Individuals follow norms for different reasons: avoiding sanctions, desire to please others, or are based on the expectation that these norms are well-founded (Bicchieri, 2006).
In light of females' employment decisions in Saudi Arabia, for instance, females' decisions and preferences to work in an SGWE could be based on many factors derived from descriptive norms (every female is doing it, then it must be the right thing to do) or injunctive norms (avoiding negative self or family reputational damage). Their decision could also be made to please their male guardians or based on religious beliefs (well-founded bases). However, individuals might privately hold different beliefs that contradict what others expect. That is, one might privately reject the norms but "incorrectly" believe that others accept it, hence deciding to follow it. Females may privately support working in a mixed working environment, but due to the expected sanctions represented by negative reputation or fear from their male guardian's refusal to work, they tend to hide this belief. This behaviour is labelled "pluralistic ignorance" (Katz & Allport, 1931).

However, in addition to the descriptive and injunctive norms, self-categorisation and conformity theories can also provide more insight about why Saudi females undertake certain employment options in the labour market. For instance, self-categorisation is "an active, interpretative, judgmental process, reflecting a complex and creative interaction between motives, expectations, knowledge and reality" (Turner, 1999, p. 31). In light of this theory, females, for instance, may perceive that other females behave and believe in a way similar to them. They may also believe that their employment decisions should reflect social expectations. Hence, they would act and form their employment decisions based on these perceptions. Those females who choose to work in an SGWE place themselves with other females into one social category.

Furthermore, there is an alternative explanation for why females' or males' personal preferences in the labour market are aligned with the social norms. Based on conformity theory, individuals opt or select the behaviours or beliefs that are considered to be favourable among others and are socially acceptable and desirable (Kelman, 1958). They select these behaviours and beliefs because they perceive that by not conforming, their status will be impacted. Researchers have identified three types of conformity. First is compliance, in which the individuals change their behaviour but not their private beliefs. Second is identification, in which the individuals change their behaviour and beliefs for a short period of time. Third is internalisation, in which individuals change their behaviour and beliefs but for a long period of time (Kelman, 1958). The influence of social norms through internalisation is likely to be closely related to the Saudi females' situation and their preferences in the labour market. Under this type of conformity, individuals feel that there is harmony between their value system and the behaviour or beliefs that need to be confirmed by them.

Moving to experimental studies, Goreges and Nosenzo (2020) surveyed recent literature for research investigating the impact of social norms in relation to the labour market context. However, this literature review focuses mainly on the experimental studies that tackle the issue of social norms and its impact on females' employment. The experimental studies that explored the role of social norms in relation to the labour market are more limited. To our knowledge, three experimental studies have been conducted exploring the relationship between social norms and females' work. Bursztyn et al. (2018) and Gauri et al. (2019) have focused more specifically on the role of social norms on females' employment. Bartos and Gebicka (2018) explored the impact of social norms represented by mothers taking three years of parental leave to provide care for the child on employers' hiring decisions.

Bursztyn et al. (2018) conducted a very interesting study in Saudi Arabia that recognised the restrictive role of men toward females' employment in Saudi Arabia. They enrolled 500 Saudi males in an experimental design study (ages 18-35, college educated and married). Their study consists of three parts: in the first part, participants were asked to respond to the following statements with agree or disagree: "In my opinion, women should be allowed to work outside of the home", "In my opinion, a woman should have the right to work in semi-segregated environments". Then, they were asked about their expectations about how many other participants agreed with the statement "In my opinion, women should be allowed to work outside of the home". Then, in the second part, half of the participants were given information

about other participants' responses while the other half were not provided with this information. In the third part of the study, all participants were asked to choose between two options: whether to take a gift card from Amazon or to sign up their wives into an employment app. Nearly 87 percent of participants agreed with the statement about supporting females' employment outside the house. However, 72 percent of the participants underestimated the true percentage. Results for control and treatment groups revealed that only 23 percent of males in the control group chose to sign up their wives in the employment app while 32 percent of males in the treatment group chose to sign up their wives in the employment app. Researchers argue that correcting and updating males' beliefs by providing them with information about other participants' responses encouraged males in the treatment group to sign up their wives to the app.

Similarly, Gauri et al. (2019) conducted focus group discussions with around 2000 employed and non-employed males and females from Jordan (Jordan is characterised with low FLFP). Participants were asked to respond to statements about women's work, including different factors that may impact females' work, such as working environment (mixed or single), being a mother, marital status and work after 5 PM. Participants' responses represent three elements: their personal beliefs, their empirical expectations (descriptive norms) and their normative expectations (injunctive norms). Results revealed that 96 percent of participants approved of females' employment. However, approval of females' employment fell when other factors were considered. For instance, 80 percent of participants approved of females' employment when they have to work outside the house, 72 percent when the female is married, 54 percent when having a child aged less than five years old, 38 percent when working in a mixed working environment and 26 percent when returning to the house after 5 PM. Interestingly, participants viewed themselves as supportive of females' employment, but when considering females' reputation in relation to their employment, they displayed conservative views. Researchers believe that taking the setting of females' employment (such as type of job, females' marital status) into consideration when surveying opinions around females' employment provides a more accurate measure for the acceptance of their employment.

From a different perspective, the impact of social norms related to females' roles in the family on employers' decisions to hire mothers was explored by Bartos and Gebicka (2018). The researchers test sensitivity to age of child, length of parental leave and work experience of the applicant. Bartos and Gebicka (2018) tested the impact of the social norm related to caring for

children. They used managers' responses to 1800 fictitious CVs sent to 900 job advertisements. Results have shown that high quality applicants received a higher rate of invitations when applying to the job after a short parental leave. Low quality (less experienced) candidates received a higher rate of invitation when applying for the job after a long parental leave (three years are considered to be typical of parental leave in Germany). Researchers proposed explanations for these results, one of which is that employers dislike employees who are not following norms. Those females who took less than three years of parental leave are considered social norm breakers, and that may indicate that they may break other social norms in the work environment, which is an undesirable action for employers. Researchers believe that taking short parental leave could signal more future absence due to the need to care for a child under three years of age. Therefore, those females with less than three years of parental leave received a lower rate of interview call-back.

Considering females' preferences for working in an SGWE, a study conducted in Kuwait (Metle, 2002) surveyed 1000 females who work in the public sector (mixed working environment). The researcher tested the relationship between cultural norms and females' job satisfaction using a questionnaire. One of the findings is that these norms were negatively correlated with the females' level of satisfaction. This suggests that the more traditional the females are, the less satisfied they are with their work. This was explained by the society's preference for females to work in an SGWE and not in a mixed environment. Furthermore, the researcher found that females who follow the cultural norms (represented by favouring traditional gender roles) display lower satisfaction with their salary and feel less secure in their employment. This was explained by the stigma of paid work particularly in a country that considered as a rich country.

Our research is different from Bursztyn et al.'s (2018) study, as they focused on misperceived information of males toward females' work. In contrast, this research focuses on two elements: females' misperceived information of other females who may prefer working in a mixed environment, and conformity of females to other females' employment decisions. Like Bartos and Gebicka (2018), we use vignettes as a research tool. However, our study focuses mainly on future employment decisions as perceived by final year students; hence, to what extent social norms could influence their future labour market decisions. Therefore, this study aims to contribute to the general literature about social norms and female employment by introducing the use of vignettes to test differences (if any) in expectations and preferences in

relation to employment decisions based on three factors: working environment (mixed or single sex), type of job and wage (administrator or cashier), and financial support (or not) from husbands.

5.3 Methodology

Integrating elements from behavioural economics in terms of exploring the effect of certain theories such as, theory of planned behaviour, normative beliefs on the individual's subjective norms, this is an online vignette-based study using experimental vignettes as a research tool (using Qualtrics). Some researchers refer to vignettes as fictional or hypothetical scenarios (Jenkins et al., 2010) while others refer to them as simulations of real events (Wilks, 2004). Vignettes can be defined as short description of a situation, person or object that represents a systematic combination of characteristics (Alexander & Becker, 1978). In the vignettes, factors of interests are manipulated in order to elicit respondents' beliefs, judgment or intended behaviour or response. Hence, this type of vignette can be called a factorial survey experiment (or vignette experiment). It is mainly used to "uncover direct normative influence over certain behaviours and practices" (Ben & Lori, 2016, p. 14). Vignettes may help in establishing possible cause/effect relationships between normative beliefs and actual behaviour (Ben & Lori, 2016) due to differences in factors manipulated in the vignettes. One of the main advantages of the use of vignettes is that it displays the potential to generate meaningful data in ways that direct questions would not have (Bicchieri, 2006). Therefore, this study is characterised by an experimental design whereby the characteristics of the situation described in the vignettes are experimentally controlled by the researcher and at least one of the different versions of the vignette is randomly assigned to different subsets of respondents (Atzmüller & Steiner, 2010). In this study randomisation was implemented by Qualtrics software.

Vignettes can be informed by theory or by qualitative/quantitative research (Atzmüller & Steiner, 2010). Accordingly, all of the vignettes in this study were informed by and constructed based on the themes that emerged from interviews with the non-employed Saudi females in Chapter 4, as well as based on previous studies conducted in Saudi Arabia (Elamin & Omair 2010; Bursztyn et al., 2018), in addition to findings from other studies conducted in other Arab countries (Mostafa, 2005; Gauri et al., 2019). Based on these studies, social and cultural norms establish that females should work in a segregated working environment. This approach in

constructing the vignettes was followed by previous studies, such as Gourlay et al. (2014) and Knutson et al. (2010). When revising the constructed vignettes, the researcher contacted and consulted with some researchers who are experienced in using vignettes as research tools.

Vignettes have been used to explore social norms such as studies conducted by Knutson et al. (2010) and Cislaghi and Heise (2019). Vignettes have also been used in some studies within the context of the labour market, studying public opinion around whether the unemployed deserve benefits, and exploring hiring decisions of employers (Buss, 2019; Lahey & Oxley, 2017; Finseraas et al., 2016).

An online pilot study was conducted on 25th February 2020 with Saudi students in Norwich to ensure that translation (from English to Arabic) of each sentence is accurate and can be easily understood. This also ensured that the participants respond to the question as the researcher intended, rather than misinterpreting the question. After the pilot study, a number of changes were implemented (see Appendix C, Table C.1 for all changes).

In this study, as Table 5.1 shows, the vignettes included three factors each with two levels; hence, there were six vignettes produced in total (3 x 2). The vignettes were randomly assigned to participants. Each participant was randomised for the response to three vignettes - see Appendix C, Table C.2 for more details about the vignettes used in the study.

Table 5.1 Vignette factors and levels

Factor	Level	Group name
Gender	Female (Nora)	A
	Male (Naser)	B
Type of the job and wage	High wage for cashier and low wage for administrator	A
	High wage for mixed working environment and low wage for single gender working environment	B
Financial dependency	Husband does not give money to his wife	A
	Husband gives money to his wife	B

For instance, a participant in group A was asked to respond to three vignettes: the first vignette included a female as job seeker; the second vignette included a situation where a married female needs to make an employment decision, with the additional information that her husband does not give her sufficient money to meet her needs; the third vignette included a situation where a female needs to make an employment decision between a job at a female-only school (administrator) with a lower wage compared to working in a mixed working environment (cashier) with higher wage.

The justification for choosing these two particular jobs (cashier and administrator) is as follows. A cashier job is one of the newer jobs that have become available for females in Saudi Arabia. However, based on females' opinions and attitudes during the interviews (in Chapter 4), this job is considered to be undesirable for multiple reasons: it requires exposure to men and a majority of females are likely to refuse to work in this job as it is not socially accepted (low-status job). Hence, does allocating this job a higher salary make it more attractive to those females compared to a lower salary in a more preferable job?

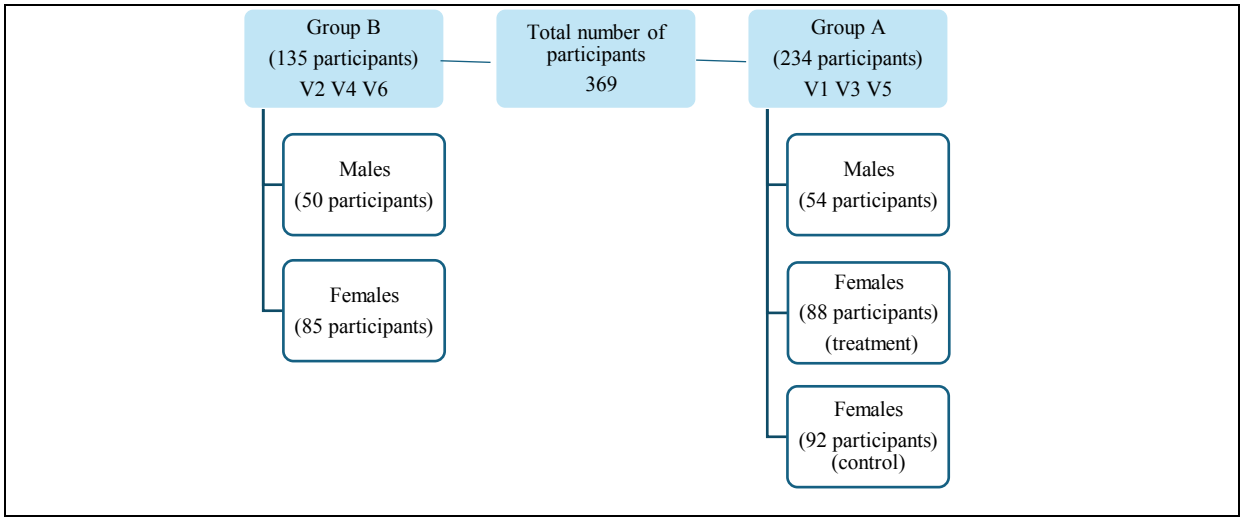
Additionally, as vignettes need to reflect realistic events, these two wages (SR 5000 and SR 6000) are based on actual wages offered in Saudi Arabia for these jobs. Based on the General Authority for Statistics (2017), the average salary for Saudis in the administrative and education sector range between SR 4062 to SR 5110. Therefore, the administrative job was allocated SR 5000 salary. To test the impact of the differences in wage on participants' responses, the cashier job was allocated a higher salary and the difference in wage was SR 1000. The difference was set arbitrarily. However, in the interviews conducted with females in the previous chapter, some mentioned that they are willing to work in a mixed environment if the salary is high enough and they agreed that SR 6000 could be an attractive wage. Therefore, SR 6000 is used in the vignettes for a mixed gender environment job and for the cashier job.

It is very clear that the second set of vignettes have a different context (female financial dependency) while the other two sets of vignettes are about working environment (mixed/single gender working environment, low/high-status jobs). The inclusion of the second set of vignettes was important to distract the participants from the research objective. It prevents participants from linking the first set of vignettes to the third set. However, to make it easier for the reader, the order of the results will be as follows: results for the first set of vignettes, followed by results from the third set of vignettes, and lastly the results for the second set of vignettes.

The vignette survey was administered to undergraduate female and male participants studying at Nora University and King Saud University, respectively, in Saudi Arabia (Riyadh). All students were enrolled in their final year at the Business School of these two institutions. The number of participants who have responded is 369, as Figure 5.1 shows. The links to the vignette study were sent to all of the male and female students through their university's virtual learning environment. The vignette survey was open for 25 days starting from 1st April 2020 to 25th April 2020. It is important to mention that although the number of participants in this

study is quite large, the sample cannot be considered as representative for all of the Saudi university students.

Figure 5.1 Participant distribution between groups



University students were the target study population as they are considered the present resources and the future leaders of the Saudi kingdom. The reason for choosing final year student is that they are very close to graduation, and they might have been thinking about their employment options. Hence, they may expect to face some of these employment situations in their own lives and in the near future.

As Figure 5.1 shows, in group A, respondents were asked questions related to vignettes 1, 3 and 5. In group B, respondents were asked questions related to vignettes 2, 4 and 6. Each set of vignettes in groups A and B received 39 and 37 percent of responses, respectively. Hence, each set of vignettes received nearly an equal number of responses. However, one may notice more participants in group A. This is because females within group A were divided into two groups, a treatment group and control group, which also explains why there were more females than males in this group. The presence of more females than males in the study was generally expected since the focus of the study is on female rather than male employment decisions. It should be noted that due to the treatment targeting female participants, two different links were sent to the participants, one for male participants and another for female participants. Consequently, the gender of the respondents who prefer not to reveal their gender was known to the researcher. There were only three males (two in group A and one in group B) and two

females (in group B) who responded with “prefer not to say” to the question regarding their gender.

5.4 Analysis

The data produced by the vignettes show a two-level structure. The first represents the vignette level and the second represents the participant level. Hence, to address the research questions, attention must be given to both levels (differences in responses based on the variation in the vignettes and differences between participants’ responses based on characteristics such as their gender) (Atzmüller & Steiner, 2010). Accordingly, experimental vignette data can be analysed using statistical tests (parametric and non-parametric tests) such as ANOVA and Wilcoxon rank-sum (Mann-Whitney) tests (Jordan et al., 1997). In this study the dependent variables (participants’ judgements and participants’ preferences) are not normally distributed, and they are categorical variables. Therefore, the non-parametric Wilcoxon rank-sum (Mann-Whitney) test is used to compare participants’ judgements between groups and within groups based on gender. To test the impact of participants’ characteristics on their judgments and preferences, logistic regressions are employed. This could be considered as a robustness check for the impact of gender when controlling for the other characteristics of the participants.

The analysis is divided into four sections: the first section examines test results to show differences in participants’ judgements in relation to the employment decisions made by the hypothetical characters in the vignettes. The second section presents participants’ personal preferences (their employment decisions based on the given hypothetical situations). The third section presents participants’ estimates (or predictions) for other participants’ personal preferences (whether they under or overestimate the number of other participants who chose a certain option as their personal reaction). The fourth section provides results for the experimental part of the study, distinguished by control and treatment groups, where half of the female participants were provided with additional information about other females’ preferences in relation to their employment decisions.

5.5 Descriptive statistics

The study sample consists of 265 females and 104 males, the higher number of females in the sample compared to males was part of the survey design. As the number of participants is 369, and the number of vignettes is 6 (3 factors x 2 levels), the total number of all vignettes that have been answered by the respondents is 2214 (6 x 369).
Considering that the participants are students and were surveyed in two universities in Riyadh (located in the central region), no variation in age, marital status or region was expected. The majority of the participants are single, are themselves from the centre region and they consider religion as very important in their lives (see Appendix C, Table C.3 for more details)

5.6 Participants' expectations and judgements

In this section, the focus is on the impact of three factors on participants' judgements in each of the hypothetical scenarios. These factors are the gender of the job seeker, the type of job and wage, and whether adequate financial support is provided by the husband. There are three hypotheses to be tested in each of these hypothetical scenarios; H1: higher expectations from the hypothetical female job seeker to choose to work in an SGWE than expectations for the hypothetical male job seeker. H2: higher expectations that the hypothetical female job seeker would choose to work as an administrator (high-status job in an SGWE with low salary) than working as cashier (low-status job in a mixed gender environment that offers a higher salary). H3: higher expectations that the hypothetical married female chooses to be employed when the husband does not provide financial support to his wife compared to when the husband does. Table 5.2 shows the summary results for differences in participants' expectations based on groups, while Table 5.3 shows the summary results for differences in participants' expectations within groups based on gender.

We start with the first question: **What do you expect the character in the vignette is most likely to do?** In group A (gender of the job seeker is a female), 91 percent of the participants expected that the female in the vignette would most likely choose to work in an SGWE. However, the expectations are lower (66 percent) in group B, where the gender of the job seeker is a male. The Wilcoxon rank-sum (Mann-Whitney) tests the null hypothesis that the two populations are equal (A and B); this was significant at the one percent level (P value = 0.000). Thus, the gender of the job seeker has significantly influenced participants' expectations of

working in an SGWE, hence, H1 is accepted. This may signal that females in Saudi Arabia are under stronger pressure to adhere to the social norms than males. However, at the group level, as Table 5.3 shows, there are insignificant differences in judgements and expectations based on gender within groups.

For the third set of the vignettes, the hypothetical character has to make an employment decision, choosing between two jobs. Group A was given information specifying the type of jobs: the first is working as an administrator in a school with a wage lower than the second job, which is working as a cashier in a supermarket. The type of job was not specified for group B. This is to test whether the type of job is important in formulating participants' expectations and whether higher wages for a mixed working environment would impact participants' expectations. In group B, the hypothetical character has to choose between two offered jobs. The first one is working in an SGWE with a salary lower than the one offered in the second job, which is framed within a mixed gender environment. In group A, nearly 78 percent of participants expected the character to choose the first job, which is administrator, whereas in group B, 57 percent expected the character to choose to work in an SGWE: a significant difference between participants' expectations in groups A and B (P value = 0.0008). This may suggest that although participants may expect the female character to choose the job that offers a higher wage regardless of the working environment (mixed/single), they do not expect the female character to choose the job that offers higher wage if that job is considered as a "low status" job, hence H2 is accepted. The results show significant differences between males and females within group A (P value = 0.0070) and insignificant differences within group B (P value = 0.3290). The significant difference within group A may indicate that males have expectations that the female character would choose to work as administrator regardless of the wage. This may signal that Saudi males expect the females to work in "higher" status jobs even if they offer lower wages. However, the insignificant difference between males and females within group B indicates that both males and females' expectations were influenced by the higher wage offered for the mixed gender environment. This may indicate that offering high wages for the mixed gender environment has changed the perceived acceptability for both males and females.

Table 5.2 Results summary for differences in participants' expectations based on groups

Factor	A (N=234)	B (N= 135)	Results from Wilcoxon rank-sum (Mann-Whitney) test
Gender of the job seeker	91%	66%	(P value = 0.000)
Type of the job and wage	78%	57%	(P value = 0.0008)
Financial dependency	75%	60%	(P value = 0.0034)

Table 5.3 Results summary for differences in participants' expectations based on gender

Participants' expectations	Male	Female	Results from Wilcoxon rank-sum (Mann-Whitney) test
Percentage of participants expecting a female job seeker to work in an SGWE when the wage offered is equal to wage offered in mixed gender environment	93% (A: N= 54)	87% (A: N=180)	(P value =0.3245)
Percentage of participants expecting a male job seeker to work in an SGWE when the wage offered is equal to wage offered in mixed gender environment	66% (B: N= 50)	65% (B: N =85)	(P value =0.9889)
Percentage of participants expecting the female character to work as administrator with lower wage compared to cashier with higher wage	87% (A: N= 54)	68% (A: N=180)	(P value =0.0070)
Percentage of participants expecting the female character to work in an SGWE with lower wage compared to mixed gender environment with higher wage	62% (B: N= 50)	52% (B: N =85)	(P value =0.3290)
Percentage of participants expecting the female character to choose to be employed when the husband does not give money to his wife	76% (A: N= 54)	73% (A: N=180)	(P value =0.7041)
Percentage of participants expecting the female character to choose to be employed when the husband gives money to his wife	64% (B: N= 50)	56% (B: N =85)	(P value =0.4987)

As Table 5.3 shows, it is important to note that the highest percentage of both males and females were found in the scenario where a female character was expected to choose SGWE, compared to their expectations in all of the other scenarios (93 percent of males and 87 percent of females, the first row, Table 5.3). This signals the strong presence of the social norms perceived by both males and females in relation to females' work in an SGWE. However, the lowest percentage of expectations of both males and females were found in responding to the scenario where a female was expected to choose SGWE with a lower wage, compared to their expectations in all of the other scenarios (62 percent for males and 52 percent for females). This shows that the expectations are influenced by the higher offered wages for the mixed gender working environment. This also suggests that the monetary incentives represented by wages can have a role in changing the social norms perceived by those males and females (Fuster & Meier, 2010).

The second set of vignettes focuses on a slightly different topic. Here, the hypothetical character has to make an employment decision, but she feels reluctant to go ahead with the job as she is not sure if she needs it or not. For group A, the vignettes mention that Ghada is not given sufficient financial support from her husband. For group B, the vignettes mention that Ghada's husband does give her sufficient financial support. The vignette poses the question of whether she should take the job or not. The participants' expectations that the character would take the job are higher (75 percent) when the husband does not provide financial support to his wife compared to when the husband does (60 percent). Thus, financial dependency on a husband lowers the Saudis' expectations for a married female choosing employment. There is a significant difference between judgements in groups A and B (P value = 0.0034), hence, H3 is accepted. This means that whether the husband provides financial support is expected to be a very important determinant for a female's employment decision. Interestingly, males and females' expectations were almost similar when the husband does not provide sufficient financial support (76 and 73 for males and females, respectively). However, when the husband provides sufficient financial support the percentages of males and females (64 percent and 56 percent, respectively) who expected that the character would take the job are much lower. There is an insignificant difference within the two groups. This may suggest that both Saudi males and females have higher expectations that the wife would only choose to be employed when her husband does not provide her with money compared to when he does. Although the setting of this study is different, these findings are in line with the study conducted in Jordan (Gauri et al., 2019), where participants who approve of females' employment were initially 97 percent, but this decreased to 72 percent when the female is married. This decreased even further to 38 percent when females' work involved a mixed gender environment.

Robustness check

To check whether the findings obtained from the non-parametric tests in terms of differences in participants' expectations based on gender are robust, a logistic regression is employed including control variables in addition to the gender variable. The dependent variable is a dummy variable equal to one if the participant expected the character to choose the first option in all of the vignettes and equal to zero if the participant expected the character to choose the second option. The control variables include: a dummy variable for the gender of the participant equal to one if the participant is a female and equal to zero if male; a dummy variable equal to one if the participant is from the centre region and zero otherwise, a dummy variable equal to one if the participant indicated that religion is very important or rather

important in their lives, and zero otherwise[9]. All of the results from the logistic model are consistent with the results obtained from the non-parametric tests in terms of gender.

Table 5.4 Results from logistic regression: Dependent variable: Participants' expectations about the hypothetical character in all vignettes

Variable name	A: expect the female job seeker to choose SGWE V1	B: expect the male job seeker to choose SGWE V2	A: expect the character to choose working as administrator with lower wage V5	B: expect the character to choose working in an SGWE with lower wage V6	A: expect the character to choose to be employed when the husband does not give his wife money V3	B: expect the character to choose to be employed when the husband gives his wife money V4
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Female (ref: male)	0.59 (0.363)	0.88 (0.763)	0.32** (0.009)	0.574 (0.144)	0.88 (0.727)	0.747 (0.448)
Centre region (ref: other regions)	3.25** (0.009)	.79 (0.646)	1.09 (0.806)	.84 (0.727)	1.42 (0.332)	2.41 (0.058)
Religious (ref: religion is not important)	1.65 (0.537)	2.73 (0.210)	.70 (0.599)	4.01 (0.114)	1.19 (0.771)	2.66 (0.222)
N	234	135	234	135	234	135

Overall, from the evidence discussed in this section, we can infer that all three factors (gender of the job seeker, financial support from the husband, and type of job and wage) have a significant impact on the Saudi males and females' expectations in relation to employment decisions. There was a significantly higher expectation for a female job seeker to choose to work in an SGWE compared to the expectation for a male job seeker. These effects were moderated by perceptions of financial need, occupational status and wage offered.

5.7 Participants' personal reactions

This section presents participants' responses to the second question across all vignettes: **If you were in the character's position, what would you do (choose)?** The results show that 79 percent of males and 65 percent of females have chosen to work in an SGWE. Although most participants have chosen to work in an SGWE, the Saudi norm and the results of the interviews with females in the previous chapter point to even higher percentages making this choice. It seems that asking female participants in this less direct way about their personal preference allowed them to respond with more freedom, as their responses do not reflect the social

[9] The regions categories and the religious categories were collapsed due to the very small number of participants in some of the categories and because no statistical differences were found between the collapsed categories. Marital status category was dropped from the analysis because the majority of participants were singles (92 percent of the sample).

desirability (main feature of using vignettes is reducing the impact of social desirability). The difference between males and females' preferences was significant (P value = 0.0174), with more males compared to females preferring to work in an SGWE.

Table 5.5 Results summary for differences in participants' preferences

Participants' preference	Males	Females	Results from Wilcoxon rank-sum (Mann-Whitney) test
Percentage of participants preferring to work in an SGWE when the wage offered is equal to wage offered in mixed gender environment	79% (N=104)	65% (N=265)	P value = 0.0174
Percentage of participants preferring to work as administrator with lower wage compared to cashier with higher wage	85% (N=54)	77% (N=180)	P value = 0.3181
Percentage of participants preferring to work in an SGWE with lower wage compared to mixed gender environment with higher wage	60% (N=50)	58% (N= 85)	P value = 0.1132
Percentage of participants preferring to be employed when the husband does not give money to his wife	89% (N=54)	97% (N=180)	P value = 0.0113
Percentage of participants preferring to be employed when the husband gives money to his wife	68% (N=50)	90% (N=85)	P value = 0.0010

The higher wages for a cashier job do not seem to be attractive to the participants (85 and 77 percent of them, respectively), as they preferred to work as administrator with lower wages than working as cashier (insignificant difference between males and females' responses, P value = 0.3181). This reinforces our earlier findings which suggest that Saudi males and females favour the high-status jobs over the high salary offered by what is perceived as a low-status job (cashier).

When the type of job (whether low/high status) is not mentioned, and only the mixed/single gender working environment is indicated, higher wages seem to attract similar percentages of males and females to work in a mixed working environment. However, the majority still prefer SGWE. Nearly 60 percent of males and 58 percent of females indicated they prefer to work in an SGWE with lower wages (insignificant difference between males and females' responses, P value = 0.1132). This may suggest that the majority of Saudi students, males and females, prefer to work in an SGWE despite lower wages.

A closer exploration of females' preferences is possible in Table 5.5. One can see that, initially, around 65 percent of females prefer to work in an SGWE. This percentage decreased to 58 percent when the SGWE offered lower wages compared to a mixed environment (insignificant difference, P value = 0.2440). This may suggest that high wages for the mixed environment do not have a significant impact on females' employment preferences. However, the percentage

of females significantly increased, from 65 percent to 77 percent, when explicitly told the type of the job to be an administrator job (significant difference, P value = 0.0068). This clearly indicates that females not only prefer working in an SGWE, but also that they prefer working in jobs considered "high status" jobs even if they offer lower wages.

On the contrary, looking at men, there was a significant decrease in the percentage of males who preferred to work in an SGWE (from 79 percent to 60 percent) when they were told that the mixed working environment offers higher wages than the SGWE (P value = 0.0131). This indicates that males' preferences for working in an SGWE have significantly changed in responding to the higher wages offered for the mixed gender working environment. On the other hand, although there was an increase in the percentage of males (from 79 percent to 85 percent) who preferred to work as administrator, this change is insignificant (P value = 0.3614). This may suggest that although males preferred to work in the SGWE, their employment preference can be altered when the mixed environment offers high wages. It seems that the Saudi males are more responsive to the offered wage compared to females.

The findings related to females are in line with Al-Bahoth's (2018) study, as she found that Saudi females tend to care about their family's reputations when choosing their career. Those females may have perceived that working in a mixed gender environment necessitates working closely with unrelated men, which is considered undesirable as it may affect the female's own reputation and her family's reputation.

Participants' responses become more interesting in terms of gender differences when considering employment decisions when the husband does not provide sufficient financial support for his wife. The percentage of males who would prefer to be employed if they were in the hypothetical character's situation, when the husband does not support his wife, was 89 percent, and it decreased to 68 percent when the husband provided support (the differences was significant, P value = 0.0087). Males' responses to this vignette's scenario may reflect their roles as male guardians for the females in Saudi Arabia. Therefore, their responses to this scenario could signal when they would/would not allow their wives to be employed. This decrease in the percentage of males who preferred to be employed if they were in the character's situation (from 89 percent to 68 percent) may suggest that the Saudi males do not support the wives' employment when their husbands provide them with sufficient financial support, and they support the wives' employment only when these funds are unavailable to the

wives. This may also indicate that Saudi males accept females' financial dependency on their husbands.

On the contrary, females' preferences seem to be unaffected by financial dependency as the percentages of females who preferred to be employed in both cases were very high. Nearly 90 percent of females preferred to be employed when the husband gives money and 97 percent when the husband does not give money to his wife. This was expected, as all females in the sample are university students and the majority are single; hence, they might feel more motivated to be employed regardless of the financial security provided by husbands. They might also believe that females' employment is important regardless of the financial support provided by the husband. However, more females chose to be employed when the husband does not give money to his wife, compared to when the husband does give her money. There was a significant difference in females' responses to these different scenarios (P value = 0.0170). This result confirms the findings of the previous chapter, in which females indicated that their motivation to be employed is low as they receive "pocket money" from their husbands. However, taking into consideration that females in the current study sample are all educated and possibly younger, the impact of financial dependency on husbands is still present[10] and still impacts females' employment decisions regardless of their education level and age. This result is in line with findings from previous studies claiming that females tend to consider their gender identity when planning to combine family life, represented by their marriage in this case, with employment (Corrigall & Konrad, 2007). For example, married females may consider taking either a lower number of working hours compared to their husband, or they may decide not to be employed in order to be able to perform the household's duties. This result is also in line with the female labour supply theory, under which female labour supply is negatively influenced by the presence of an additional earner (Mincer, 1962).

Robustness check

To check whether the findings obtained from the non-parametric tests in terms of differences between participants' preferences based on gender are robust, logistic regressions are employed including control variables in addition to the gender variable. All of the obtained results from the logistic regressions are consistent with the previous results obtained from the non-parametric tests.

[10] Although the difference is very small

Table 5.6 Results from logit model: Dependent variable: Participants' personal preference

Variable name	Choosing to work in an SGWE	Choosing to work as administrator with lower wage	Choosing to work in an SGWE with lower wage	Choosing to be employed when the husband does not give his wife money	Choosing to be employed when the husband gives his wife money
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Female (ref: male)	0.46** (0.005)	0.56 (0.175)	0.78 (0.544)	4.61* (0.016)	4.92** (0.001)
Centre region (ref: other regions)	1.05 (0.844)	.63 (0.309)	2.14 (0.099)	2.73 (0.133)	1.24 (0.733)
Religious (ref: religion is not important)	3.54** (0.007)	.94 (0.935)	*Omitted*	*Omitted*	.45 (0.488)
N	369	234	128	222	135

From this section, four points need to be highlighted. The majority of participants preferred to work in the SGWE; however, more males compared to females preferred this employment decision. High wages for the mixed environment do not have a significant impact on females' employment preferences; however, high wages for the mixed gender environment have significantly changed the males' preferences. Males and females support married females' employment more in the case where the husband does not give his wife.

5.8 Participants' estimations for the other participants' preferences

Participants' responses for the second question (about their personal reaction or preference) were used to determine whether responses for the third question were true reflections of other participants' preferences. In the third question, participants were asked to estimate the number of other participants (out of 100) who made a certain employment decision under each set of the vignettes (see Appendix C, from Table C.4 to Table C.8 for full set of participants' estimations). To allow participants to give accurate estimates, they were given a specific reference group (Saudi university students). This was necessary to identify a common reference point, which should result in comparable data and meaningful results. Furthermore, participants' beliefs about others were incentivised to obtain their true beliefs or estimates. Participants' estimations considered as over-estimation/under-estimation based on 10 percent interval from the true value.

Looking at the first set of the vignettes, male and female participants were asked to give an estimate for the number of males and females (out of 100) who preferred to work in an SGWE. The focus is on the estimates given by those who personally prefer working in an SGWE to explore their perceptions about others. This allows a test of H4: participants overestimate the number of other participants who have identical preference to their own preference. Nearly 98 percent who estimated the true percentage are those whose their personal preference was to work in SGWE. Furthermore, 81 percent who overestimated the percentage of females who would choose to work as administrator with lower wage are those who personally prefer to work as administrator with lower wage. Nearly 62 percent who overestimated the percentage of females who would choose to work in an SGWE with lower wages, are also those whose personal preference is to work in an SGWE with lower wages. Hence H4 is accepted.

From these statistics, it seems that a large share of participants overestimated the number of other participants who have identical preferences to their own. This demonstrates that those participants believe that they are choosing or doing what the majority of others are doing. This could be one of the drivers for their own preference. The finding can be explained by self-categorisation theory: that participants may perceive how other participants behave and believe in a way similar to them. They also believe that their employment decisions should reflect the social expectations. Hence, they act and form their employment decisions based on these perceptions. By doing that, based on the self-categorisation theory, those participants are placing themselves with others into one social category.

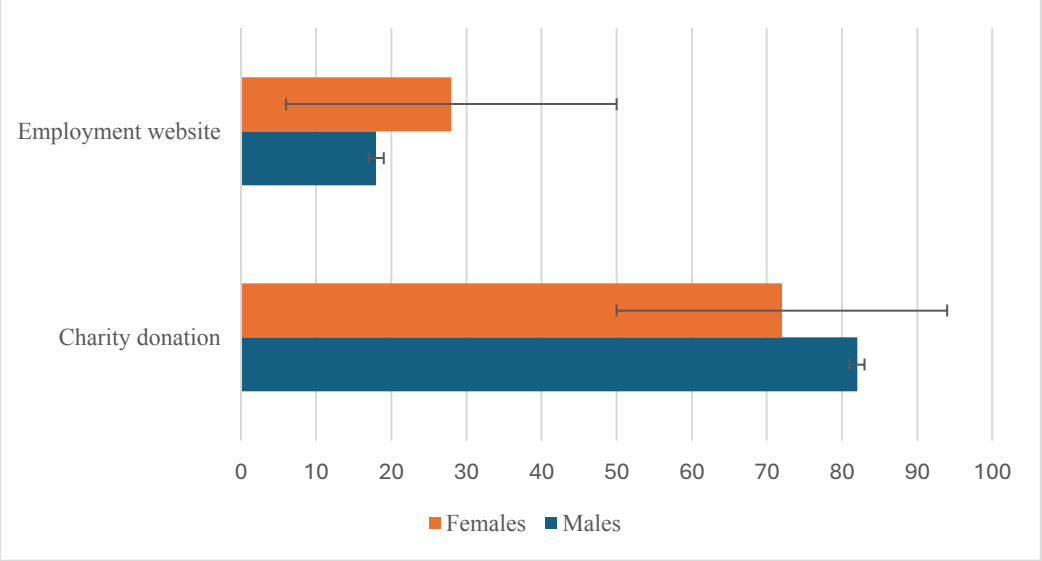
5.9 Participation reward

At the end of the survey, participants were asked how they wanted to be rewarded. They were given two options: a charity donation on their behalf, or registering on an employment website that offers jobs in a mixed gender working environment. Participants choosing to be signed up on the employment website were asked to provide the last four digits of their university ID number. This is just to indicate for participants that there is an action (writing their last four digits of their student ID) that is required from them in order to be signed up (Bursztyn et al., 2018). Participants' responses to the participation reward question would reveal three main points. First, it showed whether those participants who chose to be registered on the employment website are willing to act based on their given responses. Hence, providing the ID

number can be used as indication of the participants' actual behaviour and not just their beliefs or preferences. Second, it showed the link between participants' preference and their behaviour. This can be checked by comparing participants' responses to the reward question with their preferences given in response to the first set of vignettes. Third, responses to the reward question would show if "pluralistic ignorance" is present among the female participants. This is because female participants in group A were divided into two groups, a treatment and a control group. The treatment group was given information in the form of a chart showing arbitrary percentages of females who chose to work in a mixed gender environment and arbitrary percentages of females who chose to work in an SGWE (see Appendix C Table C.2). The message intended to be delivered to the female participants was that the majority of Saudi females prefer to work in a mixed environment. This would test two hypotheses: first, whether this information would encourage more females in the treatment group to register on an employment website in response to the participation reward question; and second, whether this information would change the preference of those who initially chose to work in an SGWE.

Figure 5.2 shows that the majority of participants prefer the charity donation option, with more males (82 percent) than females (72 percent) taking this option. In contrast, a higher percentage of females (28 percent) than males (18 percent) preferred the second option, which is the registration on the employment website. However, there is an insignificant difference in responses to the participation reward question based on gender (P value = 0.0814).

Figure 5.2 Participants' responses to the participation reward question

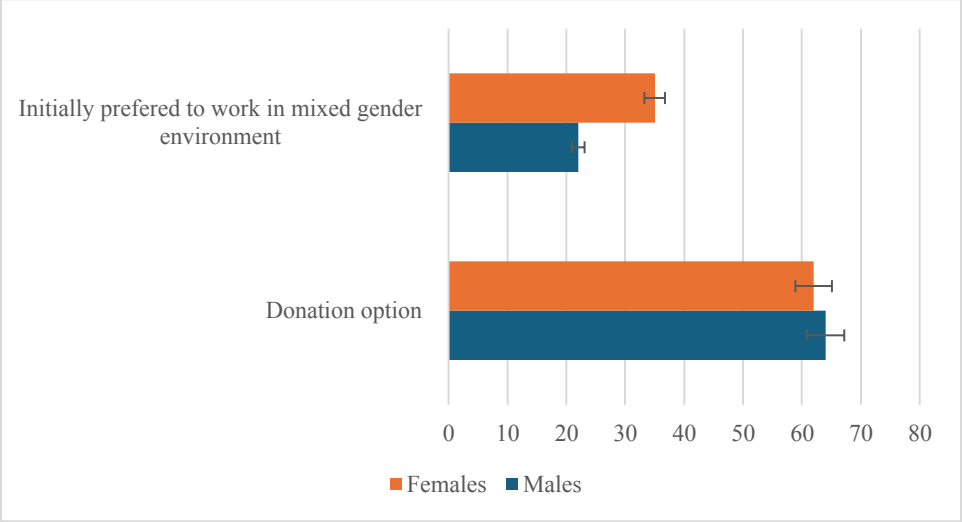


Most importantly, all participants who chose to be registered on the employment website provided the required information (the four digits of their ID number). This signals that those participants (18 percent for males and 28 percent for females) are all willing to work in mixed gender environment and this was not just a preference because it was translated into an action. However, it was not expected that more females than males would choose to be registered on the employment website, as the brief stated that this website offers jobs that have a mixed gender working environment. This may signal two facts: first, it could be a signal for a change in the perceived social norms that relate to females working in an SGWE. Second, it could be a signal for the limited jobs' search channels for those females. A Saudi male may have higher chances to be employed or find a job compared to a Saudi female (AL-Munajjed, 2010). Therefore, women need to maximise their employment opportunities by choosing to be registered on the employment website. However, results might be different if there was an option for a SGWE employment for females to sign-up in.

An interesting finding related to the link between belief and behaviour was found. There was a difference between participants' preferences in relation to their employment decisions and their actual behaviour. As Figure 5.3 shows, nearly 22 percent of males and 35 percent of females previously stated that their preference is to work in a mixed gender environment. However, the majority of those participants[11], who initially preferred to work in a mixed gender environment, did not choose to be registered in the employment website; instead, they chose the charity donation option as their participation reward. This could suggest that those participants perceived that the Saudi society is not accepting of work in a mixed gender environment; therefore, even though they personally favour working in a mixed gender environment, they are not willing to expose their beliefs or their preferences, as these were not translated into action. An alternative explanation could be that they genuinely preferred the option of the charity donation.

[11] Around 64 and 62 percent of those males and females, respectively. Of the 94 females who preferred to work in a mixed gender environment, 36 chose to be registered on the employment website, and 58 out of the 94 females chose the donation option as their participation reward. The number of males who preferred to work in a mixed gender environment was 22, 14 of which chose the donation option as their participation reward, and only 8 males out of the 22 chose to be registered on the employment website.

Figure 5.3 Differences between males and females in terms of their employment preferences and their responses to the participation reward

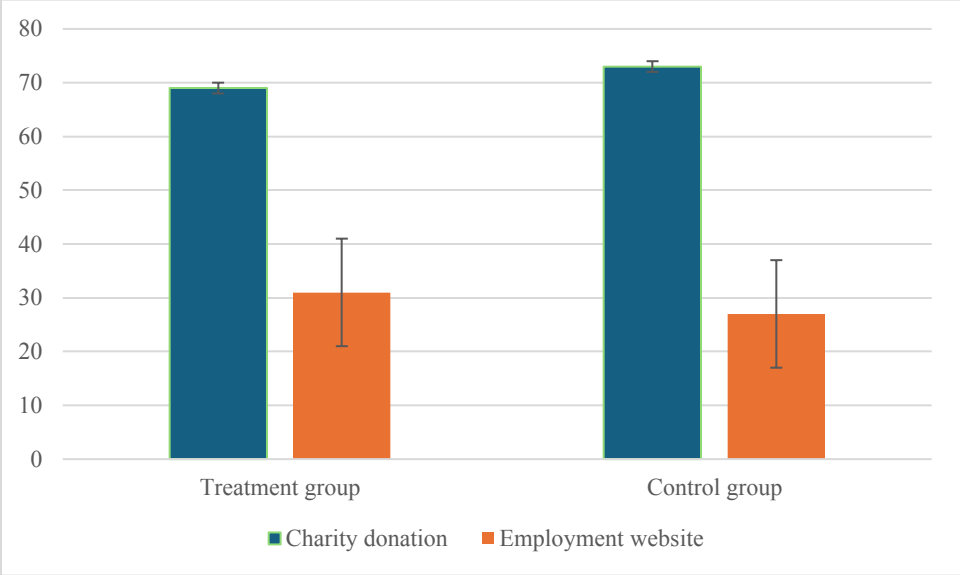


This finding can be explained by Conformity Theory. As mentioned earlier, there are three types of conformity, one of which is "compliance". Under this type of conformity, the individuals change their behaviour but not their private beliefs (Kelman, 1958). Those participants whose beliefs or preferences were not translated into actions are experiencing social influence, and they are trying to fit into the society by doing what others are doing.

In order to check for the presence of "pluralistic ignorance" among female participants, differences were tested in females' responses to the participation reward question in treatment and control groups. This is particularly important for those females who initially preferred to work in an SGWE. **Do those females change their employment decisions when prompted that the majority of females have chosen to work in a mixed gender environment?**

The females who expressed a desire to be registered on the employment website in the control group comprised 27 percent of the sample, and in the treatment group, 31 percent. This shows that there is a difference between females' responses in the treatment and control groups, with more females in the treatment group showing desire to be registered on the employment website. However, statistically, there is insignificant difference between treatment and control group (P value = 0.6047).

Figure 5.4: The influence of additional information on females' responses to the participation reward question

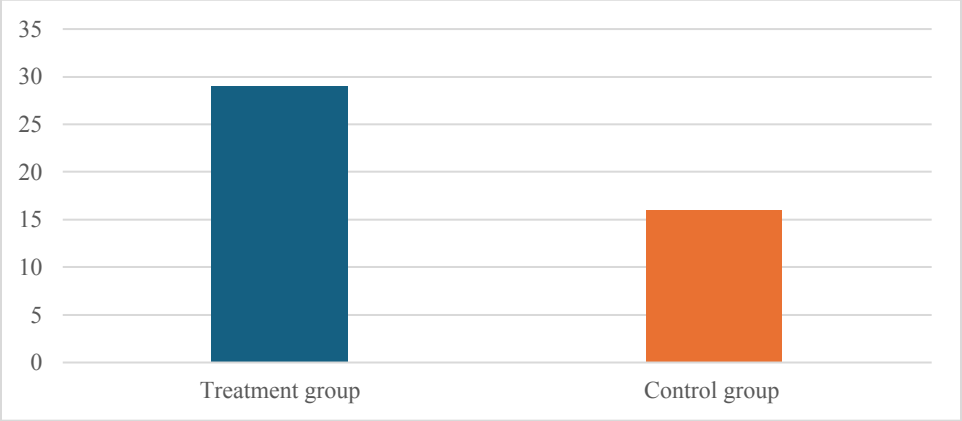


To accurately test whether the information provided has influenced those females who initially chose to work in an SGWE, responses for only those females are illustrated in Figure 5.5. The number of females in the treatment group was 88, and 58 chose to work in an SGWE. However, around 30 percent have changed their preference (17 out of 58) when provided with the additional information and responded to the participation reward question with the second option (registering on the employment website). On the contrary, the number of females in the control group was 92, and 67 chose to work in an SGWE as their personal preference. However, only 16 percent of those females (11 out of 67) changed their preference, choosing to register on an employment website as their participation reward. Based on the results using a two-sample test of proportions, the difference is borderline significant (P value = 0.0616). This may suggest that the information given led to a change in those females' perceptions. Their preference to work in an SGWE changed when they were told that other females' preferences are different from their own, and that the majority of females prefer to work in a mixed gender environment. This result is in line with the explanation provided by conformity theory (Kelman, 1958), which can be used in explaining females' decisions in the labour market. Females' responses in the treatment group reflect the desire of females to behave and act based on what is considered socially acceptable and desirable.

Additionally, the difference between treatment and control groups could signal the presence of "pluralistic ignorance" (Katz & Allport, 1931), as those females changed their employment

decisions when their perceptions were "modified" by giving them the additional information. Those females may have felt more open about exposing their true preference when they were told that there are other females who have similar beliefs to their hidden preference.

Figure 5.5 Percentage of females who preferred to work in an SGWE initially, but chose to register on the employment website as their participation reward



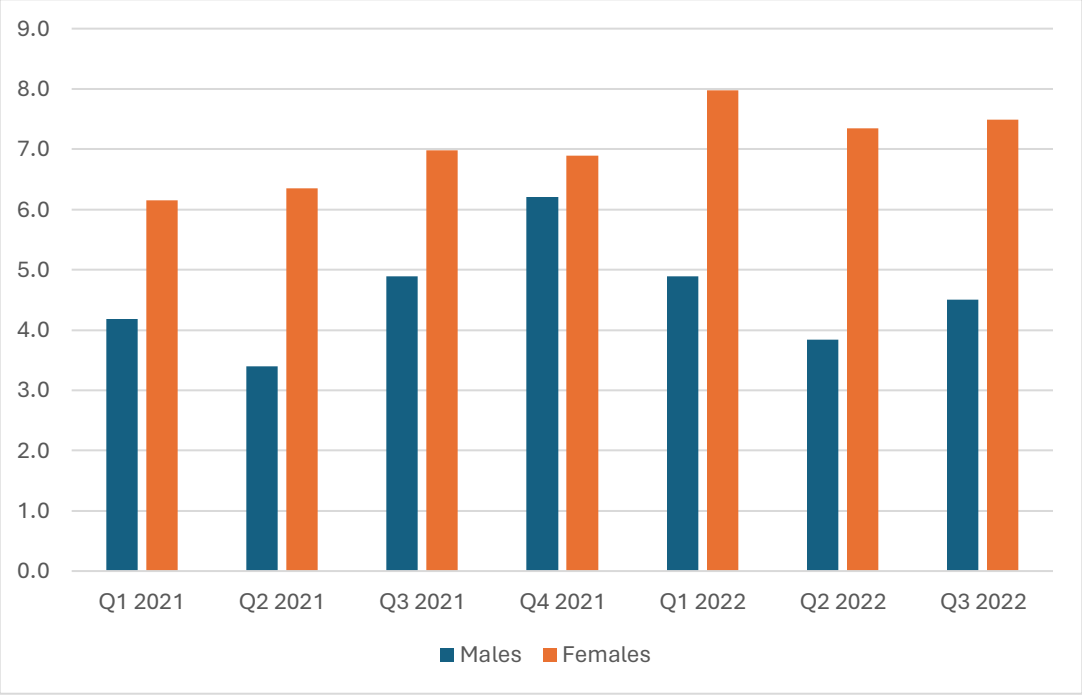
5.10 Consistency of findings with theoretical predictions and policy implications

As discussed in the context chapter, behavioural economics, combining aspects of economics as well as aspects of psychology, can provide convincing explanations for the findings from the vignette study. Findings were consistent with predictions of behavioural economics. According to the theory of planned behaviour, normative beliefs have a direct effect on the individual's subjective norms. That is the social pressure perceived by the individual on whether to perform a behaviour or not. Females' responses to the vignettes were consistent with these behavioural economic predictions. Females appeared to be under social pressure when making their employment decisions, particularly when choosing to work in an SGWE. Findings are also consistent with the predictions of theories related to presence of "pluralistic ignorance", as females were privately supporting working in a mixed working environment, but due to the expected sanctions represented by negative reputation or fear from their male guardian's refusal to work, they tended to hide this belief. Additionally, based on theories of social and gender norms, females' decisions, and preferences to work in an SGWE could be based on many factors derived from descriptive norms (i.e. every female is doing it, then it

must be the right thing to do) and injunctive norms (i.e. avoiding negative self or family reputational damage). Their decision could also be made to please their male guardians or based on religious beliefs.

Turning now to the policy implications implied by this study. Regardless of the introduction of the policies and reforms targeting enhancement of FLFP, recent statistics from the Saudi labour market show a reduction in the number of employed females in new jobs offered such as those in restaurants and shopping centres. This could reflect the original preference for females to work with female-only. Figure 5.6 shows the percentage of Saudi males and females who are unemployed and prefer not to work in the private sector. It shows that more unemployed females than unemployed males are unwilling to work in this sector. Findings from the vignettes can provide an explanation for this evidence.

Figure 5.6: Percentage of Saudi males and females who are unemployed and refuse to work in the private sector (2021-2022)



Source: General Authority of statistics, 2021 Q1-2022 Q3.

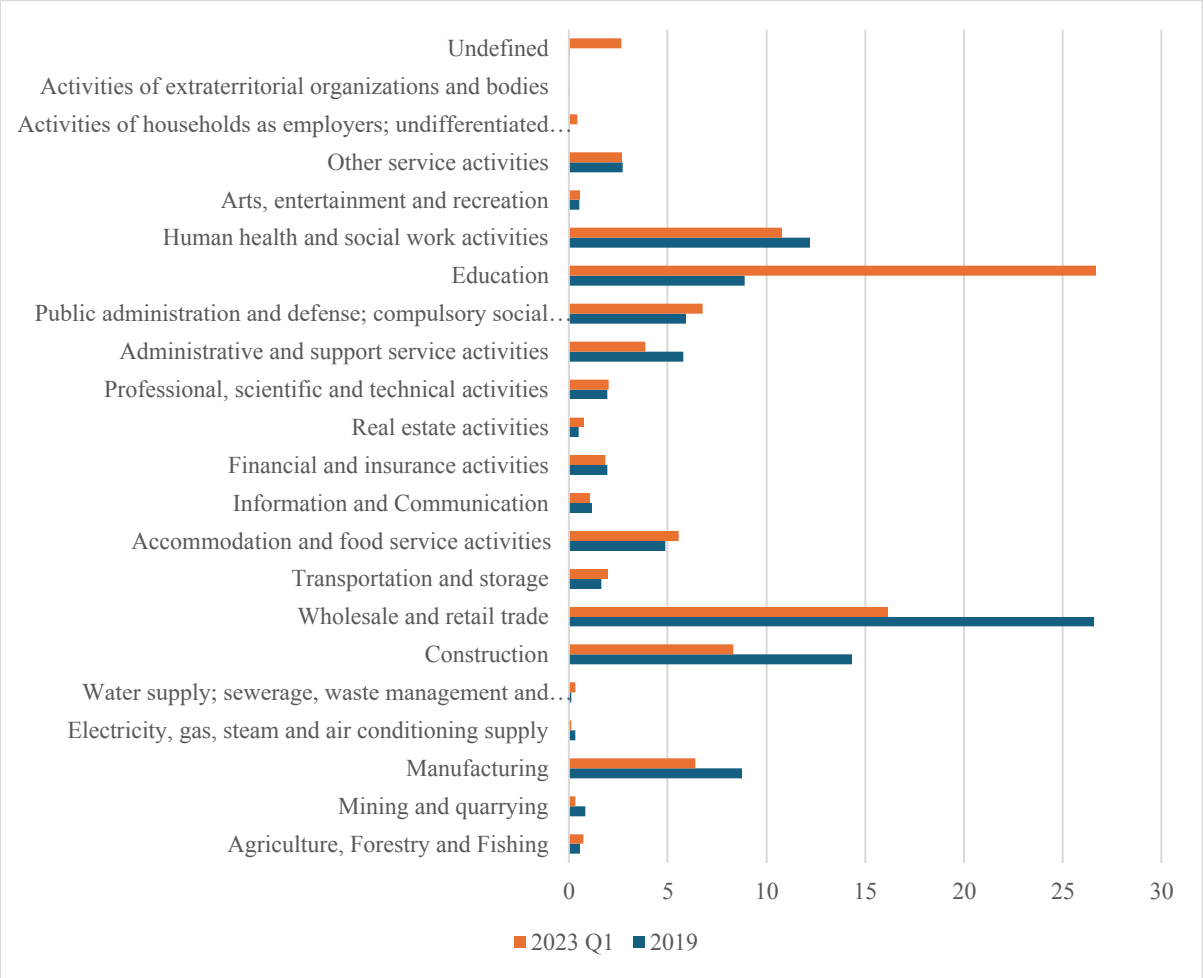
Females' preference for working in a Single-Gender Work Environment (SGWE) could potentially impact their productivity if they were employed in a mixed environment, which is the prevalent setting for many of the newly offered jobs. Accordingly, these policies might be

more successful if combined with holding awareness courses for those females about their rights when working with the opposite gender and courses about "building confidence". Courses should also be provided for male workers as well, as they are not used to work in mixed environment. The Ministry of Labour and Social Development has issued some controls concerning the protection against behavioural aggression in the work environment. According to Article 3 *"Take all preventive measures that prevent two genders from being alone during work, including setting up signboards, setting procedures for holding meetings, designing the distribution of offices and halls of the work environment, and publishing designs among workers, etc"* (Human Resources and Social Development, 2019). However, more importantly, policy makers should ensure that these measures are effective and monitored. Policy makers should ensure that females are aware and clearly understand the law of "Anti-Harassment" which introduced in 2019. The authorities also need to ensure that it is fully implemented, and poor behaviour (harassment) is actually punished. This law should eliminate females fear and reduce their anxiety when working in mixed environment. This law also reassures families who may be worried about their daughters, wives, sisters working on mixed environments. Female and males workers should be aware of the penalty for breaking this law*, "The penalty for a harassment offence shall be a maximum term of five years' imprisonment and a maximum fine of 300,000 riyals or to either penalty in the case of a repeat offence or if the crime (offence) is coupled with any of the following:* one of the which is "*if the crime (offence) occurs at a place of work, study* (International labour organisation, 2018).

Alternatively, policy makers may consider the use of "critical mass" theory (Kanter, 1977) in increasing FLFP. According to this theory there is a shift in dynamics when boards have three or more female directors, this suggests that the number of female directors reaches a critical mass, allowing females to collaborate with each other and be seen as individuals. In fact, this theory has played a significant role in motivating Western governments to take action in order to enhance the representation of women on corporate boards. Western countries have succeeded in shifting the proportions of females on corporate boards and the aggregated targets of more than 30 percent of females on board have been achieved with gender balance boards (40% - 60% each gender) (Tilbury & Sealy, 2023). Therefore, the Saudi government could follow similar approach in increasing FLFP and focusing on shifting the dynamics in workplace by motivating employers to hire a certain proportion of females. This should allow for presence of a balanced group, that is likely to exhibit fewer stereotypical behaviours, thereby facilitating the recognition of women's individual skills and characteristics.

Another policy implication is related to the type of occupations and jobs offered to Saudi females. The findings from the vignettes indicated that the majority of females (nearly 77 percent) show higher preference to work as administrator with low wage, than working as cashier with high wage. This indicates that even if the private sector provided higher salaries for females, Saudi females care more about the type of jobs more than the amount of salary. Hence policies aiming to increase female employment in the private sector should focus on creating job opportunities that considered as high-status jobs even if it has a mixed environment. Figure 5.7 shows the distribution of female workers across occupations in 2019 and in 2023. It shows that, in 2019, the highest share of employed females was in the wholesale and retail sector (26 percent). This percentage has decreased in the first quarter in 2023 (16 percent). On the other hand, the highest share of employed females in 2023 was in the education sector (27 percent) and this percentage was 8 percent in 2019. Similarly, females share in construction and manufacturing also decreased from 14 percent and 9 percent to 8 percent and 6, respectively. From these statistics, it seems that there was a shift; after the introduction and the effective implementation of reforms and policies, at the beginning, females were perhaps excited about these new job opportunities that offered to them. However, they eventually turned back to the education sector, which is the most favourable sector for Saudi females before the introduction of the policies and reforms. The education sector provides shorter working hours, high salaries, high status jobs and, most importantly, it has single gender work environment (Alwedinani, 2016). Statistics also shows that in the first quarter of 2023, 62 percent females of those who discontinue their employment in the private sector have resigned, and 13 percent of them have terminated their contract during the trial or training period (General Authority for Statistics, 2023). All of these figures could indicate that the policies did not have a long-lasting effect on females' employment, and that females possibly care about the type and status of the job (based on the findings from the vignettes).

Figure 5.7 Saudi females' distribution across occupations in 2019 and 2023



Source: General Authority of statistics, 2019 and 2023.

5.11 Conclusion

The study explored the impact of three factors (gender of the job seeker, financial support provided by husband, and type of job and wage) on Saudi males' and females' expectations about others, in relation to their employment decisions. It also explored males and females' employment preferences when facing different employment scenarios. The aim of this study is three-fold with respect to social norms: it explores differences between respondents' expectations about the employment preferences of others, as well as their own; it tests the impact of incentivising work in mixed working environments or low-status jobs by increasing wages; and it tests the impact generated by additional information that contradicts what is considered to be the norm on females' employment decisions. To achieve these goals, 369 Saudi university students were surveyed using an online experimental vignette as a research tool.

The results show that all three factors (gender of the job seeker, money provided by the husband, and type of job and wage) have a significant impact on the Saudi males' and females' expectations in relation to employment decisions. The results also point to the strong pressure that Saudi females are under to follow social norms. This was represented by participants' expectations for a female job seeker to choose to work in an SGWE compared to the expectation for a male job seeker, for a female to be employed only if the husband does not give enough money to secure his wife's financial needs, and for a female to be employed in a high-status job even with lower wages.

Furthermore, the majority of Saudi students, males and females, prefer to work in an SGWE and in a high-status job even with lower wages. However, in terms of participants' expectations in this case, offering higher wages for the mixed gender environment lowered the participants' expectations for females to choose the SGWE. Thus, monetary incentives (high wages) may have a role to play in changing the perceived social norms related to working in an SGWE. These can be used to increase the acceptance by society for females to work in a mixed gender environment, which can encourage more females to apply for these types of jobs and therefore increase the levels of female labour force participation in the country. The results also have shown that Saudi males and females have assumed that their personal preferences are similar to others or in line with the other participants because they predict that others' preferences are identical to their preference. This could be a possible justification for their personal preference.

The results have shown that nearly half of females in the treatment group, compared to females in the control group, have changed their personal preference from working in an SGWE to a mixed gender working environment when they were told that other females' preferences are different from their own, and that the majority of females prefer to work in a mixed gender environment. This can be understood as the presence of "pluralistic ignorance" among Saudi females. Amongst those females who privately reject the norm (working in an SGWE), the given information resulted in changes to their perceptions and, therefore, their employment preference. Females' responses in the treatment group reflect the desire of females to behave and act based on what is considered socially acceptable and desirable.

The findings of this study have a number of implications. First, Saudis maybe more accepting of females' working in a mixed working environment if it is highly paid. However,

they do not favour females' employment in what are considered to be low-status jobs, even if they offer higher wages. This means that the government should target increasing wages in jobs that have mixed gender environment and are considered to be high-status jobs, and not those considered to be low-status jobs as this will not be beneficial in terms of boosting female employment. Alternatively, the government may think about ways in which the perception of these jobs could be changed. Second, those seeking to recruit to jobs that are considered to be less desirable should consider including details of the number of women currently working in the sector or how these numbers change over time, or how much the proportion has been growing over time in their advertising material. This is important in order to change misperceptions about these jobs.

One limitation of this study is related to the generalisability of the findings due to lack of regional diversity in the study sample. Another limitation is related to the difference between participants' preferences in relation to their employment decisions and their actual behaviour. An alternative explanation to their behaviour is that those participants are at different stage of their lives when compared to the characters in the vignettes scenarios. Their personal preferences on whether to work in SGWE or mixed gender environment, may represent participants' choices in the future "future self", while their response to the participation reward question may represent participants' choices for the "present self", hence the comparison between these two responses as comparison between belief and behaviour may not be alike. However, this interpretation would pose the further task of explaining why participants have different preferences in the present and in the future. Further research might be needed, using the same vignettes and employing participants who are already graduated, to be able to make a more informative comparison between their beliefs and behaviour.

Furthermore, future studies should make use of the vignette as a research tool and take into consideration the inclusion of a larger share of participants from different regions in Saudi Arabia. They also may consider focusing on other factors that could have an impact on Saudis' employment decisions (whether their preferences or their expectations), such as presence of children and the location of the job. Future studies may also consider changing the reference group and investigate whether participants' expectations about employment decisions change when the reference group has changed. For instance, in this study we used female and male university students, other studies might use females with different educational levels.

Chapter 6: Saudis' Attitudes toward Females' Employment and: Survey (Reflection on context and policy highlights)

6.1 Introduction to Study 4

The previous studies provided a quantitative analysis of the relationship between norms and female employment using macro panel data (Study 1). We explored this relationship at an individual level through the lived experience (Study 2) and vignettes which explored the impact of the type of job, wage and non-wage income on female employment decisions (Study 3). The focus in this chapter will be on exploring differences in male and female attitudes towards female employment. And highlighting the need to institutional changes in order to change perceptions toward female employment in Saudi. Exploring how attitudes and values are different between males and females is important in order to fully understand the social forces that control females' economic decisions in terms of their participation in the labour market (Bernhardt et al., 2018). Additionally, this chapter provides a temperature test on attitudes in 2019 in Saudi, once significant reforms and policies were underway, this should able us to comment on how effectively they have challenged or perhaps altered norms. This is key to the likely success of the reforms and could point to other measures that might also be needed. This study highlights the importance of change in institutions (formal and informal) in order to reach gender equality in the labour market. This chapter contributes to the literature on policy making and future design by highlighting the need for structural institutional change to reduce the gender inequality in the Saudi labour market and to increase Saudi female labour participation. As discussed in Chapter 2, informal institutions can be defined as the socially shared and usually unwritten rules, whereby formal institutions refer to rules and procedures which are enforced and created by official channels (governments) (Azari & Smith, 2012). Informal institution can take different forms, such as norms, values, beliefs, and attitudes (Dobler, 2011). It was found that the informal institutions can have a negative or positive impact on the strength and efficiency of formal institutions (Williamson, 2009). For instance, the governmental family policies (as childcare policies) may have a different impact on female's employment preferences depending on the females' culture, their attitudes and beliefs (Birgi, 2012).

Gendered informal institutions create a web of attitudes, beliefs, norms and practice that might be hard to alter. In a country such as Saudi Arabia, where formal and informal institution are not only gendered but work to reinforce each other, it is unlikely that gender equality can be achieved in the labour market by addressing formal institutions alone, the gendered informal institution must be weakened or possibly altered. However, it can be very difficult to change these informal institutions, and some authors have identified that change here lags behind change in formal institutions (Goffman, 1959: Ogburn, 1957). Policy change (new formal institutions) combined with good information, communication and education could help in solving the problem (Jutting et al., 2007).

In the Saudi case, Saudi Arabia has established changes in the formal institutions through the introduction of the reforms and polices to increase female employment (as discussed earlier in the context chapter). However, based on females' narratives from the interviews and results from the vignettes, those females hold, or are impacted through others, by strong beliefs and attitudes, reflecting the role of informal institutions, that could prevent them from responding to the recent reforms and policies created in relation to the labour market. Therefore, our results suggest that changes in informal institutions would play a fundamental role in lowering gender inequality in the labour market. It is assumed that the power of informal institutions may fade when strong formal institutions are established (Waylen, 2014), however, this might not be the case in countries like Saudi where informal institutions created through deeply embedded social/cultural norms. In Saudi Arabia, these informal institutions are based not only on social norms which are then strongly reinforced by religion and culture. Hence to be able to diminish the impact of informal institutions on females' employment, reducing the power of these three elements (religion, culture and social norms) is needed.

Building on these observations, the first aim of this study is to provide a clear picture on current public opinions in Saudi Arabia in terms of females' employment. Second, using the findings from this account, we proceed to critically appraise the current policies and reforms that target increasing FLFP in Saudi and we highlight the need for further institutional changes in Saudi Arabia.

Values and attitudes can be viewed as one form of informal institutions (Alesina and Giuliano, 2015), both were defined in Chapter 2, and are different constructs. Values are more general, while attitudes are more specific to certain objects. Individuals with strong convictions in

certain values, such as those related to gender roles (i.e., males as the breadwinners and females as homemakers), may also develop attitudes toward females' participation in the labour market. Traditional gender role attitudes are usually formed in the early stages of an individual's life (Vella, 1994) and there is evidence that in countries where a majority of individuals hold less egalitarian attitudes (more traditional attitudes), females have a lower share in specific roles such as professional and technical jobs (Seguino, 2011).

As discussed earlier in the thesis (Chapter 2), structural and political/economic changes have taken place in Saudi Arabia. These changes were expected to impact Saudis' attitudes and values particularly toward females' employment. It has been argued that changes towards more gender egalitarian attitudes are associated with higher levels of female labour force participation (Cherlin & Walters, 1981; Mason & Lu, 1988). To our knowledge, the most recent survey on this topic was conducted in Saudi Arabia in 2003 using questions from the World Values Survey (WVS), and only two studies (Elamin and Omair, 2010 and Kucinskas, 2010) have explored the impact of socio-economic factors on the Saudi attitudes. These studies pre-date the structural changes, and so we make a contribution by running similar surveys in 2020 which can capture if/how attitudes (informal institutions) may be changing in response to the changes in formal institutions.

Hence, having established contemporary attitudes towards female employment, the following research questions need to be addressed:

- What are the possible determinants of Saudis' attitudes toward females' employment? Are there any differences in the determinants of attitudes based on gender?
- Based on the survey findings, how can policies and reforms be more effective in enhancing FLFP?

This chapter is structured as follows. It begins with an overview of existing empirical studies that explore determinants of attitudes toward females' employment. This is followed by a discussion of the methodology, and then an explanation of the measures and procedures. Next, descriptive statistics for the study sample and regression results are discussed. This is followed by a critical reflection on the current policies and reforms targeting females' employment in Saudi in light of the study findings. The chapter closes with a discussion of the implications of the study and conclusions.

6.2 Literature review concerning factors affect attitudes

According to social role theory, the allocation of roles between men and women is based on physical specialisation (i.e., reproductive activities for women, power and strength for men). Interaction between men and women is based on self-regulation on one side (i.e., activities that require physical strength, such as hunting and gathering for men and caring for children for women) and social regulation on the other. Repeating the same action multiple times means that society becomes accustomed to these task allocations, which produces strong beliefs over time that each gender is more compatible with or more efficient at a certain task (Eagly & Wood, 2012). Accordingly, individuals' attitudes have formed based on what they regularly observe.

There is a common understanding in some Arab and Muslim countries that women's employment diminishes the quality of time that a woman spends on her family duties. Some of these cultural practices or attitudes are justified by religious beliefs. In conservative countries such as Saudi Arabia, traditional and restrictive attitudes are based on interpretations of some of the religious texts that describe females' positions in the family (Sidani, 2005). Hence, the traditional roles of males as breadwinners and females as homemakers are reinforced by culture and by religion. However, recently, with the introduction of the new reforms and policies (see Chapter 2), the Saudi government is attempting to implement some institutional changes to influence some of these traditional attitudes through education reforms and promotion of "moderate" Islamic notion. Meaning that the country is moving toward removal of extreme thoughts and ultra conservative culture (Alotaibi, 2020).

In the context of western countries, Heineck (2004) analysed the impact of religion on attitudes toward gender roles and working mothers, drawing on data from the International Social Survey Program (ISSP) for Austria, Germany, Italy, UK and the USA. Data for three waves were used (1991, 1994 and 1998). Religiosity was measured by denominational affiliation (Christian, Muslim, Jew, No religion) and religious participation. Attitudes were measured by asking whether participants agree or disagree with the following: 1) A man's job is to earn money; A woman's job is to look after the home and the family; 2) All in all, family life suffers when the woman has a full-time job. They generated an indicator equal to one if the individual agrees or strongly agrees with these statements, and gender, age, education, social class, marital status and employment status were included as explanatory variables. Results from the probit

models showed that individuals with religious affiliations were more likely to be in favour of traditional gender roles and more likely to believe that family life suffers from females' full-time employment compared to individuals with no religion. Additionally, individuals who regularly attend church (except in Italy) are more likely to hold traditional attitudes and to believe that families suffer from females' full-time employment. Furthermore, those females who disagreed with traditional gender roles are more likely to be highly educated, young, employed, from a high social class and from urban areas.

Similarly, a study conducted by Seguino (2011) analysed data from 97 countries from the World Values Survey (WVS) on attitudes toward gender equality for the periods 1981–84, 1989–93, 1994–99, 1999–2004, and 2005–08. Seguino measured attitudes using items from the WVS and measured religiosity by three sets of questions about religion, including "How important is religion in your life?" Seguino regressed each attitude question on a set of explanatory variables such as age, gender and education plus the religiosity variables. Results from multivariate regression showed that inequitable gender attitudes were positively associated with the religious variables, males, older individuals and the less educated.

Donnelly et al. (2016) examined trends in attitudes toward female employment using data collected between 1976 and 2013 from a nationally representative sample of high school students in the US. They used 22 items on females' roles (very similar to the items from the WVS), including: "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work", "A preschool child is likely to suffer if his or her mother works", and "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family". Response choices for all three statements were strongly disagree (1), disagree (2), agree (3) and strongly agree (4). Agreement on these items were used in addition to variables such as age and education. Results revealed that whilst, in general, attitudes became more egalitarian over time, those among older individuals (40 years and over) became less egalitarian over time. Thus, age could be one of the important factors that influence attitudes.

Emphasis is also given to the role of culture and gender on attitudes' formulation. In the context of Muslim countries, a study conducted by Guney et al. (2006) investigated attitudes toward females working in managerial positions in Turkey and Pakistan (n = 219). The researchers conducted a comparison between attitudes amongst those working in different positions in the

universities (research assistant, lecturer and assistant professor, etc.). The researchers used the "managerial attitudes toward women executive scale" (MATWES). The MATWES includes 38 statements, and the answers are based on a 5-point Likert scale (from highly agree to highly disagree). They found that both men and women from Turkey hold negative (more traditional) attitudes. They found that women from Pakistan hold positive attitudes compared to men from Pakistan. Furthermore, Pakistani men held more positive attitudes than men from Turkey. The researchers believe that most of the Pakistani participants are younger in age compared to participants from Turkey and that most of them have studied in western universities, which may give them more liberal attitudes compared with participants from Turkey. Thus, gender and culture (nationality) could play an important role in forming individuals' attitudes.

Some of the studies conducted in the Arab regions used the "multidimensional aversion to women who work scale" (MAWWWS), which is the measure that will be used in the current study (see the Methodology section below for more details). Researchers have calculated the mean scores for participants' responses and used it to detect differences between participants' attitudes (holding more/less traditional attitudes). One study conducted by Mostafa (2003) investigated attitudes in the southern region of Egypt toward females' employment. The study used a sample of 217 participants from different age groups and included males and females, and Muslims and non-Muslims. Parametric statistical tests (t-tests) were used to compare the mean scores of the MAWWWS items. The researcher tested and rejected the hypothesis that there is a generational gap between students (the younger group) and the older generation. However, differences based on gender were detected with females holding less traditional attitudes compared to males. Additionally, the researcher found no significant difference in mean scores between Muslims and non-Muslims in Egypt. However, the researcher believes that due to the small sample size, the study's findings cannot be generalised. Mostafa (2005) explored attitudes of Emiratis toward working females using the same research methods as in his 2003 study. He used a sample of 186 participants, finding that -unlike the results found in Egypt- the mean scores for students were lower than older participants, which suggests that there is a generational gap. Furthermore, differences based on gender were detected with males holding more traditional attitudes than females.

In Saudi Arabia, a study conducted by Elamin and Omair (2010) measured Saudi male attitudes toward females' employment using MAWWWS (n = 301). The results showed that young, educated, single and unemployed males had less conventional or traditional attitudes toward

working women compared with less educated, employed, older and married males. This study is unique, as research tackling these issues in Saudi Arabia is still very rare and limited in scope. However, the study focused on male attitudes only and did not explore other factors such as degree of religiosity and regions that could possibly be very important aspects in the Saudi context. Similarly, a study by Kucinskas (2010) employed young Saudi and Egyptian males and females (age 18-25 years) and investigated the relationship between religiosity and egalitarian attitudes. The researcher used data provided by the "Youth, Emotional Energy, and Political Violence" cases. The sample included 766 Saudi participants and 724 Egyptian participants. The analysis was based on participants' agreement and disagreement with statements regarding gender equality in education, politics, employment, and contribution to household income, in addition to two statements: "A wife must obey her husband" and "It is acceptable for a man to have more than one wife". Descriptive results show that, while both the Egyptians and Saudis have less egalitarian attitudes, Egyptians have more egalitarian attitudes than Saudis. The researcher found that attending mosques more frequently is associated with less egalitarian attitudes for both Egyptians and Saudis. Amongst female participants who identify as religious, there was a positive association with more egalitarian attitudes only for Egyptian females.

Overall, findings from the above studies showed that factors such as gender, age, education and marital status have an impact on attitudes. Researchers used different measurements to explore possible factors that impact attitudes. Some have used survey questions from the WVS while others used MATWES and MAWWWS scales. This study builds upon these studies in terms of the following: investigation of males as well as females' attitudes and the determinants of their attitudes separately; the inclusion of additional variables thought to have a key effect on females' employment in Saudi Arabia, such as region and religiosity, as discussed in the context chapter (Chapter 2). Furthermore, the study uses two approaches to measurement, including items from the MAWWWS and from the WVS to explore attitudes regarding gender equality. The study will contribute to the literature by providing a benchmark on contemporary attitudes in Saudi Arabia, and to explore whether there are any differences in attitudes based on demographic characteristics. Furthermore, the study contributes to the literature about attitudes toward females' employment in the Arab region, which is still largely underdeveloped. The study is the first to survey Saudi males and females' attitudes and examined the determinants of their attitudes toward females' employment. Considering Saudi Arabia, a country characterised by low FLFP and undergoing a unique combination of cultural, religious

and structural changes, the study tackles the determinants of attitudes exploring the social forces that stand behind females' economic decisions. Findings from this study may help in explaining trends in countries with similar social environments as Saudi Arabia.

6.3 Methodology

To achieve the research goals, the study uses an online survey as a research tool to collect data. According to Kraemer (1991), survey research is employed when the researcher needs to describe aspects of a given population quantitatively. Using a survey may have some disadvantages, such as low response rate, respondents misreporting their behaviour (for instance, attempting to hide inappropriate behaviour) or when participants face some difficulties in assessing their own positions/behaviour (Kraemer, 1991). However, a survey has multiple advantages, such as the capability of gathering information from large samples of the population; allowing for gathering information that is difficult to measure, such as attitudes and opinions; and providing more robust results than observational techniques (Kraemer, 1991). In particular, online surveys have several advantages, including flexibility, speed and timeliness, convenience, ease of data entry and analysis (Buchanan et al., 2009), low administration costs and, most importantly, reaching larger sample sizes (Evans & Mathur, 2005).

Collecting data using an online survey was once difficult, particularly in the Arab countries due to lack of internet access (Nasif et al., 1991). However, in Saudi Arabia, internet services have become more efficient and advanced. In this study, a snowball approach was taken, and the survey link was initially sent to participants over WhatsApp and Snapchat apps. Participants were kindly asked to share the link with their friends and family members, who were also asked to share the link with their friends and family. The survey link was shared in public groups through the social media apps; as a consequence, most, if not all, of the groups included participants that are unknown to the researcher. It is important to mention that the survey responses come from Saudis with different backgrounds. For instance, some groups included students who study in foreign countries, others included parents or unemployed males and females; some groups included teachers and others housewives. The survey was designed and run anonymously using Qualtrics software and it was open for 23 days, starting from 1st April

2020 to 23rd April 2020. However, the highest response rates were recorded during the first three days.

A pilot study was conducted on 17th March 2020. The reason for conducting the pilot study was to ensure that translation (from English to Arabic) of each sentence was accurate and could be easily understood. Additionally, another important reason to conduct the pilot study was to ensure that the participants responded to each question as the researcher intended, rather than interpreting it in a different way. There were 9 Saudi participants for the pilot study (5 females and 4 males) who are PhD students at the University of East Anglia in Norwich, UK. No changes in the survey questions were required after conducting the pilot study.

6.3.1 Measures and procedures

Using an online survey, the number of people who completed the survey was 1640. The participants were from different regions in Saudi Arabia. They were from various age groups, educational levels, and marital and employment statuses. The study used two sets of questions to measure attitudes toward females' employment and uses Principal Component Analysis (PCA) to analyse participants' responses.

Various scales have been developed to measure attitudes toward women's employment, education, and social roles. This study uses the MAWWWS as it adequately assesses contemporary gender-related issues compared to other measures (Henley et al., 1998; Spence & Buckner, 2000). Additionally, the number of questions in this scale is relatively small but it is comprehensive, as it addresses the most important aspects related to gender roles. The MAWWWS consists of 10 statements intended to capture two dimensions (Valentine & Mosley, 1998; Valentine, 2001). The first five statements are intended to capture "Employment scepticism". These statements are as follows: (1) "Women lack skills and abilities needed at work", (2) "Women are not suited for work outside the home", (3) "I am sceptical about women's effectiveness in the workplace", (4) "Women's personal characteristics make life at work difficult", and (5) "Woman frequently find the demands of work difficult". The second set of statements are intended to capture "Traditional roles preference". These statements are as follows: (1) "Traditional husband/wife roles are the best", (2) "Women are happier in traditional roles", (3) "A woman's place is in the home", (4) "An employed wife leads to

juvenile delinquency", and (5) "Women with families do not have time for other employment". Answers for these questions are: strongly agree, agree, disagree and strongly disagree.

The study used the exact Arabic version of the MAWWWS scale used in Elamin and Omair (2010). First, questions were translated from English to Arabic by a native-speaking Arabic translator, then the Arabic version was translated by an English-speaking translator. Both translations were compared, reviewed and used to jointly produce a final version. This final version was reviewed by another independent English-speaking translator and minor changes were made. Elamin and Omair (2010) tested the final version with Arabic-speaking individuals to test feasibility and cultural equivalence.

Determinants of attitudes are of primary interest in this study; therefore, additional questions were added to the beginning of the survey. These questions were about gender, age, education level, marital status, employment status, and importance of religion in one's life (see Appendix D, Table D.1 for the survey questions).

Considering the characteristics of the study sample, see Appendix D, Table D.2, it can be observed that the majority of participants are female, from the centre region, educated, aged 31- 40, married, employed and consider religion as "very important" in their lives.

Inspecting the distribution of the study sample, it is important to note that the data collected is unlikely to be representative of the general population, as there are large differences with the shares in the general population. For instance, females are overrepresented in the sample, forming 76 percent of the study sample. To address this problem, a weight was constructed and applied –Appendix D, Table D.3 shows how the data were weighted. However, it is important to note that even after weighting the data, the results need to be interpreted with caution. Skewness in the collected data might exist due to different reasons such as, a particular network influenced by the researcher through snowballing and bias selection.

As shown in Table 6.1, the differences between the two genders in each of the items in the MAWWWS were tested using a t-test.[12] There are significant differences between males and

[12]Non-parametric tests were also conducted to test differences between males and females in both components: "Traditional Values" and "Employment Scepticism". For "Traditional Values": chi-squared with ties = 204.490 with 1 d.f .probability = 0.0001. "Employment Scepticism": chi-squared with ties = 59.939 with 1 d.f. probability = 0.0001.

females' responses across all of the 10 items. On average, females scored lower than males, which indicates that females have less traditional attitudes than males. Interestingly, the highest mean score for males was in response to the statement "Traditional husband/wife roles are the best"; while for females, the highest mean score was in response to the statement "Women are happier in traditional roles".

Table 6.1 Comparison of the mean scores for the 10 items in MAWWWS between males and females

Variable name	Males (2020)	Females (2020)	Result of t-test (H_0; difference in means = 0)
Employment scepticism			
Women lack skills and abilities needed at work	1.99	1.67	P-value 0.0000
Women are not suited for work outside the home	2.01	1.52	P-value 0.0000
I am sceptical about women's effectiveness in the workplace	2.12	1.86	P-value 0.0000
Women's personal characteristics make life at work difficult	2.54	2.06	P-value 0.0000
Women frequently find the demand of work difficult	2.38	2.10	P-value 0.0000
Traditional role preference			
Traditional husband/wife roles are the best	2.99	2.03	P-value 0.0000
Women are happier in traditional roles	2.85	2.28	P-value 0.0000
A woman's place is in the home	2.46	1.83	P-value 0.0000
An employed wife leads to juvenile delinquency	2.38	1.85	P-value 0.0000
Women with families do not have time for other employment	2.53	2.03	P-value 0.0000
Average	**2.42**	**1.92**	-

Note: weighted data

PCA is considered the most appropriate approach as an exploratory data analysis for datasets that involve a large number of observations. PCA is used to reduce the number of variables while retaining the information in the original dataset (Jolliffe, 2011). In this study, PCA was first conducted including all the participants (males, females and "prefer not to say" participants). PCA was then conducted for the two subsamples of males and females separately. This was an important step to allows us to assess if there are any fundamental differences in terms of the underlying traits. Having the separate PCA results allows us to explore the possibility of different determinants for men and women.

Based on the literature on determining the number of factors/components retained from the PCA, the most frequently used strategy is to retain all factors/components whose computed eigenvalue is greater than 1.0 (Zwick & Velicer, 1986). Varimax [orthogonal] rotation was applied, which identified two components' solutions. Similar results were obtained when running PCA including all participants, as well as when considering males and females separately. For the entire study sample, the two components together explain around 63 percent of the variation while it explains 66 percent and 54 percent for males and females, respectively.

The first component explains around 39 percent and 32 percent of the variation for males and females, respectively.

Furthermore, as shown in Appendix D, Table D.4, the pattern matrix including all participants indicates that all item loadings for each component ranged from 0.21 to 0.60. However, after calculating and testing[13] the correlation between each item with each of the two components, results showed that all of the unrotated components (see Appendix D, Table D.5 and Table D.6) are positively and significantly correlated with the first component. Additionally, only four items are positively and significantly correlated with the second component. This result holds for the entire sample and for male and female subsamples independently.

Accordingly, based on the correlation between the unrotated components with the questionnaire items, the first component can be named "Traditional Values", as it captures how an individual views woman, in general, and their work capabilities. The second principal component identified in this study can be labelled as "Employment scepticism", a term originally identified by Valentine (2001). Although the second item, "Women are not suited for work outside the home", is not positively correlated with this component, the remaining four items still reflect an assessment of how individuals view women as workers.

6.4 Determinants of attitudes

To explore the determinants of attitudes toward females' employment, OLS regressions were estimated independently for the entire sample, then for males and females separately (as the results from the PCA and t-tests suggested differences between males and females' responses). The first model includes the first extracted component, "Traditional Values", as the dependent variable. The second component, "Employment Scepticism", is the second dependent variable. The independent variables are dummy variables controlling for demographic characteristics, gender, region, marital and employment status, degree of religiosity and age. Some categories were combined with the reference group due to small cell sizes. For example, "single" was merged with "divorced and widowed" and the categories for participants who believe that religion is "very important" and "rather important" were merged (see Appendix D, Table D.12 for more details about how data was coded).

[13] Using PCA command with VCE option.

The results from the regression analysis can be seen in Table 6.2, they reveal that being male, married, religious and less educated is associated with more traditional attitudes. All of these findings are consistent with the results from previous studies and are not surprising. However, the regression results revealed that there are differences in the factors affecting males and females' attitudes. One difference is related to the effect of region on males' attitudes and another difference is related to the effect of age, marital status, and religiosity on females' attitudes.

Table 6.2 Regression Results

(OLS with robust standard errors)

	All participants (1)		Male participants (2)		Female participants (3)	
	Traditional values	**Employment scepticism**	**Traditional values**	**Employment scepticism**	**Traditional values**	**Employment scepticism**
Male (ref: female)	1.637*** (0.000)	0.648** (0.001)	-	-	-	-
Age 20-25 (ref: 40 and older)	-0.453 (0.089)	-0.120 (0.603)	0.726 (0.240)	0.225 (0.709)	-0.926*** (0.000)	-0.340 (0.136)
Age 26-30	-0.271 (0.371)	-0.134 (0.642)	0.0990 (0.857)	-0.196 (0.606)	-0.692** (0.001)	-0.0616 (0.785)
Age 31-40	-0.526* (0.028)	-0.109 (0.490)	-0.435 (0.554)	-0.163 (0.706)	-0.472** (0.008)	0.0130 (0.937)
Married (ref: not married)	0.477** (0.010)	0.122 (0.486)	0.423 (0.279)	-0.0943 (0.761)	0.699*** (0.000)	0.286 (0.108)
Centre Region (ref: south Region)	-0.563 (0.061)	-0.190 (0.582)	-1.515*** (0.000)	-0.871 (0.288)	0.0104 (0.956)	0.256 (0.164)
East Region	-0.590 (0.170)	-0.294 (0.332)	-1.693 (0.121)	-0.955 (0.226)	-0.217 (0.587)	0.111 (0.630)
West Region	-0.161 (0.560)	-0.156 (0.648)	-1.067** (0.009)	-0.463 (0.542)	0.184 (0.425)	-0.0569 (0.850)
North Region	-1.167* (0.024)	-0.144 (0.805)	-2.329** (0.003)	-0.729 (0.537)	-0.479 (0.121)	0.413 (0.077)
Employed (ref: students)	-0.146 (0.544)	0.281 (0.231)	0.737 (0.087)	0.787* (0.030)	-0.482* (0.015)	-0.191 (0.208)
Unemployed	0.0265 (0.904)	0.444* (0.018)	0.310 (0.634)	0.525 (0.268)	0.0774 (0.710)	0.293 (0.100)
Retired	-0.211 (0.499)	-0.117 (0.567)	-0.489 (0.452)	0.182 (0.668)	-0.177 (0.488)	-0.368 (0.116)
Religious	1.209*** (0.000)	0.484 (0.130)	0.784 (0.135)	0.158 (0.835)	1.038*** (0.000)	0.798** (0.003)
Low education (ref: university education)	0.365* (0.025)	0.0841 (0.566)	0.209 (0.477)	0.185 (0.436)	0.0784 (0.605)	-0.0726 (0.618)
High education	-0.293 (0.177)	-0.179 (0.396)	-0.519 (0.219)	-0.214 (0.429)	-0.253 (0.333)	-0.332 (0.261)
Constant	3.755*** (0.000)	3.512*** (0.000)	5.728*** (0.000)	4.358*** (0.000)	3.416*** (0.000)	3.546*** (0.000)
Observations	1640	1640	374	374	1248	1248
F	12.87	3.560	3.691	1.399	23.42	4.385
R	0.2930	0.1001	0.2642	0.0976	0.2707	0.1249

Note: weighted data. p-values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In terms of the effect of region, participants from the North typically have less traditional attitudes compared to the reference group. It is unsurprising to see that participants from Centre and West regions have less traditional attitudes comparing with the South region (reference group), however, it is surprising to see that the North region have the least traditional attitudes among all regions (-2.329). As based on the researcher observation individuals who originally come from North and South regions may have conservative attitudes and hold traditional attitudes comparing to other regions. The large and negative coefficient for the North region here could be explained in many different ways: first, individual might not be telling their true opinions in response to the survey. Second. they might felt that they need to respond in a way that show their agreement to the changes that recently occurring in Saudi. Third, their attitudes might be truly impacted by the new wave that brought new way of thinking and forced individuals to adapt with the changes occurring in the country. Fourth, the survey sample was skewed, and the weighting didn't correct for this as the number of participants from North region is only 104 (6 percent).

However, regardless of age groups, education levels, employment, marital status and religiosity levels, all males have similar attitudes toward traditional values. Region is the only factor that has a significant differential impact on males' attitudes toward traditional values, with men from the centre, west and north holding less traditional attitudes compared to the south. This finding relates to the impact of regions on males' attitudes as being very important, a feature that was not explored in previous literature, perhaps under the implicit assumption that most Saudi men have homogenous attitudes due to homogeneity in religion and culture. This variation in males' attitudes based on regions may provide a clear explanation for why some Saudi females have more freedom in terms of their employment decisions, receiving more encouragement and support from their "male guardians" toward their rights compared to other females. To explore this further, we run a logistic regression including only male participants and using indicator variables for whether a participant agrees or disagrees with the five statements from the World Value Survey (WVS)[14] controlling for regions, marital status, and religiosity level. The results were as expected – see Appendix D, Table D.13. Regions have a significant impact on one statement: "When jobs are scarce, men should have more right to a

[14] The five selected items from the World Values Survey are: "Both the husband and wife should contribute to household income", "Men make better political leaders than women do", "A university education is more important for a boy than for a girl", "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work", and "When jobs are scarce, men should have more right to a job than women". One rationale for selecting these five items from the WVS is that these items are thought to be related to gender (in)equality, which has an impact on females' employment (Fortin, 2005).

job than women". However, regions have no significant impact on the other statements related to gender equality in education, politics, contribution on household income and the relationship between a working mother and her children.

The influence of region on the attitudes of male individuals can be explained in many ways. One plausible explanation is tied to the extent of Saudis interaction with foreigners who live in these regions. In the Centre, Western, and Eastern regions of Saudi Arabia, the attitudes and values of Saudi males may undergo transformations owing to the presence of non-Saudis who either work or reside in these areas, as discussed in Chapter 2. This recurrent exposure and engagement with individuals holding diverse cultures possess the potential for attitudes and values to shift or impacted. Furthermore, certain regions in Saudi Arabia assume pivotal roles as of governmental interests and attention, particularly concerning the implementation of new policies and reforms in regards female employment. For instance, most of the new policies and reforms in regards female employment start to be implemented in the Centre region and the government monitoring particularly stringent in this area. Hence, males in this region might be accustomed to witnessing a higher prevalence of females engaging in various occupations compared to their counterparts in other regions. Consequently, the degree of acceptance among Saudi males towards these new policies exhibits variations. For instance, males originating from the Southern region may exhibit reluctance in embracing the concept of females employed in bakery shops or restaurants, as their accustomed environment seldom features females in such occupational roles. This stands in contrast to the attitudes of males from the Centre region who may be more acclimated to the presence of females in these particular occupations. Unfortunately, to the knowledge of the researcher, there is a lack of existing studies that delve into this issue.

In terms of results related to female participants, age has a significant impact on females' attitudes. Younger women tend to express less traditional attitudes. This finding is in line with other studies (Inglehart &Baker, 2000; Inglehart & Norris, 2003; Mostafa, 2005; Donnelly et al., 2016). The differences in attitudes based on age could be related to the impact of modernisation[15] on young individuals' attitudes. It is believed that modernisation has resulted in changing people's perceptions toward different aspects of life. Furthermore, modernisation

[15] Modernisation could be defined as the sum of the processes of large-scale change through which a certain society tends to acquire the economic, political, social, and cultural characteristics considered typical of modernity Alberto (2005). It also can be defined as the transformation from a traditional, rural, agrarian society to a secular, urban, industrial society (Chris, 2005).

may increase awareness of rights and responsibilities. This could occur by gaining higher levels of education and more exposure to other cultures (Inglehart & Norris, 2003).

Furthermore, being a married female has a significant association with more traditional attitudes toward traditional values (Ridgeway & Correll, 2004). Performing the daily tasks that are assigned to females, the caring roles and males the breadwinner roles, may impact their attitudes and values. Interestingly, Amato and Booth (1995) found that when married females adopt less traditional attitudes toward gender roles, they report lower marital quality (measured by five dimensions: happiness, interaction, disagreement, problems and marital instability). This may suggest that married Saudi females adopt more traditional attitudes which work in harmony with the Saudi social expectations and reduces marital conflict.

Additionally, results show that females who consider religion as very important have more traditional attitudes and express more scepticism around females' employment compared to females who consider religion less important in their lives. While the relationship between religiosity and traditional attitudes may be intuitively plausible, there are only two studies that have investigated this relationship, and both were conducted in Turkey (Tasdemir & Sakalli, 2010; Glick et al., 2016). They tested the correlation between religiosity and aspects of culture related to beliefs toward honour and negative perceptions toward women. Glick et al. (2016) found that religious females have more traditional attitudes associated with the perception of females being weak and needing males' protection and supervision. This was explained by the legitimisation of gender ideologies through religion, which leads to the endorsement of their beliefs, leaving females holding these beliefs to be less resistant to any negative ideology. However, this study is the first to empirically test the correlation between females' religiosity and their attitudes toward traditional values and scepticism around females' employment.

In summary, age and religiosity do not impact males' attitudes while they impact females', and both these variables are associated with more traditional attitudes. Regions do not have a significant impact on females, while they do have an impact for males.

6.5 Findings from previous chapters in light of the survey findings

Findings from previous chapters have indicated that females who are married, are older, or poorly educated, are the ones who are most significantly influenced by social and cultural norms which form the informal institutions in Saudi Arabia (North, 1990; Dobler, 2011). Those factors (marriage, age and education), either collectively or individually, have a great impact on those females' attitudes and perceptions. These results are confirmed in this study which showed that females who are more religious, are older and are married are more likely to hold more traditional attitudes comparing with other females. Perhaps surprisingly, levels of education did not seem to impact on those females' attitudes. This could indicate collective desire from all Saudi women, regardless of their education levels, to provide an environment where both genders have equal rights. Or possibly, that the survey sample was skewed, and the weighting did not fully correct for this.

The impact of region on males' attitudes found in this study could explain the more/less freedom that females may experience in different regions in Saudi. This would imply that the marginally more egalitarian attitudes of Saudi men in a given region may translate into greater liberties for women in that specific region. The observed disparities revealed in the interviews (Chapter 4), based on tribal affiliation, may mirror these regional variations in attitudes among Saudi men. This suggests a possible correlation between traditional mindsets (both of males and females) and affiliation with specific tribes originating in particular regions. It was documented that those who live in the south region of Saudi Arabia hold more traditional attitudes and are more socially and culturally strict (AL-Hazmi, 2017). It also documented that, in this region, Saudi females have the highest rates of unemployment (General Authority for Statistics, 2023), as discussed in Chapter 2. However, regional differences in males' attitudes do not necessary reflect differences in tribal' attitudes and values toward females' employment, because intra Saudi mobility means different tribes are not always located in specific regions. For instance, there might be individuals who are originally from the South region, but they live in the Centre region, or individuals who live in the North region, but they originally belong to tribes from the West region. Hence, based on the research conducted in this thesis, it might be difficult to draw a link between region and tribe from one side and attitudes from the other side. However, studies investigating the link between tribe and region from one side, and attitudes from the other side, are scarce or non-existent.

6.6 Conclusion

This study provided a contemporary snapshot on social attitudes and explored possible determinants of Saudi attitudes toward females' employment. The aim of the study was to provide an updated picture of Saudi attitudes toward females' employment and to assess which factors might impact these attitudes. 1640 Saudi participants were surveyed, participants' responses to statements taken from the "multidimensional aversion to women who work scale" (MAWWWS). The study found that being male, married, less educated and considering religion as very important, have a negative impact on attitudes toward females' employment. Differences in the determinants of attitudes towards female employment based on gender were also found. For male participants, attitudes are significantly different across regions of provenance, whereas for female participants, age, marriage, and religiosity are significant predictors of their attitudes.

Despite the observed regional variations in males' attitudes, there remains a prevailing trend of traditional attitudes among males when compared to females. This uniformity in male attitudes may explain the persistence of these informal institution. Furthermore, it poses a substantial obstacle to enhancing female participation in the labour market. Accordingly, and based on findings from the survey. It seems that creating policies and reforms in isolation from the informal institutions may undermine the efficiency of the policies implemented by government. Therefore, in regions where people have more traditional attitudes, government needs to intensify social awareness of the policies with advertising campaigns that are region specific. Policy makers should consider these regional differences in terms of attitudes toward females' employment. For instance, creating jobs for females that include very low contact with male workers in regions where men have high traditional attitudes. Focusing on providing more part time jobs and jobs that can be done remotely for females in these regions. This should ensure a gradual implementation of policies and reforms in these regions. This approach is essential to mitigate the potential shock of change, which could otherwise trigger adverse reactions to new policies and reforms. Government should consider how best to roll-out some of the initiatives trialled in the Centre region in terms of males and females' education, and awareness of females' rights. This should lead to changes in the informal institution and thus reducing the power of patriarchy that affect female employment. According to the findings

from the survey, increasing numbers of females working in the private sector will not be possible whilst the informal institutions remain gendered, that is when social norms and attitudes are still gender biased. Therefore, government should consider combining any formal institutions policy with policies targeting the informal institutions; for instance, creating new job opportunities for females needs to be combined with holding awareness courses or seminars, particularly in those regions where individual hold more traditional attitudes. These can be conducted through mosques, schools, universities, and community centres, distributing brochures explaining the benefits of increasing females' employment. Creating new informal rules that support the new policies and reforms. For instance, normalising the idea that males can help in childcaring and in housework, through examples and stories provided for children in schools and childcare centres. This should establish very slow and gradual structure change which will have a profound impact on female employment in the future.

Additionally, the role of education in increasing awareness of the important role of females' employment should not be dismissed in Saudi Arabia (Stubager, 2008). As informal institutions are hard to change, particularly if they are supported by religious thoughts, the introduction of educational material concerning the equal roles and responsibilities of males and females is very important for young children (young males in particular). This should allow for the normalisation of equal roles and responsibilities for males and females, creating a more supportive environment for females' employment. Furthermore, given the importance of religion in the Saudi's life, policy makers should focus on the role of religion. As the Saudi government is shifting toward "moderate Islam", the focus should be put on explaining that Islam encourage females' employment and that God created and treated males and females as equal. Provide males with the position of Islam about these jobs and how these jobs are in line with the religion rules. Finally, the government should emphasise the importance of the role of females' employment and how it can contribute to overall well-being, not only at the household level but also at the national level.

One limitation of the study is that, even though the study sample size is large, and data have been weighted, the demographic composition of the sample is not representative of the Saudi population. Therefore, caution needs to be exercised when drawing general conclusions. In conservative countries, individuals seek conformity; hence, they may respond to the survey questions in a way that does not represent their actual behaviour. For future research, studies

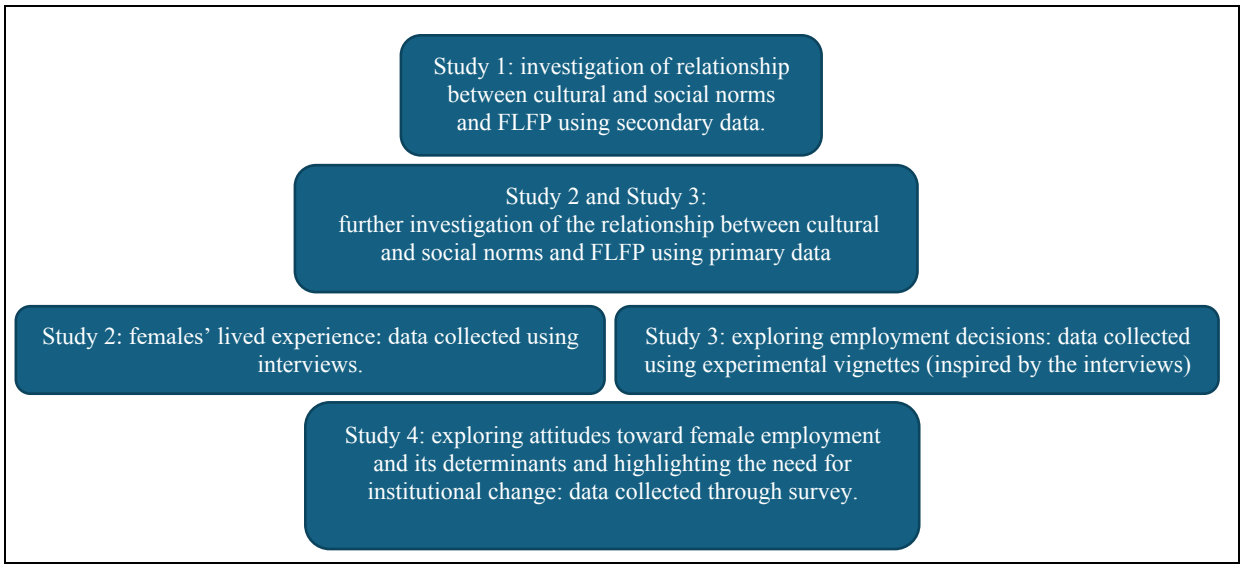
that are planning to survey attitudes in conservative countries such as Saudi Arabia should consider linking attitudes with behaviour. For example, when asking men about their opinions toward females' employment, questions about their wives and sisters' employment status could be included. This is because those men may hold negative attitudes toward females' employment, yet their females' relatives are employed and were not impacted by their negative attitudes or vice versa. Additionally, considering open-ended questions after the participants state their preference would allow them to justify their thoughts (if there are any). This would also allow for better understanding of their positions on females' employment. Consequently, this could also provide more accurate information on suitable interventions to change their negative attitudes (if any) towards female employment.

Chapter 7: Thesis Conclusion

This thesis enriches the literature by examining how social and cultural norms, acting as informal institutions, influence women's participation in the labour market in Saudi Arabia. This thesis investigates the role of social and cultural norms on female employment both at a macro and a micro level. At the macro level, differences in FLFP are explored empirically in countries that have similar religious and cultural backgrounds but different rates of FLFP; these countries are the Arab and non-Arab Muslim-majority countries. At the micro level, the role of the cultural norms and its link with female employment is explored both qualitatively and quantitively with specific reference to the context of Saudi Arabia. In this sense, these studies embrace a case study approach. However, the blending of economic theories based on optimising utility, with insights from behavioural economics, has revealed their role at the meso level, acting as informal institutions which also influence women's participation. Figure 7.1 summarises the content of the thesis.

This thesis consists of three substantive studies, accompanied by an additional contextual investigation that presents findings on gender attitudes obtained from a survey conducted in 2020. This supplementary study serves as a measure for attitudes toward female employment, offering insights into the informal institutions influencing women's employment in Saudi Arabia. Thus, it complements the three main chapters and provides a framework for evaluating the effectiveness of policy adjustments.

Figure 7.1 Thesis summary



The first substantive study in the thesis empirically investigated the determinants of female labour force participation in Arab and non-Arab Muslim-majority countries. The study used data from 34 Arab and non-Arab Muslim-majority countries between 1991 to 2018. The results revealed that countries with higher levels of religious diversity experience higher levels of FLFP. This suggests that when people live amid different combinations of religious thought, their ideas regarding females' employment become more welcoming and more supportive. Additionally, one of the critical results of the study shows that Arab countries that are highly oil dependent with a high level of social conservatism, display significantly low levels of FLFP. This result clearly explains why the FLFP rates differ (taking all other factors into consideration) between the Arab countries that are highly oil dependent. This means that high conservatism and Arabic culture may combine to enforce greater restrictions on women, resulting in norms that discourage FLFP. On the other hand, high oil dependency would be associated with high unearned income for women, represented by the financial support given to women by their male relatives; this ultimately decreases the incentives for women to work, reducing their participation in the labour market. One of the main implications of the study is that Islam on its own should not be considered a main hindrance for female employment in Arab countries. Combinations of social conservatism, the Arabic culture and the very oil revenues are linked to the low FLFP in these countries. A further implication of the study is that Muslim countries should not be treated as homogenous. Being a Muslim country does not necessarily equate with similar levels of religiosity or similar levels of social conservatism.

The second study in this thesis delved deeper into the relationship between female employment and the impact of social and cultural norms, by exploring lived experiences of non-employed Saudi females. The study analysed the data collected from 35 interviews with non-employed Saudi females (age 22 to 40 years). The results revealed that social norms established by the influence of male guardians, social norms manifested through the preference to work within female-only environments, social and cultural norms represented by responsibilities for caring for children and housework are all social barriers that contribute to low FLFP in Saudi Arabia. The study also found that, although Saudi females' decisions were significantly affected by social and cultural norms, their attitudes and perceptions toward these social norms were strongly associated with their demographic characteristics. For instance, females who belong to tribes, are married, are older, or poorly educated, are those who are most significantly

influenced by social and cultural norms. Furthermore, the social norms represented by male guardian approval creates strong barriers for females' employment. Though not a legal requirement for taking up a range of jobs, married females, for instance, are eager to obtain guardian approval to avoid any problems that may impact their marriage. Making females' employment subject to their male guardian's attitudes and opinions implies that either females' preferences are ignored, or that both husband's and wife's preferences must be met. This may prolong the duration of female non-employment and, most importantly, female employment will be restricted to certain occupations.

However, one of the important implications of the study is that the ILO definition of being unemployed may not be accurate for some of the Saudi women who are not in employment. This is because many women who are not employed are highly selective in setting the conditions identifying suitable jobs, such as being in a female-only working environment. Therefore, especially in conservative Arab countries, defining females who do not have a job but who are not actively searching for a job as unemployed might bias aggregate statistics and mislead policy intervention.

The third study explored Saudis' expectations and preferences in relation to employment decisions. This study corroborates the result of the second study, as it investigated the issue of female employment using a different methodology, grounded on the narratives offered by the women who participated in the second study. The study investigated the perception of social norms of Saudi males and females in relation to employment decisions. It investigated the role played by gender of the job seeker, financial support provided by husbands to wives, the type of job considered (mixed- or single-gender environments), and the wage offered. It also explored males and females' employment preferences when facing different employment scenarios. The study surveyed 369 Saudi university students online, using experimental vignettes as a research tool. The results showed that all of the factors considered in the vignettes have a significant impact on the Saudi males and females' perception of social norms in relation to employment decisions. In particular, the results highlight that Saudi women are pressured to follow social norms that limit their participation in the labour market. The results also show that Saudi males and females have assumed that their personal preferences (working in an SGWE) are in line with the other participants because they predict that others' preferences are identical to their preference, which could be a possible justification for their personal preference. Furthermore, nearly half of the women in the sample changed their personal preference from working in an SGWE to a mixed-gender working environment when they were

told that other females' preferences were different from their own, and that the majority of women preferred to work in a mixed-gender environment. These results point to the importance of changing or updating the perceptions of those women who restrict their employment preferences to "female-only" working environment in order to increase their chances to be employed.

The fourth study investigated Saudis' attitudes toward females' employment by exploring the possible determinants of these attitudes. This study shed light on the significance of institutional reforms, both formal and informal, to achieve gender equality in the labour market, by emphasising the necessity of structural institutional change. The study enriches the debate on policy formulation and future planning; it provides a snapshot on attitudes at a time when there have been a lot of reforms aimed at boosting FLFP, and so, gives us a sense of how a supportive policy translates into acceptance, and how it can made more effective in light of the study findings. Over 1,600 Saudi participants were surveyed, and participants' responses to statements were taken from the "multidimensional aversion to women who work scale" (MAWWWS). The study found that being male, married, less educated and considering religion as very important, have a negative impact on attitudes toward females' employment. Differences in the determinants of attitudes toward female employment based on gender were also found. For male participants, attitudes were significantly different across regions of provenience, whereas for female participants, age, marriage, and religiosity were significant predictors of their attitudes. The results from this study are exploratory but useful to produce an up to date account of attitudes toward females' employment in Saudi Arabia.

Overall, this thesis contributes to the economic literature by incorporating qualitative methods alongside the quantitative approaches typically employed in economics studies. It integrates behavioural economics theories to interpret findings obtained through regression analysis, emphasising the significance of employing behavioural economics in understanding female economic decisions, particularly regarding employment choices. Some of these findings cannot be explained using economic theories based on optimising utility, as individuals do not always make rational choices.

The first study contributed to the female labour participation literature by highlighting the positive impact of the religious diversity on FLFP. The impact of religious diversity has never

been explored before. The study also highlighted the negative impact of the combination of being a conservative and an oil-dependent country. The second study also explored the impact of a factor that was neglected in previous research, which is tribe-identity. This factor was found to be important in determining women's attitudes and perceptions toward their employment. The third study has contributed to the literature by adopting a novel methodology, the use of experimental vignettes. To our knowledge, the study was the first exploring females' employment choices and the role of social and cultural norms using this research tool and involving female participants, particularly in the Arab countries. This research method has helped to uncover the influence of social and cultural norms over certain behaviours of females. It also showed that some female participants hold different beliefs than those that they express, furthering the understanding of female employment decisions in Saudi Arabia. Finally, the fourth study provided significant contributions to the literature by providing a benchmark on contemporary attitudes in Saudi Arabia, and by exploring the differences in attitudes based on the demographic characteristics. The study reflects on current policies that aim at increasing the participation of Saudi female in light of the findings of the other research conducted in this thesis. Overall, this thesis contributes to a still very limited literature exploring attitudes and perceptions toward females' employment in the Arab region, in particular, and the Muslim countries in general.

The limitations of the research presented in this thesis are tied to data availability and/or generalisability. First, in study one, the level of conservatism was measured based across four elements: early marriage, contraceptive use, females' empowerment, and adolescent fertility rates. These four elements may not fully capture the countries' level of conservatism. However, we used those measures as they tend to be the most reliable indicators for the countries' level of conservatism and the data for them were generally available. It would be desirable to employ a wider set of indicators, such as the attitudes toward females' roles, toward the roles of mothers and fathers, and toward male as breadwinner and female as homemaker. Concerning study two, it is important to recognise that women participating in interviews are not representative of the different regions in Saudi Arabia. Hence, the results may not be generalised. Having access to interview participants from different regions would help in identifying similarities and differences in perceptions and attitudes related to employment across regions. A further potential limitation can be identified for study three, as employment decisions elicited through the vignettes could differ from those taken in real world situations (Hughes & Huby, 2004;

Parkinson & Manstead, 1993). However, in this research we were less concerned about generalisability, as the focus was on exploring attitudes and perceptions toward employment in certain scenarios, rather than predicting choices in real life. In study four, one limitation is the sample size and representativeness of the Saudi population; therefore, caution needs to be exercised when drawing general conclusions from the findings.

This thesis has a number of important policy implications. First, after conducting study one, to be able to investigate and measure the impact of social and cultural norms, governments (particularly the Arab countries) should be able to provide more detailed data related to these norms, for instance, the number of males who object to the employment of their female relatives, number of males and females who preferred to work in a single gender working environment. Having this information would allow better design of an intervention because it would be clear who they need to target. Additionally, providing a consistent approach and way to measure these norms across all of the countries (particularly the Arab countries) will help in understanding the effect of these norms in clearer and accurate way. For instance, measures similar to the GII.

In terms of policy implications related to study two, three and four. Significant social changes are occurring at a very fast pace in Saudi Arabia. Whilst attitudes are shifting towards greater acceptance of female employment and empowerment, a large share of the population find it hard to accept and adapt. This includes many women for whom the lived experience of conservative social norms has become embedded in their own outlooks. Therefore, policy makers who aim to increase FLFP need to recognise all groups, including those for whom the changes are more challenging. This possibly can be done in all of the other Muslim countries who are focusing on increasing females' employment level. Governments should not neglect those females who may need more time to process these changes. Governments should devote more effort in educating those females about their rights and their important role in the society through schools, universities, and key institutions. Increasing the level of awareness of the importance of female empowerment from a very young age is very important. This is to ensure that the young generation are capable of adapting with the new social and cultural changes. Meanwhile, in a country such as Saudi Arabia, even if women want to work, they might be face restrictions in regard to the characteristics of the jobs offered to them. Aside from reservation wages that impact females' employment decisions, there is another concept identified by this research, which we can call "reservation employment conditions" which may

be even more important than reservation wages for some females in such countries. Under the reservation employment conditions theory, every employment opportunity that is offered for a woman in Saudi Arabia must be compatible with social expectations (or social norms), which implies that the employment opportunity must ensure limited contact with unrelated males, it must ensure reputational safety for all female workers, must be practiced in public and fixed places, and preferably held during daytime rather than at night. Additionally, another important implication for policy makers to consider, is establishing an agency or organisation that measures the social and cultural changes that are occurring in the country. These statistics should be advertised and shared with the public in order to update their perceptions and attitudes. This may allow for quicker adaptation to the new social and cultural changes.

Muslim countries aiming to shift societal perceptions on specific issues, like the importance of female employment, should prioritise leveraging organised religion. Religion can serve as a powerful influencer, particularly in shaping attitudes among males. One policy recommendation involves promoting a "moderate" Islamic ideology while discouraging extreme and ultra-conservative views. This entails advocating for pure Islamic principles regarding female employment and discouraging extremism. Policy suggestions may include organised campaigns in educational institutions and media platforms such as television and radio. Given the presence of misinformation in conservative societies, governments must correct for these misconceptions, perhaps through regular surveys on female participation in various occupations. Ensuring widespread dissemination of survey results, particularly to those with misconceptions, is crucial. Making sure that these results are achievable through social media and traditional media channels is also very important.

One of the recommendations emerging from this thesis is that empirical investigations around FLFP should not neglect or dismiss the role of cultural and social factors, especially when considering Muslim countries. Although collecting reliable data on sensitive matters is challenging, this thesis reveals the potential of innovative research methods in exploring people’s perceptions and attitudes, such as the use of experimental vignettes. These methods may be particularly powerful in societies where people find it difficult to express views truly and openly.

For future studies, in terms of using vignettes as a research tool, researchers maybe able to explore the strength of social norms by varying different factors; the type of jobs (for instance, education vs health), the wage rates, the distance of job, number of working hours. All of these factors should provide insights that could help explaining females' employment decisions. Using the same vignettes across different countries and regions could also provide good understanding of differences in females' employment decisions between countries, as well as within the countries. Future studies should consider linking beliefs to behaviours. This is important as some participants may not report their true responses when responding to survey questions. For instance, when asking a male participant whether he agrees that his wife could work in a mixed gender environment, he might answer with yes just to signal that he is supportive for females' employment. In reality, this participants' wife may be unemployed, or her husband refuses to allow her to work in a mixed environment. This could be measured if the researcher were able to collect household level data which includes information on employment status for both members of the couple before posing the survey questions on attitudes. Additionally, future studies that are planning to measure changes in attitudes and perceptions in Saudi, or compare it with other countries, should make use of the findings provided by this study and use same survey items used in study four. This should provide comparable data that show whether there are any significant changes.

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Appendix A

Table A.1 Data definition and sources

Variable Name	Definition	Source
Labour force participation rate, female (% of female population ages 15+)	Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.	International Labour Organization, ILOSTAT database (1991-2018)
GDP per capita, ppp (Constant 2010 USD)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2010 U.S. dollars.	World Bank national accounts data, and OECD National Accounts data files
Fertility rate	Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.	World Bank (1991-2018)
Unemployment, total (% of total labor force)	Unemployment refers to the share of the labor force that is without work but available for and seeking employment.	International Labour Organization, ILOSTAT database (1991-2018)
Urban population (% of total)	Urban population refers to people living in urban areas as defined by national statistical offices. The data are collected and smoothed by United Nations Population Division.	World Bank (1991-2018)
Religious Diversity Index (RDI)	The Religious Diversity Index is based on the shares of eight major world religions (Buddhism, Christianity, folk or traditional religions, Hinduism, Islam, Judaism, other religions considered as a group, and the religiously unaffiliated); higher scores indicate higher diversity.	Pew Research Centre (2010)
Oil rents (% of GDP)	Oil rents are the difference between the value of crude oil production at world prices and total costs of production.	World Bank (1991-2018)
Adolescent fertility rate	Adolescent fertility rate is the number of births per 1,000 women ages 15-19. (Converted from rates to percentage by dividing by 10)	World Bank (1991-2018)
Contraceptive use	Contraceptive prevalence, any methods (% of women ages 15-49)	United Nations Population Division, World Population Prospects (1991-2018)
Proportion of seats held by women in national parliaments (%)	Women in parliaments are the percentage of parliamentary seats in a single or lower chamber held by women.	World Bank (1991-2018)
Early Marriage	Percentage of girls married under age 18.	Social Institutions and Gender Index (SIGI) (1991-2018)
Literacy rate, adult male (% of males ages 15 and above)	Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life.	World Bank (1991-2018)

Literacy rate, adult female (% of females ages 15 and above)	Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life.	World Bank (1991-2018)
• **A woman can choose where to live in the same way as a man** • **A woman can obtain a judgment of divorce in the same way as a man** • **A woman can register a business in the same way as a man** • **A woman has the same rights to remarry as a man**	Women, Business and the Law tracks progress toward legal equality between men and women in 190 economies. Data are collected with standardized questionnaires to ensure comparability across economies. Questionnaires are administered to over 2,000 respondents with expertise in family, labor, and criminal law, including lawyers, judges, academics, and members of civil society organizations working on gender issues. Respondents provide responses to the questionnaires and references to relevant laws and regulations. The Women, Business and the Law team collects the texts of these codified sources of national law - constitutions, codes, laws, statutes, rules, regulations, and procedures - and checks questionnaire responses for accuracy.	World Bank: Women, Business and the Law (1991-2018) https://wbl.worldbank.org/

Table A.2 Country Classifications (level of conservatism)

Country Name	Countries that have low contraceptive use compared to the world average (lower than 61.23 percent)	Countries that have low female empowerment compared to the world average (lower than 18.4 percent)	Countries that have high percentage of early marriage compared to the world average (higher than 29 percent)	Countries that have high percentage of adolescent fertility rate (higher than 5.3 percent)	Overall level of conservatism
Algeria	X	X			Low
Azerbaijan	X	X		X	High
Bahrain		X			Low
Bangladesh	X	X	X	X	High
Chad	X	X	X	X	High
Comoros	X	X		X	High
Egypt	X	X		X	High
Gambia	X	X		X	High
Indonesia	X	X			Low
Iraq	X		X	X	High
Iran		X			Low
Kazakhstan	X	X			Low
Kuwait	X	X			Low
Lebanon		X			Low
Libya	X	X			Low
Malaysia	X	X			Low
Mali	X	X	X	X	High
Mauritania	X	X	X	X	High
Morocco		X		X	Low
Nigeria	X	X	X		High
Oman	X	X			Low
Pakistan	X			X	Low
Qatar	X	X			Low
Saudi Arabia	X	X			Low
Sierra Leone	X	X		X	High
Sudan	X	X		X	High
Tajikistan	X	X			Low
Tunisia					Low
Turkey		X			Low
United Arab Emirates	X	X			Low
Uzbekistan		X		X	Low
Senegal	X			X	Low
Jordan	X	X			Low
Yemen	X	X		X	High

Source: author's calculation based on dataset. Thresholds were determined by the average values for each variable from 1991-2018. X indicates that the country has higher/lower than the world average for the specified variable. Blank cells indicate that the country does not have high/lower value compared to the world average for the specified variable.

Table A.3 Descriptive statistics

Variable Name	Mean	Std. Dev.	Min	Max
Female Labour Force Participation	34.89	16.48	5.98	65.66
Log of Gross Domestic Product (in billions)	8.99	1.24	6.71	11.72
Fertility Rate	3.79	1.57	1.41	8.45
Unemployment	7.72	5.31	0.11	31.84
Urbanisation	56.19	22.21	20.25	100
Religious Diversity	2.19	2.14	0	6.3
Descriptive statistics for the dummy variables				
Variable Name	**1 (%)**		**0 (%)**	
Highly conservative	38		62	
High oil dependency	32		68	
High conservative * high oil dependency	9		91	
Arab	53		47	
Arab* high oil dependent	26		74	
Arab* high conservative	18		82	
Arab* high oil dependent* high conservative	6		94	
Inequality in education	82		18	

Table A.4 Countries and their classifications

Arab Countries	Non-Arab Muslim Majority Countries	Highly conservative countries (Under definition 1)	Highly conservative countries (Under definition 2)	Highly oil-dependent countries (20% and higher)	Highly oil-dependent countries (25% and higher)
Algeria	Azerbaijan	Comoros	Bahrain	Algeria	Iraq
Bahrain	Bangladesh	Mauritania	Bangladesh	Azerbaijan	Kuwait
Comoros	Chad	Egypt	Chad	Iraq	Libya
Egypt	Gambia	Sudan	Comoros	Iran	Oman
Iraq	Kazakhstan	Yemen	Iraq	Kuwait	Qatar
Jordan	Mali	Chad	Iran	Libya	Saudi Arabia
Kuwait	Malaysia	Gambia	Jordan	Oman	United Arab Emirates
Libya	Nigeria	Iraq	Kuwait	Qatar	Yemen
Lebanon	Pakistan	Nigeria	Malaysia	Saudi Arabia	
Qatar	Iran	Sierra Leone	Oman	United Arab Emirates	
Morocco	Indonesia	Mali	Pakistan	Yemen	
Mauritania	Senegal	Azerbaijan	Qatar		
Oman	Sierra Leon	Bangladesh	Saudi Arabia		
Saudi Arabia	Tajikistan		Sudan		
Sudan	Turkey		United Arab Emirates		
Tunisia	Uzbekistan		Yemen		
United Arab Emirates					
Yemen					

Robustness check:

To examine the robustness of the results obtained, different approaches were implemented. Under each robustness check, the results for the variables of interest (RDI, Arab, interaction terms for Arab countries, highly conservative and highly oil dependent) are identical to the results obtained earlier, which confirms the robustness of the given results.

First, a different definition of high oil dependency was used. Countries with an average of 25% and higher of oil rent (as percentage of GDP) were considered highly oil dependent, as opposed to the previous definition using 20%. Results are in Table A.5, which all similar to the results given when using the previous definition of oil dependency.

Table A.5 Robustness check using a different definition of high oil dependency

Variables	**High oil dependency (25 % and higher)**
Log GDP	2.284 (0.871)
Log GDP^2	-0.264 (0.743)
Log Fertility Rate (Fertility rate, total (births per woman)	-7.222** (0.001)
Lagged Unemployment (% of total labour force)	-0.271** (0.004)
Log Urbanisation (% of total population)	-14.18 (0.067)
Inequality in Education	-11.56* (0.017)
Religious Diversity Index (RDI)	3.392*** (0.000)
High oil dependency	9.496 (0.092)
High conservatism	10.56 (0.060)
Arab (dummy variable for Arab countries)	-2.985 (0.649)
Time	0.245* (0.011)
Time * Arab	-0.0781 (0.369)
Arab * high conservative	-10.35 (0.210)
Arab * high conservative * high oil dependency	-17.88* (0.011)
Constant	100.4

	(0.077)
Observations	918
F	298.74 (0.0000)
R square: within **Between** **Overall**	0.40 0.67 0.66

Note: p-values in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001.

Second, we used different measures to construct the conservatism indicator. Countries were classified using the same approach based on four different measures as follows. 1) A woman can choose where to live in the same way as a man 2) A woman can obtain a judgment of divorce in the same way as a man 3) A woman can register a business in the same way as a man 4) A woman has the same rights to remarry as a man. The country will be considered as highly conservative if the answer is "no" in response to three or more of these statements. This definition of conservativeness can be closely linked to the conservativeness of the institutions while the earlier definition is more linked to the culture. The results obtained, in Table A.6, all are similar to the results given earlier.

Table A.6 Robustness check using different definitions of conservativism

	(1)	**(2)**
Variables	**20 %**	**25%**
Log GDP	1.711 (0.903)	1.784 (0.899)
Log GDP^2	-0.227 (0.777)	-0.230 (0.774)
Log Fertility Rate (Fertility rate, total (births per woman))	-7.274** (0.001)	-7.320** (0.001)
Lagged Unemployment (% of total labour force)	-0.271** (0.004)	-0.271** (0.003)
Log Urbanisation (% of total population)	-13.97 (0.058)	-13.87 (0.058)
Inequality in Education	-7.430 (0.183)	-9.250 (0.098)
Religious Diversity Index (RDI)	4.746*** (0.000)	4.415*** (0.000)
High oil dependency	10.54 (0.085)	18.96*** (0.000)
High conservatism (definition 2)	-19.01*** (0.000)	-15.82*** (0.000)
Arab	-10.13 (0.159)	-11.14 (0.089)
Time	0.240** (0.007)	0.238** (0.007)
Time and Arab	-0.0764	-0.0755

	(0.364)	(0.367)
Arab and high oil dependency	-1.913 (0.858)	Omitted
Arab * high conservative	20.31** (0.003)	17.72** (0.006)
Arab * high conservative* high oil dependency	-7.158 (0.458)	-17.86** (0.001)
Constant	102.5 (0.072)	104.6 (0.067)
Observations	918	918
F	235.20 (0.0000)	240.93 (0.0000)
R square: within **Between** **Overall**	0.40 0.67 0.66	0.40 0.68 0.67

Note: p-values in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Third, in the variable GDP per capita, there were some missing values for the countries of Libya, Kuwait and Qatar. Those missing values were in the beginning of the time series for each of these countries, so we used the first observed value when reporting the earlier results. For example, for Kuwait we used the value from 1995 to fill in the missing values from 1991 to 1994. To check the robustness of the earlier results, we rerun the regression using different approaches: 1) Without filling in the missing values (Table A.7), although the number of observations were reduced, all of the obtained results were identical to the results given earlier when the missing values were filled in. 2) We rerun the regression without these three countries that have missing values (Table A.8). 3) We rerun the regression without the GDP per capita variable (Table A.9 Column 1). 4) We rerun the regression using the average values (for the year before and the year after for any years that have strange values, such as in Libya in 2011, and in Kuwait from 2000 to 2009 (Table A.9, Column 2). 5) We rerun the regression using the command ipolate in Stata to fill in the missing values and any odd values (Table A.9, Column 3).

Table A.7 Regression results: no imputation for the missing values in the GDP per capita

Variables	(1)	(2)	(3)	(4)	(5)
Log GDP	3.940 (0.797)	2.005 (0.887)	2.280 (0.872)	2.435 (0.863)	2.371 (0.867)
Log GDP^2	-0.311 (0.713)	-0.240 (0.765)	-0.255 (0.752)	-0.264 (0.744)	-0.261 (0.747)
Log Fertility Rate (Fertility rate, total (births per woman)	-6.677** (0.008)	-7.272** (0.002)	-7.282** (0.002)	-7.285** (0.002)	-7.254** (0.002)
Log Urbanisation (% of total population)	-11.98 (0.065)	-13.68 (0.069)	-13.68 (0.070)	-13.82 (0.072)	-13.78 (0.073)
Lagged Unemployment (% of total labor force)	-0.227** (0.002)	-0.272** (0.004)	-0.272** (0.004)	-0.273** (0.003)	-0.272** (0.004)
Religious Diversity Index (RDI)	4.293*** (0.000)	4.387*** (0.000)	4.100*** (0.000)	3.506*** (0.000)	3.612*** (0.000)
Inequality in Education	-12.06* (0.013)	-11.84* (0.018)	-13.08* (0.012)	-13.82** (0.007)	-9.757 (0.090)
High oil dependency	1.682 (0.711)	2.743 (0.536)	5.903 (0.321)	1.084 (0.899)	-9.030 (0.128)
High conservatism	4.122 (0.434)	2.762 (0.639)	5.666 (0.285)	11.98* (0.042)	8.006 (0.208)
Arab	-8.041* (0.049)	-5.970 (0.227)	-6.283 (0.218)	-0.179 (0.980)	-4.281 (0.554)
Time	0.176** (0.004)	0.235* (0.012)	0.235* (0.013)	0.236* (0.014)	0.236* (0.014)
Arab*Time		-0.0809 (0.346)	-0.0809 (0.349)	-0.0814 (0.350)	-0.0812 (0.351)
High oil dependency * High conservatism			-10.29 (0.233)	-6.058 (0.372)	17.58 (0.052)
Arab * high oil dependency				2.395 (0.784)	16.30* (0.043)
Arab * High conservative				-15.35 (0.064)	-7.710 (0.392)
Arab * High conservative* high oil dependency					-33.23** (0.006)
Constant	82.70 (0.194)	100.5 (0.077)	99.94 (0.080)	99.31 (0.082)	97.65 (0.087)
Observations	898	898	898	898	898

Note: p-values in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.8 Regression results after dropping countries that have missing values

Variables	(1)	(2)	(3)	(4)	(5)
Log GDP	5.475 (0.741)	3.523 (0.819)	3.657 (0.814)	3.796 (0.807)	3.764 (0.809)
Log GDP^2	-0.381 (0.686)	-0.313 (0.730)	-0.321 (0.725)	-0.329 (0.719)	-0.328 (0.719)
Log Fertility Rate (Fertility rate, total (births per woman)	-6.016* (0.012)	-6.656** (0.003)	-6.660** (0.003)	-6.645** (0.003)	-6.622** (0.003)
Lagged Unemployment (% of total labor force)	-0.213** (0.002)	-0.263** (0.004)	-0.263** (0.004)	-0.264** (0.004)	-0.263** (0.004)
Log Urbanisation (% of total population)	-10.72 (0.096)	-12.53 (0.091)	-12.55 (0.091)	-12.71 (0.092)	-12.71 (0.093)
Inequality in Education	-13.76** (0.008)	-13.51* (0.013)	-14.27* (0.011)	-14.72** (0.008)	-11.25 (0.081)
Religious Diversity Index (RDI)	3.797*** (0.000)	3.900*** (0.000)	3.784*** (0.000)	3.258*** (0.000)	3.332*** (0.000)
High oil dependency	-3.148 (0.482)	-2.015 (0.639)	-0.00508 (0.999)	-2.100 (0.777)	-9.439 (0.136)
High conservatism	6.527 (0.212)	5.065 (0.379)	6.530 (0.227)	12.30* (0.032)	9.257 (0.138)
Arab	-9.562* (0.023)	-7.320 (0.142)	-7.354 (0.143)	-1.024 (0.883)	-4.122 (0.579)
Time	0.158* (0.030)	0.222* (0.029)	0.223* (0.030)	0.224* (0.031)	0.225* (0.030)
Arab*Time		-0.0884 (0.306)	-0.0885 (0.307)	-0.0892 (0.307)	-0.0893 (0.307)
High oil dependency * High conservatism			-5.596 (0.461)	-2.042 (0.722)	15.45 (0.109)
Arab * high oil dependency				-0.772 (0.916)	9.934 (0.178)
Arab * High conservative				-14.30 (0.067)	-8.707 (0.328)
Arab * High conservative* high oil dependency					-24.94* (0.036)
Constant	71.45 (0.278)	90.04 (0.126)	89.85 (0.129)	88.94 (0.133)	87.46 (0.140)
Observations	837	837	837	837	837
Number of countries	31	31	31	31	31
F/Wald	211.63 (0.0000)	231.44 (0.0000)	286.30 (0.0000)	328.62 (0.0000)	332.62 (0.0000)
R2: within **Between**	0.32 0.68	0.33 0.66	0.33 0/67	0.33 0.70	0.33 0.72

Overall	0.67	0.65	0.66	0.69	0.71

Note: three countries were dropped from the data set. These countries have missing values in the GDP per capita variable. Kuwait was missing values in the beginning of the time series, from 1991 to 1994. Libya was missing values also in the beginning of the time series, from 1991 to 1998. Qatar was missing values from 1991 to 1998.

Table A.9 Regression results: without the GDP per capita variable and when data was smoothed

Variables	(1)	(2)	(3)
Log Fertility Rate (Fertility rate, total (births per woman)	-8.168** (0.004)	-7.398*** (0.001)	-7.564** (0.003)
Log Urbanisation (% of total population)	-13.19 (0.084)	-13.98 (0.069)	-14.24 (0.069)
Lagged Unemployment (% of total labor force)	-0.224* (0.016)	-0.269** (0.005)	-0.270** (0.004)
Religious Diversity Index (RDI)	3.067*** (0.000)	3.615*** (0.000)	3.568*** (0.000)
Inequality in Education	-9.429 (0.075)	-10.21 (0.070)	-9.353 (0.101)
High oil dependency	-12.97* (0.015)	-9.908 (0.080)	-9.200 (0.106)
High conservatism	11.75 (0.117)	8.969 (0.195)	7.778 (0.219)
Arab	-6.898 (0.313)	-4.362 (0.550)	-4.354 (0.542)
Time	0.155 (0.113)	0.224* (0.034)	0.240** (0.010)
Arab*Time	-0.0297 (0.767)	-0.0701 (0.469)	-0.0742 (0.380)
High oil dependency * High conservatism	16.17 (0.087)	17.05 (0.067)	18.16* (0.045)
Arab * high oil dependency	16.72* (0.023)	17.23* (0.031)	15.97* (0.044)
Arab * High conservative	-8.749 (0.346)	-8.364 (0.365)	-7.684 (0.395)
Arab * High conservative* high oil dependency	-29.92* (0.012)	-32.57** (0.009)	-33.17** (0.006)
Log GDP		6.930 (0.608)	-0.437 (0.967)
Log GDP^2		-0.499 (0.519)	-0.102 (0.862)
Constant	98.76*** (0.001)	77.47 (0.146)	111.8* (0.017)
Observations	918	918	918
Number of countries	34	34	34
R2: within	0.38	0.40	0.40

Between	0.70	0.68	0.68
overall	0.69	0.67	0.67

Note: p-values in parentheses* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Column (1) includes results after dropping the variable GDP per capita (due to missing values for some of the countries). Column (2) includes regression results after smoothing the data (Libya: using the average values of 2010 and 2012 to fill in 2011). Column (3) includes regression results after using the command ipolate in Stata to fill in all the missing values for Libya, Kuwait and Qatar.

Issues with endogeneity:

Based on previous studies, there could be a reverse causality between FLFP and fertility rates, and also reverse causality between FLFP and GDP, which makes these variables not strictly exogenous (Mishra & Smyth, 2010). To investigate the presence of these relationships between the named variables, the Granger-causality Wald test was used. The results revealed that there is no reverse causality between FLFP, GDP and fertility rates in the sample.

Table A.10 Results from panel VAR-Granger causality Wald test

Equation/excluded	Chi2	df	Prob> chi2
FLFP			
Log GDP	0.116	1	0.733
Log GDP2	0.124	1	0.725
ALL	0.892	2	0.640
Log GDP			
FLFP	0.007	1	0.976
Log GDP2	2.141	1	0.142
ALL	3.153	2	0.215
Log GDP2			
FLFP	0.007	1	0.934
Log GDP	2.141	1	0.143
ALL	3.153	2	0.207
FLFP			
Log Fertility	0.098	1	0.754
ALL	0.098	1	0.754
Log Fertility			
FLFP	0.527	1	0.468
ALL	0.527	1	0.468

Note: Ho: Excluded variable does not Granger-cause Equation variable, Ha: Excluded variable Granger-causes Equation variable.

However, to control for the potential presence for endogeneity problems in the regression, two-step system GMM was employed (Arellano & Bond, 1991) as a robustness check. This includes regressions in levels and regressions in differences simultaneously. Lagged differences are used as instruments in the level equations and lagged levels are used as instruments in the differenced regressions. To obtain robust estimates from the GMM model, the study used the Hansen and Sargan test for over-identifying restrictions, and the results show failure to reject the null hypothesis and concludes the validity of the instruments. All of the obtained results confirmed the previous results obtained from the FE and RE models.

Table A.11 Results from System GMM

Variables	FLFP
Lagged FLFP	0.834*** (0.000)
Log GDP	24.77 (0.239)
Log GDP^2	-1.378 (0.236)
Log Fertility Rate (fertility rate, total (births per woman)	1.023 (0.705)
Log Unemployment (% of total labor force)	-0.0953 (0.325)
Log Urbanisation (% of total population)	1.258 (0.387)
Inequality in Education	-3.269 (0.105)
Religious Diversity Index (RDI)	0.473* (0.017)
High oil dependency (15% and higher)	-7.979 (0.066)
High conservatism	3.648 (0.119)
Arab (dummy variable for Arab countries)	-4.156* (0.013)
Time	-0.00962 (0.556)
Time * Arab	0.0373 (0.396)
High oil dependency * High conservatism	4.711 (0.185)
Arab * high oil dependency	14.25 (0.077)
Arab * high conservative	-0.860 (0.712)
Arab * high conservative * high oil dependency	-14.12* (0.048)
Constant	-106.8 (0.262)
Observations	918
F	4289.7 (0.0000)
AR(1)	0.133
AR(2)	0.775

Hansen	0.925
Sargan	0.370
Number of instruments	22
Number of groups	34
Lags used as instruments	18^{th}

Note: p-values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure A.1 FLFP

Figure A.2 GDP per capita

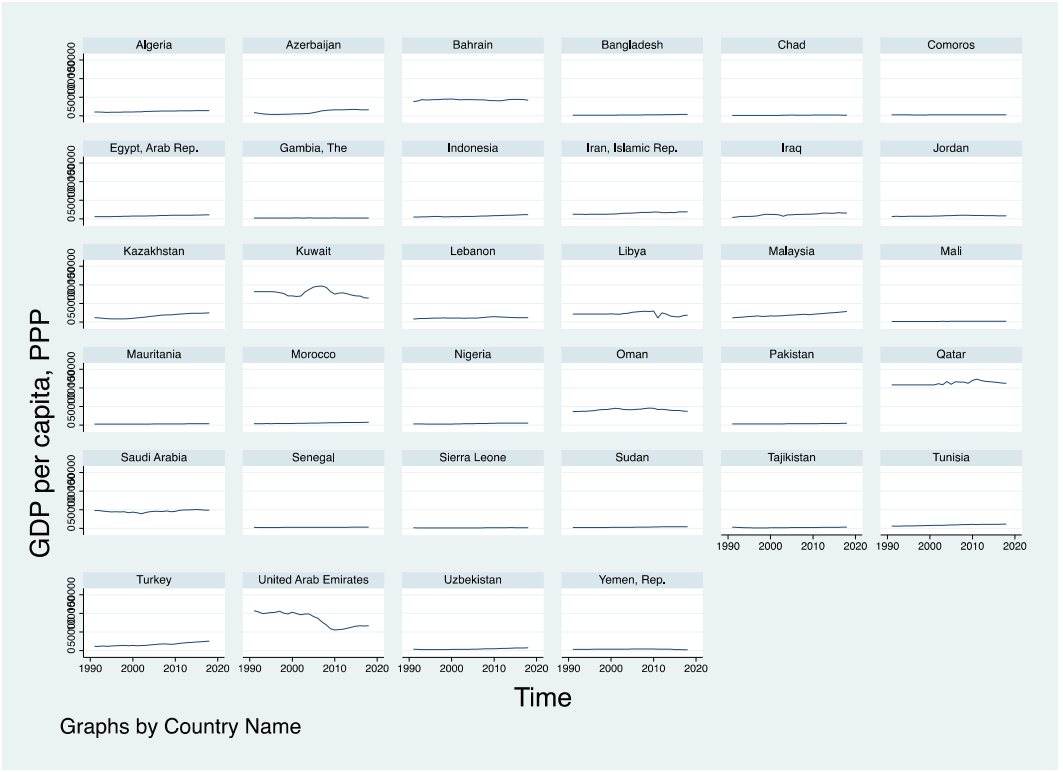


Figure A.3 Fertility rates

Figure A.4 Urbanisation

Figure A.5 Unemployment

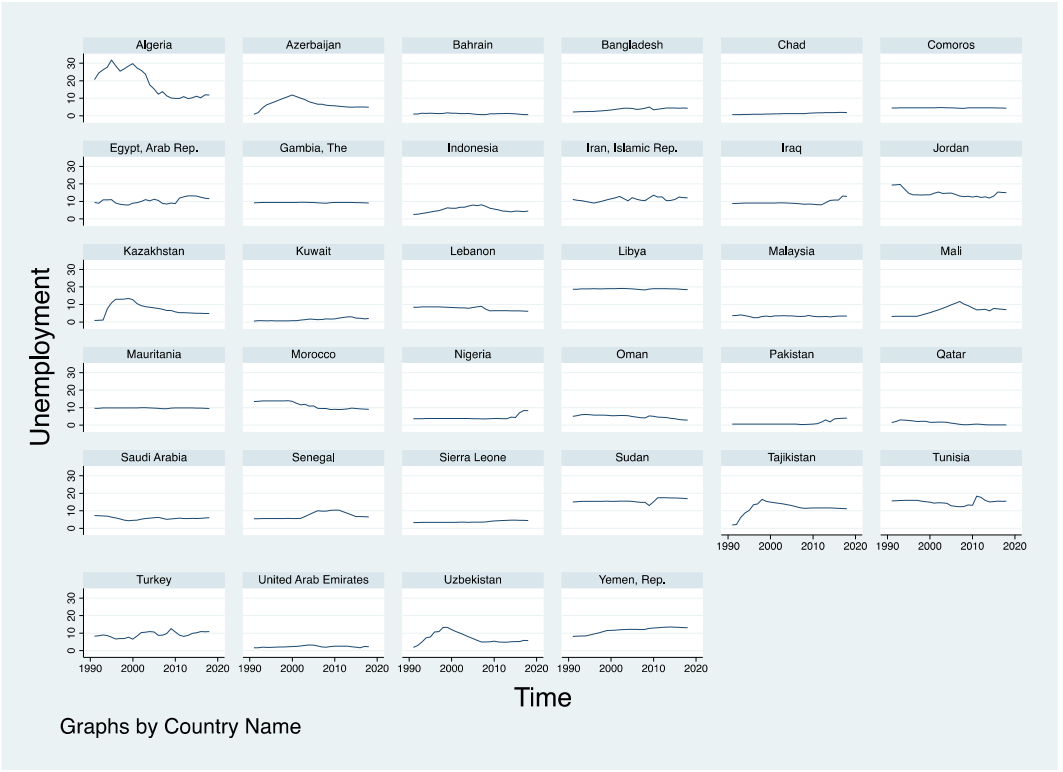
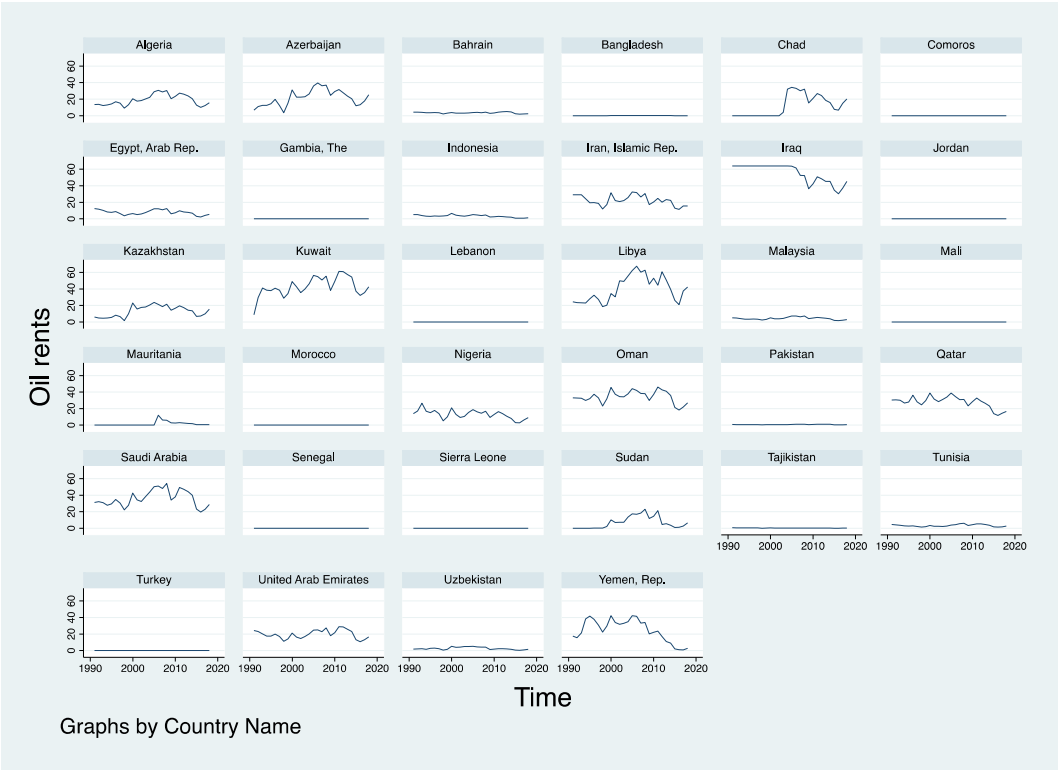


Figure A.6 Oil rents



Appendix B

Table B.1 Information Sheet and consent form

Research project title:	The Impact of Social and Gender Norms on Female Employment in Saudi Arabia
Researcher:	Dalal Alotaibi
Contact details:	Phone: +44(0)7757751816 Email: D.Alotaibi@uea.ac.uk or misdoly@hotmail.com

About the Project:
These interviews are part of the researcher thesis that consist of three studies: the determinants of female labour force participation in the Arab countries; the effect of social and gender norms on female unemployment in Saudi Arabia; how employed females faced and challenge Saudi social norms and culture. This project aims to highlight how social and gender norms may affect female unemployment and how male guardians may play a role in limiting female job opportunities.

Who is responsible for the data collected in this study?

- **The researcher is Dalal Alotaibi. She works as a lecturer in Nora University and she is a PhD student in the University of East Anglia in UK, Norwich.**
- **The data will be used only by the researcher.**
- **Interviews will be audio recorded, anonymised, transcribed and translated into English. They will be used for the research purpose only.**
- **The interviews duration will last approximately 45 minutes (each interview)**
- **The data will be stored in a USB memory drive (password protected).**
- **This research was ethically approved by the Research Ethics Committee of the School of Economics at the University of East Anglia in July 2019.**

What is involved in the study?
From 23 July to 30 September, the researcher will conduct interviews with unemployed females in Saudi Arabia. Participants are welcome to contact the researcher to amend or remove any of the information contained in their interview, or to withdraw consent to having information used for this research until 30 September 2019. The researcher will destroy the file associating identities to interviews after this date.
What are the risks involved in this study?
You will be asked questions about topics that you and your families might perceive as very sensitive. You might be concerned if the content of this interview is disclosed to your social network. However, you can be assured that your identity will be kept confidential. All your information will be anonymised using a specially designed coding system and this code will be used when participants' responses need to be quoted. Aside from the researcher, nobody will be able to identify your contribution.
What are the benefits for taking part in this study?
Your participation in this interview will benefit all females in Saudi, by identifying the causes that resulted in large number of females being unemployed. Your participation will help in highlighting the possible reasons that connect female unemployment to social and gender norms in Saudi Arabia. You can find out about the results when the researcher's PhD dissertation is published.
What are your rights as a participant?
Taking part in the study is voluntary. You may choose not to take part or to leave the interview at any time. You have the right to amend the information you have given or withdraw your consent to participate to this research until 30 September 2019.
Signature:
( ) I have carefully read and fully understood the information contained in this form.
All my questions were answered to my satisfaction, and I voluntarily agree to participate in this study

( ) I obtained a copy of this consent form co-signed by the interviewer
Participant's Signature …… Date……
Researcher's Signature…….. Date…….

Table B.2 Interview schedule

All of these questions were translated in Arabic and that the interviews were run in Arabic.

Demographic characteristics:
Age:
Marital status: ( ) single ( ) married ( ) divorced ( ) widowed
Number of children if there are any ( )
Educational level……..

Cultural and religious background:
How important is religion in your life: ( ) very important ( ) important ( ) neutral ( ) not important ( ) not important at all
How important are social customs, social norms (following social rules and valuing social customs) and Saudi culture in your life: ( ) very important ( ) important () indifferent () not important () not important at all
Which region in Saudi do you belong to? ( )West ( )East ( )North ( )South ()Middle
(Do you belong to a specific Saudi tribe ( ) Yes ( ) No

Open-ended Questions:
Tell me about your life and your studies?
Respondent's upbringing, to find out the socio-economic context in which the respondent grew up
Whether the respondent studied against her will or whether she wanted to study but she could not, and why.
Whether the respondent has always worked, or whether holding a job was not a consistent pattern
(Depending on the participants social status) Were you actively searching for a job? (for example, after or before marriage, after or before having children) What is your approach when searching for a job?
Are there any specific conditions or characteristics for the job you are looking for? If yes, what are they?
If you were offered a job through Saudization, would you take it and stop looking for another job? Why? (Saudization means that companies employ Saudi females to obtain better ranking among other companies. The companies give a salary to the their females employees but these employees do not actually work (they are nominally employed only).
Could you tell me how important to you is being employed? Do you have further ambitions that you might reach through employment?
How is unemployment linked to human capital (education and qualification)? How about "Wasta"? Does it have a role in female unemployment in Saudi Arabia? (Wasta means that someone can be employed not based on their qualifications but based on their social connections and having strong network).
How important do you consider it for Saudi Arabia's development that women have more opportunities for employment?
Do you think that traditions related to Saudi culture should be changed? Please refer specifically to those governing female employment?
How important is it for women in Saudi Arabia to choose their own jobs? Should their male guardians have a say in this choice?
If your male guardian had a very positive attitude toward your employment in any job you prefer, would you prefer to work in a mixed-gender job environment or in single-gender environment? Why?
Could you tell me about your opinion about the following?
Being an unemployed female is a more acceptable condition in Saudi Arabia than being an unemployed male.
Females should have full control of their lives in terms of employment, and have full independency when making their work decisions.
Mothers employment what is (and what should be) the relationship between being employed and being a mother?
From your point of view, what are the possible reasons that stand behind female unemployment?

If you were asked to rank the main possible barriers that limit female employment in the country, how would you rank them?
Social barriers (norms constraints)
Economic barriers (limited job opportunities)
Structural barriers (mismatch between female education fields/ female skills and available jobs)
Females' low level of motivation to work, or other).

Table B.3 Interviews Summary

Number of participants	Pseudonyms Names	Age	Marital status	No of childre n	Education level	Region	Tribe	Importance of religion	Importance of social and cultural norms	Work experience	Duration of job search	Father's education level	Mother's education level
1	Nora	25	Married	0	University	Centre	Prefer not to answer	Very important	Not important	No	8 months	high school	elementary school
2	Hessah	24	Married	0	University	Centre	Yes	Very important	Important	2 months	6 months	primary school	primary school
3	Farah	26	Married	2	Master	Centre	Yes	Very important	Important	No	2 years	primary school	primary school
4	Ghada	25	Married	2	University	Centre	Yes	Very important	Neutral	No	1 year	primary school	primary school
5	Layan	27	Single	_	University	West	Yes	Very important	Important	2 years	6 months	primary school	primary school
6	Noor	24	Single	_	University	Centre	Prefer not to answer	Very important	Neutral	No	6 months	university	university
7	Eman	24	Single	_	University	Centre	Prefer not to answer	Very important	Neutral	1 year	6 months	primary school	primary school
8	Mashel	25	Single	_	University	Centre	Prefer not to answer	Very important	Neutral	No	3 years	elementary school	primary school
9	Sara	24	Single	_	University	Centre	Yes	Very important	Neutral	1 month	8 months	high school	high school
10	Arowa	25	Single	_	Master	Centre	Yes	Very important	Neutral	No	6 months	University	University
11	Hanan	24	Single	_	High school	Centre	No	Very important	Not important	No	4 years	high school	high school
12	Bushra	27	Single	_	University	South	Yes	Important	Not important at all	3 months	4 months	elementary school	elementary school
13	Sahar	24	Single	_	University	South	Yes	Very important	Not important	2 months	10 months	primary school	primary school
14	Rola	23	Single	_	University	Centre	No	Very important	Not important	No	6 months	university	university

15	Nuha	25	Single	_	University	Centre	Yes	Very important	Neutral	No	3 years	primary school	primary school
16	Basmah	23	Single	_	University	Centre	No	Very important	Neutral	8 months	2 months	high school	high school
17	Tala	23	Single	_	University	Centre	Yes	Very important	Important	No	6 months	master	high school
18	Bedoor	24	Single	_	University	Centre	Yes	Very important	Important	No	1 year	high school	high school
19	Nofe	24	Single	_	University	South	Yes	Important	Neutral	2 months	3 months	master	university
20	Jwaher	23	Single	_	University	Centre	Yes	Very important	Important	No	6 months	university	primary
21	Shooq	29	Single	_	High school	Centre	Yes	Important	Neutral	No	8 years	illiterate	illiterate
22	Kadi	39	Married	3	Primary	Centre	No	Very important	Important	1 month	4 years	primary school	illiterate
23	Wafa	29	Married	0	High school	Centre	No	Very important	Not important	No	2 years	primary school	primary
24	Reham	40	Married	3	High school	Centre	Yes	Important	Important	1 year	1 year	primary school	primary
25	Muna	39	Married	2	Primary	Centre	Yes	Very important	Important	No	4 years	illiterate	primary
26	Haya	37	Married	6	Primary	Centre	Yes	Very important	Important	No	2 years	illiterate	primary
27	Samar	36	Married	4	University	Centre	Yes	Very important	Very important	No	12 years	illiterate	primary
28	Rahma	40	Married	7	University	Centre	Yes	Very important	Important	No	10 years	illiterate	primary
29	Samiah	23	Single	_	University	Centre	No	Very important	Neutral	No	6 months	university	elementary school
30	Asma	24	Single	_	University	Centre	Yes	Very important	Neutral	No	6 months	university	primary
31	Hanadi	23	Single	_	University	Centre	No	Very important	Neutral	No	6 months	illiterate	illiterate
32	Wedad	24	Single	_	University	Centre	Yes	Important	Important	No	6 months	elementary school	elementary school
33	Dema	27	Single	_	University	West	Yes	Very important	Neutral	No	3 years	PhD	high school
34	Deem	31	Married	2	High school	Centre	Yes	Very important	Important	No	3 years	illiterate	primary
35	Ebtisam	22	Single	_	University	Centre	Yes	Neutral	Neutral	No	2 months	high school	elementary school

Source: interview data for all 35 participants, gathered by the author, from July 2019 to September 2019. Participants were given the following options: important, very important, neutral, not important and not important at all to answer the question concerning importance of religion and social and cultural norms.

Ethical issues:

Before conducting any interviews, all participants were made aware of the purpose of the study and all their rights were clarified to them. All of the participants' names and identity were hidden and they were given pseudonyms to ensure their protection. All of the participants gave informed consent. They were aware that the interviews were being recorded and transcribed. Interviewees were given the right to withdraw from the interviews at any time. Some females were reluctant to sign the consent sheet as they thought it might be used against them; however, after the researcher explained to them that this is used for academic purposes, they signed it. A number of participants (7) refused the use of the voice recorder even after explaining to them that it will be erased later; as a result, hand-written notes were taken for interviews with these participants. The duration of each interview was about 35 to 40 minutes except for the interviews that were recorded manually, which lasted roughly 90 minutes as the researcher was writing the participants' answers and listening to the participants at the same time.

In this study, phone interviews were more convenient for many of the participants. For some, transportation was a challenge, as none of the participants can drive their own car and they have to pay for a taxi or ask their brothers or fathers to bring them to the proposed interview location. During some of the face-to-face interviews, participants told very sad stories about their lives and their family situations, and the researcher could not hide her emotion and sympathy toward those females and in some occasions could not hide her tears when listening to one of the participant's stories. As an example, one of the females started to talk about her life and how her mother opposes her study, employment and even her marriage. She was very sad, and she cried, the researcher found it difficult to continue the interview; therefore, she asked to pause the interview and continue when she was ready to do so. If this interview were conducted through a phone call, the researcher would have been able to manage and control her feelings and her sympathy. Furthermore, some participants who have the same family name as the researcher, looked for the researcher's agreement or disagreement through the researcher's facial expressions on some issues. A phone interview would be preferable for this occasion. Also, some participants asked the researcher the same questions they were asked because they were looking for support from the researcher. For example, one of the participants said:
"Some of our social norms regarding male permission need to be changed because it is useless, isn't it?"
A phone interview would also help in masking the researcher's reaction to these questions from participants.

It should be emphasised that during all interviews and with all participants, the researcher attempted to use very simple and clear language. The researcher never used technical terms that may make participants feel that the researcher is superior to them. Instead, she used language that was intended to ensure that participants felt that the interviewees and interviewer were equal (Taylor & Bogdan, 1998; Grbich, 1999). Being an insider researcher, which means that researcher has similar characteristics as the interviewees, has some great advantages (Kanuha, 2000). Sharing the same gender, language and cultural background has helped in gaining the participants' trust and confidence. Females felt relaxed in expressing their beliefs and telling their stories. Furthermore, having an insider position empowered the researcher to realize that the Saudi females are not homogenous and that they differ based on their race, class and their Islamic beliefs, which is something that an outsider researcher may not consider.

Note on the interviews:

In the research methodology literature, it is discussed how qualitative researchers need to be reflexive (Berger, 2015), which means the "turning of the researcher's lens back onto oneself to recognize and take responsibility for one's own situatedness within the research and the effect that it may have on the setting and people being studied, questions being asked, data being collected and its interpretation" (p. 220). This is because the researcher's own culture, beliefs and experience may influence the findings of the study, either through the way of asking the questions or when analysing the data. Therefore, to increase the study's reliability, the researcher undertook reflexive approach when analysing interview data by means of being aware and always recognising this possible effect on data collection and analysis (Mason, 1996). The interviewer is a Saudi female and all the interviewees are Saudi females. This may provide some advantages and disadvantages in terms of the interview process. Being female and interviewing females facilitates the process of face-to-face interviewing and phone interviews, particularly in a socially and religiously conservative society as Saudi Arabia in which females are not allowed to be interviewed by males without their guardian's presence. Furthermore, when discussing such a sensitive topic as social and religious norms, along with gender

inequality, in a heavily restricted country, females might feel more comfortable, relaxed, confident and would provide information that they might not reveal if the interviewer was a male (Greif & Pabst, 1988).[16]

Furthermore, a Saudi female researcher might show more understanding of the situation of those who are being interviewed and perhaps display more empathy. Understanding the Saudi social norms and social culture is an advantage that another researcher or interviewer may not have if he/she is not born and living in Saudi Arabia. The interviews were conducted using the Arabic language (both the interviewer and interviewees speak the same language), the researcher was able to clearly understand the direct and indirect answers of the participants, and this also helped the researcher to be aware of occasions in which participants chose to avoid responding directly to any questions.

However, as a Saudi female researcher who understands the females' situation in Saudi Arabia, there is the clear possibility of the researcher being affected by personal points of view and beliefs on the topics discussed during the interviews. Therefore, it is important to take actions aimed at containing this bias. This was achieved through online training, by attending courses on how to be professional and a more neutral interviewer, and reflection on how the researcher needs to isolate his/her judgment and thoughts.[17] Additionally, and for the same purpose, none of the interview questions included any close-ended options, such as questions that exclusively admit a yes or no as an answer (other than demographic questions). In this way, the researcher avoided asking any leading questions (Dervin & Dewdney, 1986).

All the interviewees are female, as the study's focus concerns the reasons behind females' low employment and how social norms may contribute to this issue. Interviewing females rather than males allow those females to speak for themselves, expressing their thoughts, speaking about barriers they face from their own perspective. The age of interviewees ranges from 22 to 40. The justification for choosing this age category is that this age group represents the largest category of women in Saudi Arabia. Women in this demographic category experience the highest rate of unemployment among Saudi women (General Authority for Statistics, 2019).
It is also important to acknowledge the intersectionality of females with different education levels, networks, ethnic backgrounds and religious or traditional backgrounds. Therefore, the sample of the study includes females with different education levels, different tribal backgrounds and belonging to different age groups.

Interview Questions:

Thirty-five interviews were conducted. Interviews were semi-structured, which means that a given set of questions were used to guide the interviewer; additional sub-questions could be asked if needed and all participants were asked the same initial questions using the same order and wording. Most of the questions were open-ended. Aside from being the most effective and convenient approach for collecting data for research (Kvale & Brinkmann, 2009), it increases the comparability of participants' responses, as they were asked exactly the same questions (Sandy & Dummay, 2011).

It is important to note that, throughout the research, females were categorised in two groups in order to facilitate the interpretation of the results. For example, respondents with a university degree or higher can be presented as females with a high education level compared with females with a lower educational level (who have high school and lower). A similar approach was followed with age. 'Younger females' refers to females who belong to the age category of 27 years and under, and 'older females' refers to females who belong to the age category of older than 27 years. The age of 27 was chosen as cut-point, as it represents the average age for the females in the study.

Questions related to demographic background of the respondents included the importance of religion, importance of social and cultural norms, and belonging to a specific tribe. The reason for including these questions is to provide an understanding or possible justification for the participants' answers. For example, participants with strong points of view in regard to working in a single-gender working environment are expected to consider social norms and/or religion as very important aspect(s) in their lives. It is also expected that females who belong to specific tribes in Saudi Arabia will show more adherence and respect to social norms and the Saudi culture in general. However, questions related to whether respondents belong to a specific tribe are very sensitive; therefore, participants were given the option to not respond if they were uncomfortable doing so.

[16] In this study Greif mentioned that he asked Pabst, the female researcher, to interview participants who were divorced mothers, because he believed that this may make these participants feel more responsive and give more details and information.
[17] The researcher had taken courses offered by the University of East Anglia and delivered by Dr Simon Watts about interviewing skills. Additionally, the researcher engaged in self-training utilising online material and reading articles discussing how to be a professional interviewer.

Furthermore, as the interviews were semi-structured, additional questions were asked to gain more data, information and clarification. All remaining questions were a subset of neutral and open questions to allow the participants to guide the conversation and give more information (Dervin & Dewdney, 1986).

Saudi people speak two different dialects. The *Bedouin* tribes speak Bedouin dialects, while others, those who immigrated to Saudi Arabia, speak urban or *Hadhar* dialects. Fortunately, the researcher is able to speak both dialects fluently. This was very helpful in facilitating communication with participants of different origins and to gain their trust. Additionally, since all interviewees were Saudi, all interviews were in Arabic. All questions were translated from English to Arabic to facilitate participants in understanding the questions. As all of the interview questions were initially written in English and all of the participants speak Arabic, a forward translation process was used. The researcher gained additional help from a native Arabic person who has a PhD in Teaching English as a Second Language (TESL) to ensure that all the responses were translated accurately and with the equivalent meaning.

Interviews were conducted in two ways: through phone calls and face to face. All participants were given the choice on how to be interviewed. Although phone interviews have an advantage in terms of saving time, effort and cost of travelling. Face-to-face interviews allow for better engagement between the interviewer and the interviewees and allow for more understanding of the responses by the visual and nonverbal cues (Aquilino, 1994). The researcher did not notice any major differences between females who opted for a face-to-face interview or a phone interview. However, it seems that females who preferred phone interviews were more engaged in the conversation and more excited to share details of their stories, while some females who opted for face-to-face-interviews were rather discreet or cautious to share their stories, especially at the beginning of their interview.

The analysis process started with transcribing all of the interviews. All of the interviews were analysed in the Arabic language using ATLAS, a qualitative data analysis software. Translating interview transcripts from Arabic to English could cause loss of meaning of sentences. To mitigate for this bias, material from the interviews was translated from Arabic into English, where the interview quotes are used to illustrate key points. These translations were cross checked by a native Arabic person who has a PhD in Teaching English as a Second Language (TESL) to ensure that all the responses were translated accurately and with an equivalent meaning.

Appendix C

Table C.1 Changes made after conducting the pilot study

Most of the changes that have been made were on the wording of the questions. Answers to some questions were also changed to make it as easy as possible for participants to understand and then respond to the questions. New statements were added such as: "no female-only section). The following points indicate how changes have been made.

1- Change the answers from "Job A and Job B" to **"First Job and Second Job"** as it was difficult for participants to remember which job was A and which job was B.

2- Include a sentence that says **"no female-only section"** when introduce the mixing work environment as some participants chose mixed working environment because they thought that there might be a private female section in the company.

3- Rewrite the second question as "**What do you expect Sara is most likely to choose**" instead of "Which job do you expect most Saudi females would choose."

4- Based on participants' suggestions, change the **order of the questions**: make the first question about the "norms" (What do you think Sara is most likely to choose?) rather than "personal preference." (If you were in Sara's position, what would you choose?)

5- For the third question, each participant was thinking of Saudi females who belong to a different age group and different level of education. Hence the third question is rewritten as **"Out of 100 Saudi female university students, how many do you think chose the "first job" as their personal choice"** instead of (Please guess how many participants (out of 100) in the previous question chose Job A). Writing the question in this way, as participants suggested, help them to make accurate predictions

6- **Remove type of job** in the second set of vignettes (A Saudi married female named Ghada. Her husband always gives / does not give her enough money every month to support herself), as female participants were more concerned about the type of job instead of focusing on the main elements of the vignette. Remove the sentence that said (her husband does not like this job) as some female participants have made their decisions based on the probability of convincing the husband later. Hence, all participants agreed that the story should be written as "**A Saudi married female named Ghada. Her husband always gives her / does not give her enough money every month to support herself. Now she is looking for a job. She has found one, but she feels reluctant to go ahead with this job as she is not sure if she needs a job or not."**

7- Change the possible answers to this vignettes' questions and make it two answers only instead of three answers **(would take the job/ would not take the job)**

8- Give clear information about what is required from participants if they choose to be registered in the employment website. Some participants wanted to choose the second option (sign up on an employment website), but because they thought that private information would be required from them, only one of the participants chose this option.

Table C.2 Vignettes

First page :
Employment decisions
Dear participants
Thank you for giving us some of your time and filling out our research survey. I am a Ph.D. student at University of East Anglia in the UK. I work for Nora University in Riyadh, Saudi Arabia. Information and opinions given in this survey will be of great importance for the achievement of the research objectives, and it will be treated confidentially. This research aims to explore employment decisions in Saudi Arabia. There is no right or wrong answer in this survey. Please choose the answer that is in line with your opinion honestly and objectively. Note that the information received will only be used for scientific research purposes only. Your participation in this survey is highly appreciated and in the event of any enquiry or information needed, please do not hesitate to contact me:

Email: hvj17dgu@uea.ac.uk
"I consent to participate in this survey"
Yes ( ) No ( )
Thank you in advance for participating in this survey
Yours Sincerely,
Dalal Alotaibi
Ph.D. Candidate in the School of Economics, University of East Anglia, Norwich, UK

Demographic characteristics:
Gender: Male ( ) Female ( )
Age: 20-25 ( ) 26-30 ( ) 30 and over ( ) Prefer not to say ( )
Marital status: Single ( ) Married ( ) Divorced or Widow ( ) Prefer not to say ( )
Region where you were born: South **( )** West **( )** Centre **( )** North **( )** East**( )** Prefer not to say **( )**
Indicate how important religion is in your life. Would you say it is: Very important ( ) Rather important ( ) Not very important ( ) Not at all important ( ) I do not know **( )**

Please read carefully the following paragraphs that describe a situation for different job seekers, then answer the questions about them. The first question asks you about the character's reaction, the second about your personal reactions and the third about the proportion of Saudi females who responded to the second question with certain choice. If any of your predictions about others are correct, you will be entitled for a charitable donation to be made on your behalf valued 2 SR for each correct answer.

First set of vignettes: (Mixed/single gender working environment at fixed wage level): **Gender**

(Vignette 1)
A Saudi female named Nora is 24 years old. She holds a bachelor's degree and is looking for a job. She was offered two jobs: the first one is with a company that has a female-only working environment with salary around 6000 Saudi Riyal a month. The other job is in a company that has a mixed working environment (no female-only section) with the same salary. Both jobs have the same working hours, working days and same work advantages (size of both companies and their reputation all the same, holidays and promotion opportunities are all the same)
What do you expect Nora is most likely to choose?
The first job
The second job
If you were in Nora's position, what would you choose?
The first job
The second job
Out of 100 Saudi female university students, how many do you think indicated the "first job" as their personal choice ( )

(Vignette 2)
A Saudi male named Nasar is 24 years old. He holds a bachelor's degree and is looking for a job. He was offered two jobs: the first one is with a company that has a male-only working environment with salary around 6000 Saudi Riyal a month. The other job is in a company that has a mixed working environment with the same salary. Both jobs have same working hours, working days and same work advantages (size of both companies and their reputation are all the same, holidays and promotion opportunities are all the same)
What do you expect Nasar is most likely to choose?
The first job
The second job
If you were in Nasar's position, what would you choose?
The first job
The second job
Out of 100 Saudi male university students, how many do you think indicated the "first job" as their personal choice ( )

Second sets of vignettes: Presence of financial support provided by the husband: **sufficient/ not sufficient**

(Vignette 3)
A Saudi married female named Ghada. Her husband does not give her sufficient money to meet her needs. Now she is looking for a job. She has found one, but she feels reluctant to go ahead with the job as she is not sure if she needs a job or not.
What do you expect Ghada is most likely to do?
She would take the job
She would not take the job
What would you do if you were in Ghada's position?
I would take the job
I would not take the job.
Out of 100 Saudi female university students, how many do you think indicated the "second option" as their personal choice ( )

(Vignette 4)

A Saudi married female named Ghada. Her husband always gives her enough money every month to support herself and sometimes more than what she needs. Now she is looking for a job. She has found one but she feels reluctant to go ahead with the job as she is not sure if she needs the job or not.

What do you expect Ghada is most likely to do?

She would take the job

She would not take the job

What would you do if you were in Ghada's position?

I would take the job

I would not take the job.

Out of 100 Saudi female university students, how many do you think indicated the "second option" as their personal choice ( )

(Vignette 5)

Third sets of vignettes: Different wage level for two different jobs (high for cashier job and low for administrative job) / (high for mixed working environment and low for female-only working environment): **mentioning / not mentioning the type of jobs**

A Saudi female named Sara is 24 years old. She holds a bachelor's degree. She is looking for work. She was offered two jobs: the first one is working as administrator in females' school with a salary around 5000 Saudi Riyal a month. The other job is working as a cashier in one of the supermarkets with salary around 6000 Saudi Riyal a month. Both jobs have the same working hours, working days and same work advantages (holidays and promotion opportunities are all the same)

What do you expect Sara is most likely to choose?

The first job

The second job

If you were in Sara's position, what would you choose?

The first job

The second job

Out of 100 Saudi female university students, how many do you think indicated the "first job" as their personal choice ( )

(Vignette 6)

A Saudi female named Sara is 24 years old. She holds a bachelor's degree. She is looking for work. She was offered two jobs: the first one is working in a job that has female-only working environment with salary around 5000 Saudi Riyal a month. The other job is working in a job that have mixed working environment (no female-only section) with a salary around 6000 Saudi Riyal a month. Both jobs have the same working hours, working days and same work advantages (size of both companies and their reputation are all the same, holidays and promotion opportunities are all the same)

What do you expect Sara is most likely to choose?

The first job

The second job

If you were in Sara's position, what would you choose?

The first job

The second job

Out of 100 Saudi female university students, how many do you think indicated the "first job" as their personal choice ( )

How do you want to be rewarded for your participation in this survey?

Charity donation of SR 5 to the Saudi Cancer Charity.

Signing up onto employment website

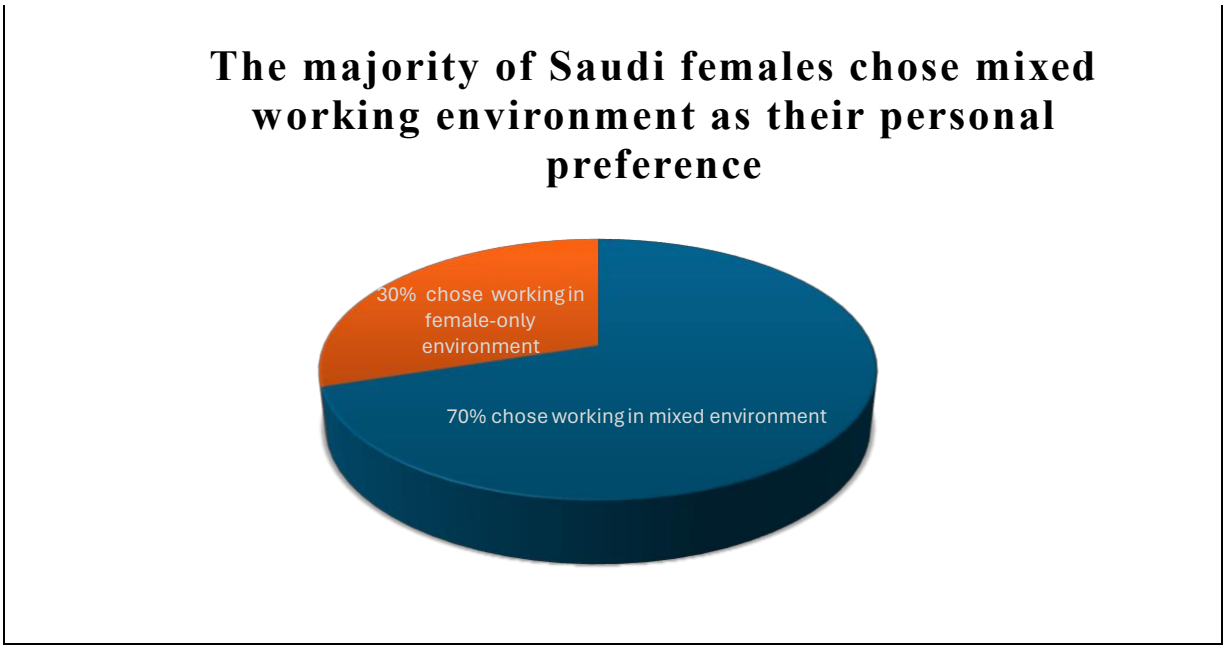
Notes: All of the employment opportunities in this website are in mixed working environment (no female-only section)

If you choose this option, you will be asked to provide the last four digits of your university ID number in the box below:

You will be provide **on as survey is closed.**

Thank you

The treatment group have an additional page in their survey that includes the following chart that gives "placebo information" about female participants' responses. **This chart appears before asking the participant to answer the question: How do you want to be rewarded?** The chart should deliver a certain message to the participants. The point is to test whether other participants' liberal attitudes would have an impact on the females' response to the participation reward question.



Note: All of these questions will be translated in Arab

Table C.3 Characteristics of the study sample

Variable	Frequency	Percent
Male	104	28.18
Female	265	71.82
Single	338	91.60
Married	27	7.32
Divorced/widowed	2	0.54
"Prefer not to say"	2	0.54
Centre region	301	81.57
East region	15	4.07
West region	11	2.98
North region	13	3.52
South region	18	4.88
"Prefer not to say"	11	2.98
Religion is very important	302	81.84
Religion is rather important	46	12.47
Religion is not important	9	2.44
Religion is not at all important	4	1.08
Religion importance: I do not know	8	2.17

Table C.4 Participants' estimations related to vignette 1

Estimation for the number of females who would choose to work in SGWE	Number of males	Number of females	Total
0	0	1	1
6	0	1	1
8	0	1	1
10	0	4	4
11	0	1	1
12	1	0	1
19	1	0	1
20	0	3	3
22	0	2	2
25	0	2	2
26	0	1	1

30	3	2	5
31	0	1	1
35	1	1	2
36	0	1	1
37	1	1	2
39	0	2	2
40	3	8	11
42	0	1	1
44	1	0	1
45	0	3	3
47	0	1	1
50	5	32	37
51	0	2	2
52	1	0	1
53	0	1	1
55	0	1	1
56	0	3	3
57	0	1	1
59	0	1	1
60	3	14	17
61	0	1	1
62	0	1	1
65	3	2	5
67	1	0	1
68	0	1	1
70	5	11	16
71	0	3	3
73	0	1	1
75	1	12	13
78	1	1	2
79	0	2	2
80	5	8	13
81	0	3	3
82	1	3	4
84	0	1	1
85	1	5	6
87	1	2	3
88	0	1	1
90	5	13	18
91	0	3	3
92	1	0	1
93	0	1	1
94	0	1	1
95	3	3	6
99	0	2	2
100	5	5	10
Total	53	178	231

Note: 65 percent of females chose to work in an SGWE. Only 5 participants gave estimates equal to 65. Nearly 35 participants overestimated this percentage (gave an estimate that equal to 75 and higher)

Table C.5 Participants' estimations related to vignette 2

Estimation for the number of males who would choose to work in SGWE	Number of males	Number of females	Total
0	1	0	1
7	0	1	1
10	3	0	3
11	0	1	1
20	0	2	2
21	0	1	1
22	1	0	1
25	0	1	1
30	2	7	9
32	0	1	1
33	0	1	1
34	0	1	1
35	0	1	1
36	1	0	1

37	0	1	1
40	6	2	8
41	0	2	2
45	1	2	3
49	1	1	2
50	6	17	23
51	0	2	2
53	0	1	1
54	1	1	2
55	1	3	4
56	0	1	1
57	1	0	1
60	6	5	11
63	0	1	1
66	0	3	3
67	0	1	1
70	6	7	13
72	1	0	1
73	0	1	1
75	1	2	3
78	0	1	1
79	0	2	2
80	3	6	9
84	1	0	1
85	0	1	1
86	1	0	1
89	0	2	2
90	3	2	5
92	2	0	2
97	1	0	1
100	0	1	1
Total	50	85	135

Note: The percentage of males who preferred to work in an SGWE was 79 percent. Only 2 participants made "correct" guesses and gave an estimate of 79. However, only 8 percent of participants overestimated this percentage.

Table C.6 Participants' estimations related to vignette 5

Estimation for the number of females who would choose to work as administrator with low wage	Number of males	Number of females	Total
9	0	1	1
15	0	1	1
19	0	1	1
20	1	1	2
25	0	1	1
28	0	2	2
29	0	2	2
30	2	4	6
31	0	2	2
33	0	2	2
35	0	2	2
36	2	1	3
37	0	1	1
38	1	0	1
39	0	3	3
40	0	9	9
44	0	1	1
45	0	3	3
46	1	0	1
48	0	5	5
49	1	2	3
50	4	18	22
51	0	1	1
52	0	1	1
53	1	0	1
54	0	3	3
55	0	2	2
56	1	0	1

57	0	2	2
58	0	1	1
59	1	1	2
60	5	10	15
61	0	3	3
62	1	3	4
63	0	1	1
64	0	1	1
65	1	0	1
68	1	0	1
69	1	2	3
70	3	15	18
71	0	2	2
72	1	1	2
75	1	3	4
76	0	1	1
77	0	2	2
78	0	1	1
79	0	1	1
80	5	16	21
81	1	2	3
82	0	2	2
83	0	2	2
84	2	0	2
85	2	4	6
86	1	4	5
87	1	1	2
88	1	0	1
89	1	0	1
90	1	3	4
91	0	1	1
92	1	4	5
93	0	1	1
94	0	1	1
95	2	5	7
96	0	1	1
97	1	0	1
100	6	12	18
Total	54	178	232

Note: females who chose to work as administrator with lower salary compared to working as cashier with higher salary was 77 percent. Only 2 participants made a “correct” guess and gave an estimate of 77. Nearly 19 percent of participants overestimated this percentage.

Table C.7 Participants’ estimations related to vignette 6

Estimation for the number of females who would choose to work in SGWE with low wage	Number of males	Number of females	Total
0	1	1	2
7	0	1	1
10	0	1	1
12	0	1	1
19	1	0	1
20	1	2	3
21	1	0	1
24	0	1	1
25	0	1	1
27	0	1	1
29	0	2	2
30	2	2	4
33	1	0	1
37	1	0	1
38	1	0	1
39	2	0	2
40	3	3	6
42	0	1	1
43	0	1	1
45	1	2	3
47	0	2	2
48	1	0	1
50	6	11	17

53	0	1	1
55	0	1	1
57	1	0	1
60	4	5	9
61	2	0	2
63	0	1	1
65	1	2	3
66	0	1	1
67	0	1	1
68	0	1	1
69	0	1	1
70	2	9	11
71	0	2	2
73	1	0	1
74	1	0	1
75	4	0	4
76	0	1	1
78	0	1	1
79	0	1	1
80	1	8	9
81	1	0	1
82	1	0	1
83	0	1	1
85	0	2	2
86	0	1	1
87	1	1	2
88	1	1	2
90	3	4	7
91	0	1	1
92	1	1	2
94	1	0	1
97	1	2	3
100	1	2	3
Total	50	85	135

Note: females who chose to work in an SGWE with lower salary compared to working in a mixed gender environment with higher salary was 58 percent of the sample. None of the participants gave a correct guess and nearly 44 percent of the overestimated the number of females who would choose to work in an SGWE with lower wages.

Table C.8 Participants' estimations related to vignette 3

Estimation for the number of females who would choose not to be employed when the husband does not give his wife money	Number of males	Number of females	Total
0	1	5	6
1	0	1	1
2	1	0	1
3	1	1	2
4	0	2	2
5	0	1	1
6	0	1	1
7	0	1	1
8	0	2	2
10	1	5	6
11	0	1	1
12	0	2	2
14	1	0	1
15	0	1	1
18	0	1	1
19	0	1	1
20	2	7	9
21	0	2	2
23	0	1	1
24	1	0	1
25	1	2	3
26	1	0	1
28	0	1	1

29	0	2	2
30	1	9	10
32	1	1	2
33	0	2	2
34	1	0	1
35	1	3	4
37	1	0	1
38	1	0	1
39	0	1	1
40	4	8	12
41	1	1	2
42	0	1	1
44	0	1	1
45	1	2	3
46	0	1	1
49	0	2	2
50	6	18	24
51	0	2	2
54	1	0	1
55	0	3	3
57	0	1	1
59	1	1	2
60	2	7	9
61	0	1	1
62	0	1	1
65	0	1	1
66	1	0	1
67	0	1	1
68	0	2	2
69	1	1	2
70	4	5	9
71	0	2	2
72	1	1	2
73	0	1	1
74	0	2	2
75	0	4	4
76	0	1	1
79	0	1	1
80	1	12	13
81	0	1	1
82	0	1	1
83	0	2	2
85	0	2	2
86	0	1	1
87	0	1	1
88	0	1	1
90	3	6	9
91	2	3	5
92	1	1	2
93	1	1	2
94	0	3	3
95	1	0	1
96	0	1	1
97	0	1	1
99	0	1	1
100	5	12	17
Total	53	178	231

Note: females who chose to be employed when the husband does not give money to the wife was 97 percent of the sample and 3 percent chose not to be employed under this scenario. Participants were asked about the number of females (out of 100) who would choose not to be employed. Only two participants gave a “correct” guess. Nearly 89 percent of participants overestimated this percentage.

Table C.9 Participants' estimations related to vignette 4

Estimation for the number of females who would choose not to be employed when the husband gives his wife money	Number of males	Number of females	Total
0	1	0	1
4	1	0	1
10	1	4	5
11	1	1	2
15	0	1	1
20	2	3	5
21	0	1	1
23	1	0	1
25	0	1	1
26	1	0	1
29	0	2	2
30	2	7	9
31	0	1	1
32	0	1	1
34	0	1	1
35	1	0	1
37	0	1	1
38	0	1	1
39	0	1	1
40	7	7	14
41	1	0	1
42	1	1	2
43	0	2	2
45	1	0	1
48	0	2	2
49	0	1	1
50	5	10	15
51	1	1	2
55	0	1	1
56	0	1	1
57	0	2	2
60	2	2	4
61	2	0	2
64	0	1	1
65	0	1	1
70	7	3	10
71	0	2	2
73	1	0	1
77	0	1	1
80	5	4	9
82	1	0	1
83	1	0	1
84	0	1	1
85	0	1	1
86	0	1	1
88	1	2	3
90	0	4	4
94	2	0	2
95	1	2	3
96	0	1	1
98	0	1	1
100	0	4	4
Total	50	85	135

Note: females who chose not to be employed when the husband gives money to the wife made up 10 percent. 5 participants provided "correct" guesses, and 95 percent of participants overestimated this percentage.

Appendix D

Table D.1 Survey Questions

All of these questions will be translated into Arabic.

Investigating males and females attitudes towards employment in Saudi Arabia

Dear participants

Thank you for giving us some of your time and filling out our research survey. I am a Ph.D. student at University of East Anglia in the UK. I work for Nora University in Riyadh, Saudi Arabia. This research aims to investigate males and females attitudes towards employment in Saudi Arabia. Information and opinions given in this survey will be of great importance for the achievement of the research objectives, and it will be treated confidentially. There is no right or wrong answer in this survey. Please choose the answer that is in line with your opinion honestly and objectively. Note that the information received will only be used for scientific research purposes. Participation is for Saudis only.

Your participation in this survey is highly appreciated and in the event of any enquiry or information needed, please do not hesitate to contact me:

Email: hvj17dgu@uea.ac.uk

"I consent to participate in this survey"

Yes ( )

No ( )

Thank you in advance for participating in this survey

Yours Sincerely,

Dalal Alotaibi

Ph.D. Candidate in the School of Economics, in University of East Anglia, Norwich, UK

Gender: Male ( ) Female ( ) Prefer not to say ( )
Age: 20-25 ( ) 26-30 ( ) 31-40 ( ) 41 and over ( ) Prefer not to say ( )
Marital status: Single ( ) Married ( ) Divorced or Widow ( ) Prefer not to say ( )
Region where you were born: South ( ) West ( ) Centre ( ) North ( ) East ( ) Prefer not to say ( )
Indicate how important religion is in your life. Would you say it is: Very important ( ) Rather important ( ) Not very important ( ) Not at all important ( ) I do not know ( )

Educational level: Primary ( ) Elementary ( ) High school ( ) University ( ) Masters ( ) PhD ( ) Prefer not to say ( )
Employment status: Employed ( ) Unemployed ( ) Retired ( ) Student ( ) Prefer not to say ( )

Multi-dimensional aversion to women who work (MAWWWS) questions:

The response options to these questions:
Strongly Agree ( ) Agree ( ) Disagree ( ) Strongly Disagree ( )

Employment scepticism
- Women lack skills and abilities needed at work
- Women are not suited for work outside the home.
- I am sceptical about women's effectiveness in the workplace.
- Women's personal characteristics make life at work difficult
- Woman frequently find the demands of work difficult

Traditional roles preference
- Traditional husband/wife roles are the best.
- Women are happier in traditional roles.
- A women's place is in the home.
- An employed wife leads to juvenile delinquency.
- Women with families do not have time for other employment.

World Values Survey (WVS) questions
The response options to these questions:
Strongly Agree ( ) Agree ( ) Disagree ( ) Strongly Disagree ( )

- Both the husband and wife should contribute to household income
- Men make better political leaders than women do
- A university education is more important for a boy than for a girl
- A working mother can establish just as warm and secure a relationship with her children as a mother who does not work
- When jobs are scarce, men should have more right to a job than women

Table D.2 Characteristics of Participants

Variable	Percentage	Frequency
Gender		
Male	22.80	374
Female	76.10	1248
Prefer not to say	1.10	18
Age		
20- 25	24.88	408
26-30	16.28	267
31- 40	31.22	512
40 and over	25.43	417
Prefer not to say	2.20	36
Marital status		
Married	58.05	952
Single	35.37	580
Divorced/widow	5.37	88
Prefer not to say	1.22	20
Region		
Centre	61.16	1003
East	6.59	108
West	13.72	225
North	6.34	104
South	8.11	133
Prefer not to say	4.09	67
Education level		
Low education	18.72	307
University	64.76	1062
High education	15.4	250
Prefer not to say	1.28	21
Employment status		
Employed	48.84	801
Unemployed	22.38	376
Retired	6.28	103
Student	18.05	296
Prefer not to say	4.45	73
Religion importance		
Very important	89.21	1463
Rather important	8.66	142
Not very important	0.91	15
Not at all important	0.37	6
I don't Know	0.85	14

Note: unweighted data.

Table D.3 How data is weighted

Variable	As percentage of study sample	As percentage of Saudi population	Weight	Weighted data
Gender				
Male	22.80	50.98	2.23	48.23
Female	76.10	49.01	0.64	50.95
Prefer not to say	1.10	-	1	0.82
Age				
Less than 40	72.38	50.84	0.70	61.1
40 and over	25.43	36.55	1.43	38.66
Prefer not to say	2.20		1	0.24
Marital status				
Married	58.05	58.10	1	53.04
Single	35.37	36.89	1.01	42.37
Divorced/widowed	5.37	5	0.93	4.5
Prefer not to say	1.21	-	1	0.09
Region				
Centre	61.16	27.39	0.44	28.4
East	6.59	15.33	2.32	14.7
West	13.72	29.56	2.15	18.9
North	6.34	9.10	1.43	10.6
South	8.11	18.59	2.29	27.2
Prefer not to say	4.05	-	1	0.01
Education level				
Low education	18.72	78.78	4.20	78.3
University	64.76	19.96	0.30	20.6
High education	15.4	1.33	0.08	0.9
Prefer not to say	1.12	-	1	0.2
Employment status				
Employed	48.84	21.55	0.44	19.58
Unemployed	22.38	13.90	0.62	19.47
Inactive population (retirees students)	24.33	64.54	2.65	60.1
Prefer not to say	4.45	-	1	0.8

Table D.4 Rotated components for all participants, males and females

	All participants		Males		Females	
Variable	**Comp1**	**Comp2**	**Comp1**	**Comp2**	**Comp1**	**Comp2**
Women lack skills and abilities needed at work		0.4712		0.4276		0.5040
Women are not suited for work outside the home	0.2603		0.2600		0.2843	
I am sceptical about women's effectiveness in the workplace		0.4959		0.5966		0.3168
Women's personal characteristics make life at work difficult		0.4654		0.4536		0.4506
Women frequently find the demand of work difficult		0.5381		0.4616		0.5546
Traditional husband/wife roles are the best	0.5557		0.4611		0.5805	
Women are happier in traditional roles	0.4436		0.3957		0.5378	
A woman's place is in the home	0.4438		0.4528		0.4497	
An employed wife leads to juvenile delinquency	0.3736		0.4969			0.2554
Women with families do not have time for other employment	0.2901		0.3230			0.2075

Note: weighted data, blanks represent abs(loading) $\leq$ 0.1.

Table D.5 Test statistics for the two components (for males and females)

	MALES				FEMALES			
Comp1/ Comp2	**Coef.**	**Std. Err.**	**z**	**P>z**	**Coef.**	**Std. Err.**	**z**	**P>z**
Comp1								
Women lack skills and abilities needed at work	.2699206	.0217898	12.39	0.000	.3031099	.011611	26.11	0.000
Women are not suited for work outside the home	.3447971	.0168321	20.48	0.000	.2750521	.0091467	30.07	0.000
I am sceptical about women's effectiveness in the workplace	.2955005	.0204449	14.45	0.000	.2747599	.0128881	21.32	0.000
Women's personal characteristics make life at work difficult	.3048656	.0210765	14.46	0.000	.3162228	.0123353	25.64	0.000
Women frequently find the demand of work difficult	.2525926	.0233906	10.80	0.000	.2960926	.0145336	20.37	0.000
Traditional husband/wife roles are the best	.3421425	.0201771	16.96	0.000	.3743739	.0129137	28.99	0.000
Women are happier in traditional roles	.3149461	.0200701	15.69	0.000	.3578619	.0132792	26.95	0.000
A woman's place is in the home	.3868882	.0197493	19.59	0.000	.372995	.0115529	32.29	0.000
An employed wife leads to juvenile delinquency	.3237635	.0181362	17.85	0.000	.2934994	.0124331	23.61	0.000
Women with families do not have time for other employment	.3056688	.0203699	15.01	0.000	.2753578	.011837	23.26	0.000
Comp2								
Women lack skills and abilities needed at work	.4475826	.0739168	6.06	0.000	.2941772	.0401457	7.33	0.000
Women are not suited for work outside the home	.0526972	.0689758	0.76	0.445	-.0173869	.0300761	-0.58	0.563
I am sceptical about women's effectiveness in the workplace	.3606745	.0757067	4.76	0.000	.3706051	.0477547	7.76	0.000
Women's personal characteristics make life at work difficult	.3259951	.0795328	4.10	0.000	.1450503	.0516595	2.81	0.005
Women frequently find the demand of work difficult	.4170061	.0965007	4.32	0.000	.5407637	.0451292	11.98	0.000
Traditional husband/wife roles are the best	-.3617334	.080222	-4.51	0.000	-.4449345	.0376233	-11.83	0.000
Women are happier in traditional roles	-.2359307	.0928989	-2.54	0.011	-.3713197	.0525128	-7.07	0.000
A woman's place is in the home	-.3794236	.0630045	-6.02	0.000	-.3395358	.0347316	-9.78	0.000
An employed wife leads to juvenile delinquency	-.1794706	.0670018	-2.68	0.007	.0175206	.0576423	0.30	0.761
Women with families do not have time for other employment	-.1547692	.1023693	-1.51	0.131	.1044401	.0492348	2.12	0.034

Note: These are unrotated components. Unweighted data.

Table D.6 Tests statistics for the two components including all of the participants

Comp1/ Comp2	**Coef.**	**Std. Err.**	**z**	**P>z**
Comp1				
Women lack skills and abilities needed at work	.2801692	.0095369	29.38	0.000
Women are not suited for work outside the home	.3017637	.0074736	40.38	0.000
I am sceptical about women's effectiveness in the workplace	.2665482	.0100486	26.53	0.000
Women's personal characteristics make life at work difficult	.3062004	.0097649	31.36	0.000
Women frequently find the demand of work difficult	.2652352	.0113887	23.29	0.000
Traditional husband/wife roles are the best	.3957898	.0100539	39.37	0.000
Women are happier in traditional roles	.3396864	.0100808	33.70	0.000
A woman's place is in the home	.3841381	.0090067	42.65	0.000
An employed wife leads to juvenile delinquency	.3091491	.0093851	32.94	0.000
Women with families do not have time for other employment	.2830474	.0093782	30.18	0.000
Comp2				
Women lack skills and abilities needed at work	.3477024	.0346382	10.04	0.000
Women are not suited for work outside the home	-.0016243	.0275969	-0.06	0.953
I am sceptical about women's effectiveness in the workplace	.3840752	.0383422	10.02	0.000
Women's personal characteristics make life at work difficult	.2138378	.041622	5.14	0.000
Women frequently find the demand of work difficult	.5308919	.0396496	13.39	0.000
Traditional husband/wife roles are the best	-.4463787	.0323482	-13.80	0.000
Women are happier in traditional roles	-.2966068	.0452631	-6.55	0.000
A woman's place is in the home	-.3350134	.0297174	-11.27	0.000
An employed wife leads to juvenile delinquency	-.0446143	.0448083	-1.00	0.319
Women with families do not have time for other employment	.0505955	.0450469	1.12	0.261

Note: These are unrotated components as the teste' statistics can't be obtained for the rotated components. Unweighted data.

To measure the adequacy of the sample for extraction, the Kaiser-Mayer-Olkin (KMO) measure was employed. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations (hence, factor analysis is likely to be inappropriate). A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Kaiser (1974) has recommended accepting values greater than 0.5, whereas values below this should lead a researcher to either collect more data or rethink which variable to include. Furthermore, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb. For this study, the KMO value found of 0.917 falls into the range of being superb, and that increases the confidence level in the appropriateness of factor analysis for the present study's data. Bartlett's test of sphericity was used to test the multivariate normality of the set of distributions. This procedure also tests whether the correlation matrix (R-matrix) is an identity matrix. If the R-matrix is an identity matrix, then all correlation coefficients would be zero and that undermines the meaningfulness of factor analysis. For factor analysis to be appropriate for the data, this test must be significant (i.e., have a significance value less than 0.05). For the present study, Bartlett's test was highly significant (Chi-square 5779.123, df 45, P-value 0.000). Such a result reveals the data are thus approximately multivariate normal and acceptable for factor analysis.

PCA for all participants, males and females independently:

Table D.7 Results of PCA with varimax rotation including all participants

Component	Variance	Difference	Proportion	Cumulative
Comp1	2.7037	1.15449	0.3974	0.3974
Comp2	1.54921	1.10349	0.2277	0.6251
Comp3	.445715	.0273661	0.0655	0.6906
Comp4	.418349	.0328548	0.0615	0.7521
Comp5	.385494	.08422	0.0567	0.8087
Comp6	.301274	.0173597	0.0443	0.8530
Comp7	.283914	.00961688	0.0417	0.8947
Comp8	.274298	.020658	0.0403	0.9350
Comp9	.25364	.0653671	0.0373	0.9723
Comp10	.188272	.	0.0277	1.0000

Note: weighted data

Table D.8 Results of PCA with varimax rotation for males only

Component	Variance	Difference	Proportion	Cumulative
Comp1	2.8244	.838982	0.3881	0.3881
Comp2	1.98542	1.49062	0.2728	0.6609
Comp3	.494804	.0439506	0.0680	0.7289
Comp4	.450853	.0402086	0.0620	0.7909
Comp5	.410645	.130291	0.0564	0.8473
Comp6	.280353	.0261704	0.0385	0.8858
Comp7	.254183	.0234535	0.0349	0.9208
Comp8	.23073	.0469811	0.0317	0.9525
Comp9	.183748	.0215642	0.0252	0.9777
Comp10	.162184	.	0.0223	1.0000

Note: weighted data

Table D.9 Results of PCA with varimax rotation for females only

Component	Variance	Difference	Proportion	Cumulative
Comp1	1.7124	.50737	0.3169	0.3169
Comp2	1.20503	.776123	0.2230	0.5399
Comp3	.428907	.0380143	0.0794	0.6193
Comp4	.390893	.0338003	0.0723	0.6916
Comp5	.357092	.0132127	0.0661	0.7577
Comp6	.34388	.0524605	0.0636	0.8213
Comp7	.291419	.0209068	0.0539	0.8753
Comp8	.270512	.0398705	0.0501	0.9253
Comp9	.230642	.0578509	0.0427	0.9680
Comp10	.172791	.	0.0320	1.0000

Note: weighted data. Bartlett test of sphericity Chi-square = 5779.123 Degrees of freedom = 45 p-value = 0.000 H0: variables are not intercorrelated Kaiser-Meyer-Olkin Measure of Sampling Adequacy KMO = 0.917

Table D.10 Results of PCA with varimax rotation

Component	Variance	Difference	Proportion	Cumulative
All participants				
Comp1	2.7037	1.15449	0.3974	0.3974
Comp2	1.54921	1.10349	0.2277	0.6251
Males only				
Comp1	2.8244	.838982	0.3881	0.3881
Comp2	1.98542	1.49062	0.2728	0.6609
Females only				
Comp1	1.7124	.50737	0.3169	0.3169
Comp2	1.20503	.776123	0.2230	0.5399

Note: weighted data

Descriptive statistics for the two components

It is useful to present descriptive statistics for the two components obtained from the PCA to gain a clear idea about differences between participants in attitudes toward both dimensions, "Traditional Values" and "Employment Scepticism". As Table 6.4 shows, the means for "Traditional Values" and for "Employment Scepticism" are higher for males than for females, which suggests that males have more traditional attitudes toward traditional values, and they have higher scepticism toward females' employment.

Table D.11 Descriptive statistics for the two components

Component's name	Mean	Standard deviation	Minimum	Maximum
Traditional Values (all participants)	5.46	1.64	2.21	9.54
Employment Scepticism (all participants)	4.30	1.24	1.90	8.43
Traditional Values (males)	6.32	1.68	2.40	9.77
Employment Scepticism (males)	4.47	1.40	1.82	8.12
Traditional Values (females)	4.51	1.23	1.95	8.80
Employment Scepticism (females)	4.44	1.16	2.05	8.73

Note: weighted data

Table D.12 How data is Coded

Variable name	Code
Gender	
Male	1
Female	2
Age	
20-25	1
26-30	2
31-40	3
40 and higher	4
Marital status	
Single	1
Married	2
Divorced/Widow	3
Region	
Centre	1
East	2
West	3
North	4
South	5
Importance of religion in ones' life	
Very important	4
Rather important	3
Not very important	2
Not at all important	1
Educational level	
Primary education	1
Elementary education	2
Highschool	3
University education	4
Master	5
PhD	6
Employment Status	
Employed	1
Unemployed	2
Retired	3
Student	4
Agreement/disagreement	
Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1
All prefer not to say answers to any of the questions were coded as 0	

Figure D.1 All participants rotated components (weighted data)

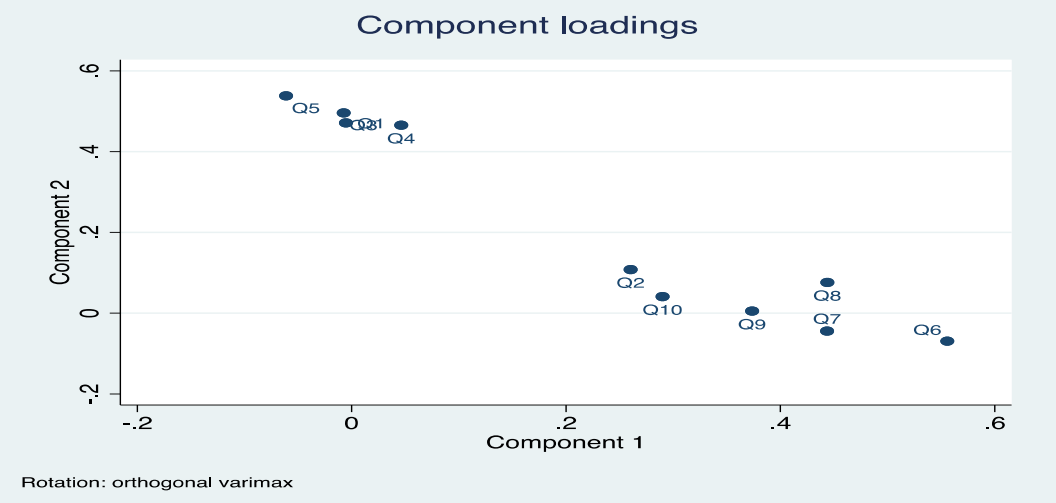


Figure D.2 Males rotated components (weighted data)

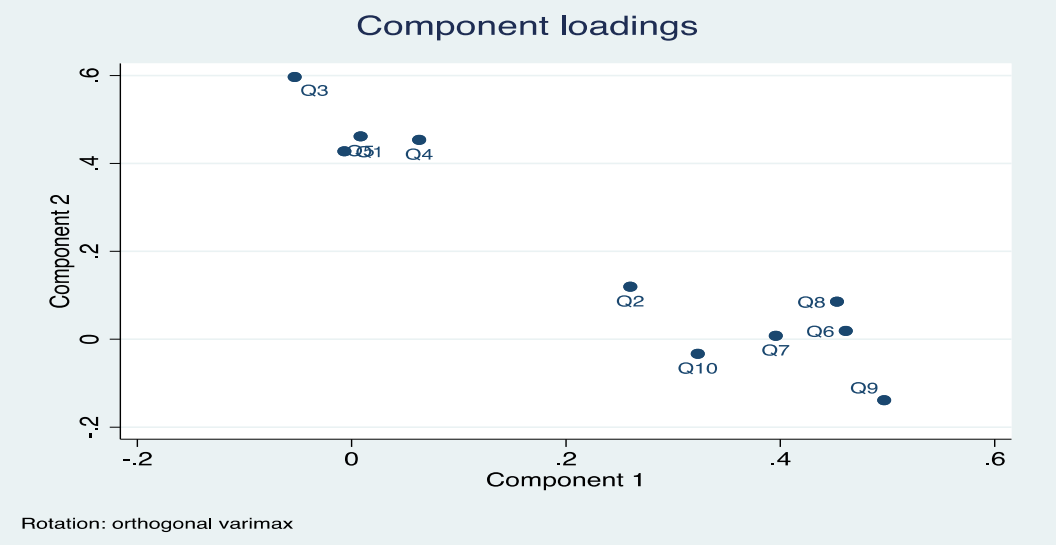


Figure D.3 Females rotated components (weighted data)

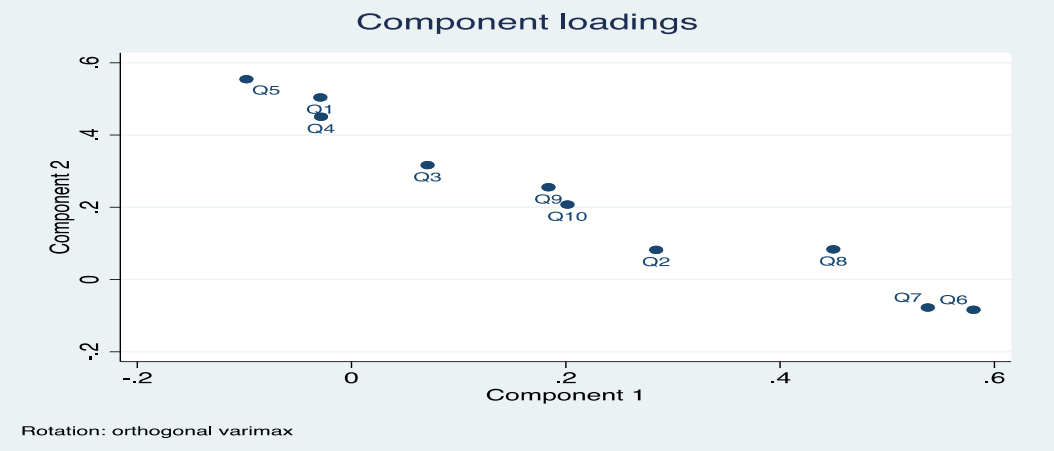


Table D.13 Results from logistic regression: Impact of regions on males' attitudes based on the five items from the WVS

	(1)	(2)	(3)	(4)	(5)
	Agreement on "When jobs are scarce, men should have more right to a job than women"	**Agreement on "A university education is more important for a boy than for a girl"**	**Agreement on "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work"**	**Agreement on "Men make better political leaders than women do"**	**Agreement on "Both the husband and wife should contribute to household income"**
Centre Region (ref: south Region)	1.105** (0.001)	0.187 (0.635)	0.845* (0.018)	-0.0121 (0.977)	0.676* (0.049)
East Region	0.788 (0.202)	0.414 (0.523)	0.945 (0.116)	-0.226 (0.746)	0.444 (0.463)
West Region	1.236** (0.004)	0.399 (0.378)	0.333 (0.421)	-0.0292 (0.952)	0.338 (0.399)
North Region	1.026 (0.053)	0.450 (0.394)	0.904 (0.070)	-0.654 (0.233)	0.911 (0.078)
Religious	1.314 (0.115)	0.217 (0.789)	-0.800 (0.396)	-0.0289 (0.974)	-0.383 (0.706)
Married (ref: single, divorced and widowed)	0.364 (0.216)	-0.393 (0.176)	-0.0496 (0.851)	-0.147 (0.643)	-0.0635 (0.817)
Constant	-1.513 (0.092)	-1.204 (0.173)	0.135 (0.893)	1.433 (0.142)	0.482 (0.650)
Observations	374	374	374	374	374
Wald chi2	14.04	2.995	9.388	2.584	5.799

Note: data is weighted. p-values in parentheses* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$