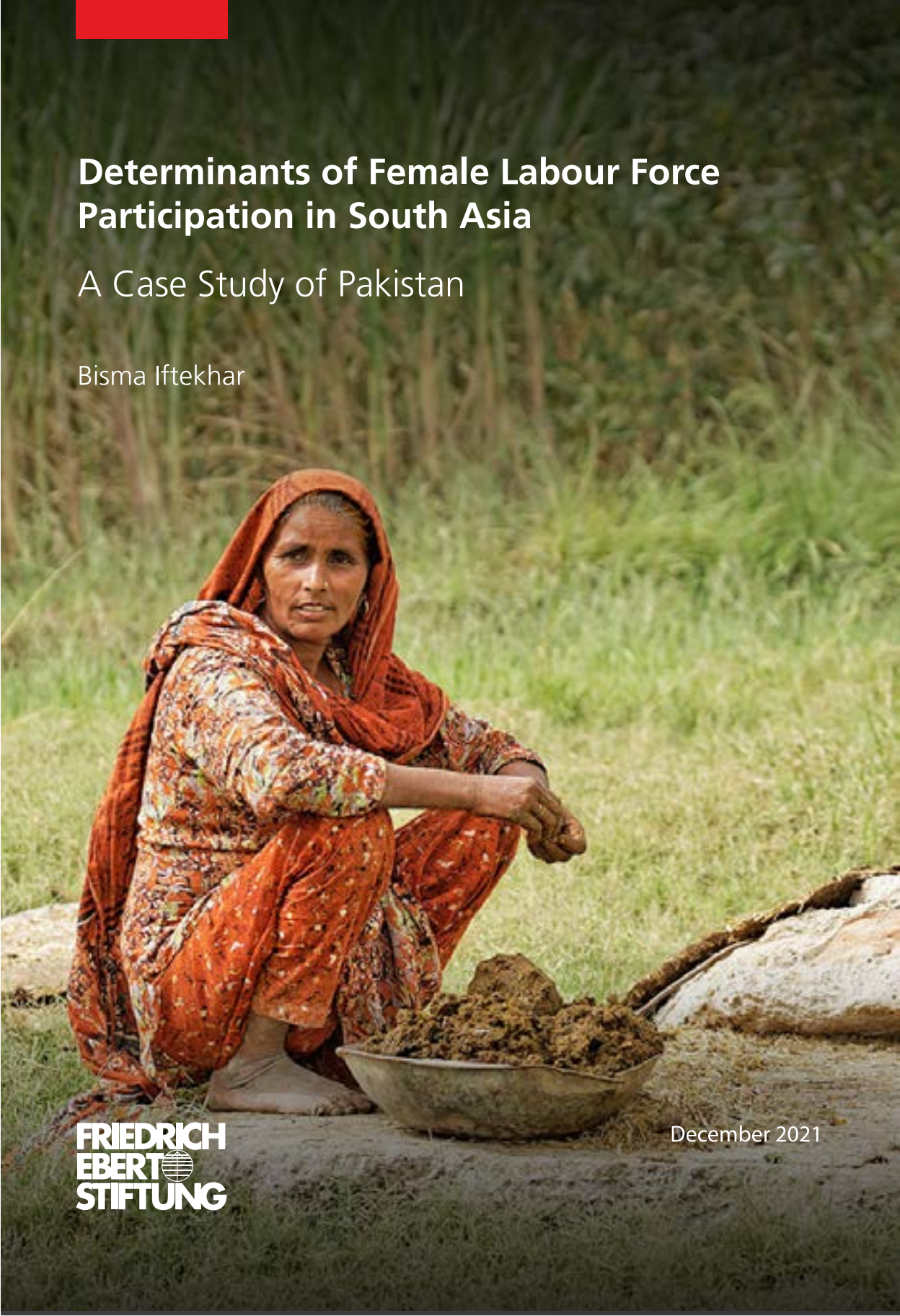
Determinants of Female Labour Force Participation in South Asia

A Case Study of Pakistan

Bisma Iftekhar



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List of Acronyms

FLFP	Female Labour Force Participation
FLFPR	Female Labour Force Participation rate
GDP	Gross Domestic Product
HBWs	Home-based workers
IV	Instrumental Variable
LF	Labour Force
LFS	Labour Force Survey
LFP	Labour force participation
PBS	Punjab Bureau of Statistics
SDG	Sustainable Development Goal

Preface

While men and women each make up about half of all of our societies, in many countries, and especially in South Asia, female participation in the work-force is considerably lower. The results are that many women have quite restricted opportunities in social, economic and political participation; restricted opportunities of self-fulfillment; and limited opportunities to contribute to the development of their societies. All of this can, in turn, reenforce a stereotype that women are less valuable members of society than men.

Many reasons have been discussed why female participation in the work-force in South Asia is shockingly low. The paper at hand, written by Bisma Iftekhar, is a serious attempt to analyze the reasons for the restricted access of women in the labor market. While she keeps regional conditions in South Asia in the background, the focus of the study is on Pakistan, where only 22.6 percent of the workforce is female, and the rate has even been declining over the last few years. The study analyzes income levels, cultural factors, legal barriers and education as potential key factors influencing the likelihood and chances of women to participate in the work-force, and finally presents a set of policy recommendations.

Reaching gender equality is a matter of rising awareness in both women and men. But it also will only be possible if the gaps in economic independence between men and women will be bridged. As long as men are supposed to feed the family and women are not allowed or cannot contribute to the economic wellbeing of it, gender equality will be very difficult to achieve.

This study is a major contribution to understand the key reasons for the low female participation in the Pakistani work-force. We hope the analysis and the recommendations will help to prepare the necessary reforms, which would strengthen Pakistani women, and the Pakistani economy.

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Executive Summary

Female labour force participation (FLFP) presents severe marginalization of women in South Asia due to several socio-economic reasons. This study mainly focuses on Pakistan and analyzes factors such as mobility, culture/norms, sector of work, location, religion, income, and education. Specifically, given the unclear relationship between education and FLFP, this paper examines the effect of primary, secondary, and tertiary levels of education on FLFP in Pakistan while considering factors, for instance, the nature of women's work, income, mobility, location, household size and childcare. The provincial analysis shows high employment rates in Punjab, followed by Sindh, KP and Baluchistan. Moreover, the percentage of employment is much higher in rural areas in all four provinces. Furthermore, for all the four provinces, as the total household income increases, the LFP of women with higher education increases manifolds and more and more women work on regular contracts as opposed to causal ones. However, it is not just the factors of income and education that determine the FLFP probabilities but an interplay of various socio-economic factors that influence the participation decision. Hence, for a concrete analysis and to draw inference, a Probit regression is done using the cross-sectional data of the Labour Force Survey of Pakistan 2017-18. Findings suggest that that women have a 33.4% lower probability of participating in the labour force than males and individuals with no formal education have a higher participation probability than those with primary and secondary levels of education. However, the probability of participation increases considerably with tertiary levels of education. Gender also plays a role as women with primary level of education have a lower participation probability than males with no formal education. Though there is a small increase for the ones with secondary and tertiary levels of education. The analysis also reveals that with increasing age, the probability of participating in the labour market decreases. The analysis also shows a correlation between education, type of contract, income, childcare, and mobility, implying that the higher the woman in Pakistan is educated, the more she is engaged in regular contracts. Furthermore, her income level rises with each additional year of education, she is more mobile and works outside the house, and has a lesser childcare burden. In addition to this, other literature findings highlight how with increasing levels of education, occupational gender segregation also reduces in Pakistan, suggesting that women could engage in sectors apart from the

informal, which is currently dominant in women's employment. The study proposes policy measures such as providing cash and in-kind transfers to parents for girls' education, state's role in assessment of inclusive social protection programmes, ensuring safer mobility for women and in improving working conditions for the home-based workers, including unpaid care work in the labour force surveys, educating women in STEM areas, emphasizing on the hurdles faced by young Pakistani women, efficient data collection and assessment methods and emphasizing the role of media in the positive portrayal of women's economic contributions as possible solutions to increase LFP of women and to empower them in the longer run.

1. Introduction

Women make up half of the world's population and, therefore, potentially half of the labour force. However, in countries worldwide, women's share of the labour force is significantly less, almost 27% lower than men's in 2019 (International Labour Organization, 2020, p. 4). Though there are substantial regional disparities, this inequality is massive in the Arab States and South Asia. Despite numerous efforts to reduce this gender gap, estimates for the Female Labour Force Participation Rate (FLFPR) in South Asia still show a declining trend from a mere 26% in 2010 to only 22.8% in 2023 (International Labour Organization, 2020, p. 115). What could explain this deacceleration or, in fact, a setback?

Firstly, most of the research has examined demographic and socio-economic factors. For instance, marital status, age, geographical location (rural or urban), wealth, household size, education levels in determining the women's decision to participate in the labour market (Agüero & Marks, 2008; M. Faridi et al., 2009; Hafeez & Ahmed, 2002). Though there is not a significant variation in these factors in South Asian countries but the FLFPR within this region is highly heterogeneous (Chaudhary & Verick, 2014, p. 10), for instance, 22.6% in Pakistan to 85.3% in Nepal in 2019 (The World Bank, n.d.-b).

The substandard performance of women's labour force participation (LFP) in Pakistan is one of the main reasons why the country ranks so low in the Global Gender Gap Index of the World Economic Forum (2020), ranking 151 out of 153 countries on gender parity. The subcategory of this index reveals suboptimal performance in all the categories (150th in economic participation and opportunity, 143rd in educational attainment, 149th in health and survival except political empowerment, which ranks the country relatively better at 93rd). Although such indices alone cannot draw any conclusions, Pakistan's poor performance in closing the gender gap even when compared to other South Asian countries paints a bleak picture of the prevalent long-standing conditions. Not only does this make Pakistan an interesting case study in its own right, but it offers significant parallels with other countries struggling with a similar phenomenon. For instance, just as in the Pakistani case, conservative social attitudes toward women is one of the main reasons for the low FLFP observed in the Middle East and North Africa

(Gaddis & Klasen, 2014). Hence, this study explores the South Asian region, focusing on Pakistan as a representative case of South Asia.

Furthermore, extensive literature claims that the higher the level of education, the greater is the labour force participation (Azid et al., 2001; M. Faridi et al., 2009; Naqvi et al., 2003) however, Khadim & Akram (2013), Shaheen et al. (2011) and Najeeb et al. (2020) argued that FLFP decreases after matriculation level in Pakistan, indicating that women who are moderately educated have lesser chances of participating than women with either no/low education or high levels of education. Chatterjee et al. (2018) found similar results for India as well. Assaad & Krafft (2013) also highlighted how despite increasing women's education levels, urban women's participation rates had declined. Most puzzling is that some studies even report a negative relationship between the two variables (Das & Desai, 2003a; Dasgupta & Goldar, 2005; Kingdon & Unni, 2001).

This explains that the relationship between education and FLFP is not a straightforward one and requires thorough research. Hence, this study's prime purpose is to unfold and analyze this novel, unexpected relationship between the two in Pakistan's case. Thus, the research question is "To what extent does the educational attainment affect the FLFP in Pakistan while considering other socio-economic and cultural factors of mobility, type of work, income, and childcare."

This study provides a qualitative literature review supplemented by a quantitative analysis using the latest Labour Force Survey (2017-2018) of Pakistan. As FLFP is a multidimensional concept, factors such as education, divided into primary, secondary, and tertiary levels, household size, age, location, sector of employment and marriage, are analyzed using the Probit regression.

The second chapter discusses the literature review that includes a thorough analysis of the factors affecting LFP. The relevant theories are then explained in the following section, which would help analyze the data. Chapter 4 provides an overview of FLFP in South Asia, explaining the trends and its analysis. An enriched comparison of South Asian countries would help chart each country's progress (or lack thereof) to investigate if the FLFPR has always been low in this region. The latter section then describes women's education in South Asia followed by a closer look at Pakistan and its provinces. Chapter 6 explains the methodology i-e description of the variables used, their interpretation, and the Probit model's findings. The last section is a discussion on the findings of the study followed by policy implications.

2. Factors affecting Female Labour Force Participation

This chapter discusses the relationship between evolving socio-economic and demographic factors and their effect on the women's participation in the labour market. Apart from the economic factors, culture/norms also play a significant role in South Asia. Hence, the report reviews legal barriers, culture, income level, and education as essential drivers of FLFP.

2.1. Income levels

Najeeb et al. (2020) note that there is a "U-shaped" relationship between FLFP and the country's level of development (a standard measure of which is the Gross Domestic Product per capita). Hence, low- and high-income countries would have higher participation rates than middle-income countries. A common explanation that is often related to this is the fact that since in these middle-income countries, the agricultural sector is primarily dominant; hence when these countries transition from this agricultural employment to the one that is more technology-oriented, men's privileged access to education means a higher displacement of women from the labour market (Boserup, 1970).

For the same reason, this Covid-19 pandemic had a disproportionate effect on the women in Pakistan. This is especially the case for the Home-Based Workers (HBWs), as they are invisible in the systems to take advantage of any financial support program. To gauge this, Hasan et al. (2020) analyzed who could study and work from home in Pakistan in 2020. The idea was to realize if women carried the most burden of the pandemic. The results show that although for women 9%–76% of the tasks in the top five occupations are switchable online (as compared to 0% for males) however due to lack of information technology education and inequalities in internet use, they are not better off than men (see Appendix-A).

Apart from the country's income level, household income level is also an important determinant. Olivetti (2014, p. 166) explains that with an improvement in men's market opportunities, women move out of the labour

market, chiefly the manufacturing sector. It is not just because of the rising reproductive burden but also because of the reinforcement of social barriers within higher-income households against seeing women work in, specifically, the blue-collar labour market (Mammen & Paxson, 2000).

In the same vein, at lower income levels, women's LFP is high as economic need pushes women into the productive work sphere. Yet, as women of lower economic backgrounds have poor educational achievement, it is more likely that their employment will be in less lucrative sectors or occupations where there is a lower educational requirement. Hence, although FLFP is high among women from underprivileged households, the nature of such work is usually poor. This most often manifests as unpaid family work especially in the agriculture sector, and in the manufacturing sector, work that is based at home and often on casual contracts with little to no benefits and bargaining rights associated with regular contracts (see Kazi & Raza (1990) for a discussion of this phenomenon in Pakistan).

2.2. Culture/Norms

Adeel et al. (2016) explain a very dominant and persistent factor for almost all South Asia. Social and cultural norms play a significant role in determining women's decision to participate in the labour market. Such norms act as a barrier for women's mobility and, in turn, shape gender roles about time use and household responsibilities. For example, Ejaz (2011) observed the factors affecting FLFP in Pakistan using the Pakistan Social and Living Standards Measurement Survey (PSLM 2004-2005). His study revealed that being unmarried positively affected the probability of being in the labour force. After marriage, the responsibility on the woman increases manifolds, and hence due to time constraints (especially after having many children), the probability of market activity decreases. This points to the unpaid work that most of the women are engaged in. According to a recent International labour Organization report, Asian men spend the lowest share of unpaid care work. In Pakistan, they spend 28 minutes or 8 % of men's total working time in a day and only 31 minutes in India (7.9 %) (International Labour Organization, 2018a).

Muńoz Boudet et al. (2013, p. 46) carried out extensive research consisting of three hundred and seventy focus groups in nearly twenty countries. They found out that in cultures where it is considered morally or religiously inappropriate to interact with "unknown/unrelated" men, women's

economic opportunities are constrained (for instance, lack of permission to work outside the home).

Field et al. (2016) and Eric Field & Vyborny (2016) noted similar results for India and Pakistan, where in India, men boasted explicitly that they did not like their women to work for pay outside the house. Pakistan is no less different. A large proportion of the women responded that they were not allowed to work outside the house because they were not permitted to do so by their husbands or fathers as fulfilling domestic responsibilities was their primary responsibility. These patriarchal arrangements also determine which occupations are "acceptable" for the women to participate (if allowed) in Pakistan. Hence, the gender norms to date are strongly entrenched in South Asian countries (Pimkina & de La Flor, 2020, p. 27).

2.3. Legal Barriers

In addition to the factors discussed before, legal barriers are also an essential determinant of FLFP in South Asia. There are laws restricting the number of hours women can work and in which industries they can participate (see Appendix-B). For instance, during the 1990s in India, when the economy was growing with increased trade, factory laws still put legal constraints on women's working hours. Such laws are highly discriminatory against women and can affect the overall FLFP (Najeeb et al., 2020, p. 5).

The World Bank's Women, Business and Law project carries out extensive, rigorous research on the interplay between the legal gender discrimination faced by women and how it affects their labour market situation. The Women, Business and Law (WBL) index is calculated using multiple data points across 8 indicators, such as mobility, starting a job, getting paid, getting married, having children, running a business, managing assets and getting a pension (World Bank, n.d.). The index score (arranged in ascending order on a scale of 1-100) for South Asian countries, an average of each country's score on the indicators mentioned in 2018 (see Appendix-C). A higher score would represent more gender-equal laws and a greater possibility of women participating in the labour market. Out of all countries mentioned, India has the highest score of 74.4, which implies that the laws related to mobility, workplace, pay, marriage; parenthood have continued to be reformed for women's favor. Despite such a higher score, low FLFP rate in India is a topic for further research. Pakistan and Bangladesh´s score is similar i-e close to 50, reflecting an average score in equal gender laws. However, if we explore how

the index is constructed and what factors are included, explains a lot about the discriminatory laws against women. For instance, in Pakistan, the law does not obligate equal pay for equal work, the government does not provide childcare services and women are not able to work in the same industry as men (The World Bank, 2021). This is the situation for most of the other South Asian countries and not just Pakistan. In addition, the unsatisfactory performance on the Global Gender Gap index explained earlier shows that indices alone cannot be a true reflection of the actual state of affairs. A lot depends on what factors are included, the weights given to each factor, and its computational methodology.

2.4. Education

Psacharopoulos & Tzannatos (1989) highlighted that out of all the factors, education is the one crucial factor that the governments should focus on if they wish to increase the FLFPR. Higher education would impact women's economic empowerment and contribute to their decision-making power, choice and agency in important domains of the household, leading to greater labour market activity.

Naqvi et al. (2003) analyzed how women in Pakistan decide to participate in the labour market using cross-sectional data from the Pakistan Integrated Household Survey (1998). Their study highlighted that the employment status of the head of the family (most likely a male), younger children, and having a male member in the house are significant factors that affect a woman's decision. Their finding related to education asserted that higher levels of education, primarily secondary, would improve the chances of labour participation by 19.7%. Heckman et al. (2011) and Rahman & Islam (2013) also noted increasing returns to the labour market at every level of education.

However, Chatterjee et al. (2018) observed that women with secondary levels of education (moderately educated) have lesser chances of being in the labour force than women with no education or high levels of education, suggesting a "U-shaped" relationship between the two. Similarly, Najeeb et al. (2020) in their research, showed that women with secondary levels of education had lower chances of employment than those with primary levels of education in the year 2015. However, the probability increased for those with tertiary levels of education. For instance, in Pakistan, in 1999, women with post-secondary education were 22% more likely to be in the labour

force than the women with no education at all (World Bank, 2018, p. 3). However, this likelihood dropped to only 13% in 2014. Alarmingly in 2015, for women with little or no education, their employment rate was 30.2%, whereas, for women with at least some secondary level of education, it was 13.2% (Najeeb et al., 2020, p. 19). On the contrary, men had a positive effect on their LFP with increasing years of education.

Klasen & Pieters (2012) research also had similar findings. They undertook a study in India analysing urban FLFP from 1983 to 2005. Their results revealed that the economic opportunities for participation attracted highly educated women and women with less than secondary schooling, which found no effect on participation.

To conclude this section, an enriched understanding of the factors affecting FLFP (though there are multiple other factors apart from the ones discussed above) is not only significant from a theoretical perspective, but it has a societal value attached as well. For instance, the determinants of FLFP are a reflection of diverse dimensions of women empowerment (Heyne, 2017). In addition, it is significant for policymakers, Civil Society Organizations (CSOs), and academia for progress towards gender equality and its attached economic worth. It would lead to the country's socio-economic development through an increase in the workforce, higher productivity and improved standard of living via a reduction in poverty levels. This economic empowerment would also contribute to their decision-making power, choice and agency in critical domains of the household (Kabeer, 2017).

Özsoy & Atlama (2009) rightly claim that the opportunity cost of low FLFP is the forgone opportunity for higher economic growth and development. The global Gross Domestic Product (GDP) could grow by an additional $5.8 trillion if the gender gap in male and women LFP is reduced by 25% by 2025 (Pimkina & de La Flor, 2020, p. 29). Hence, to contribute to informed, progressive, and targeted interventions for the well-being of women, an understanding of determinants of FLFP is of paramount importance.

As discussed in the introduction, the relationship between education and FLFP is not a straightforward one. The following section would discuss the theories that emphasize the role of education and how it impacts the labour force participation decision. This shall help analyze the data and better understand the labour dynamics.

3. Theoretical Considerations

Before explaining the underpinning theories, it is significant to define the central theoretical concept used in this study.

FLFP is defined as the "women's decision to be part of the economically active population: employed or unemployed population as compared to being part of the economically inactive population of the economy – those not working nor seeking work" (Hosney, 2016, p. 14). LFPR is the standard measure of LFP. International Labour Organization (n.d.) defines it as "a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work". This definition would then encompass people engaged in paid employment, self-employed and unemployed people. It is interesting to note how domestic work or work done by people for the household is explicitly not counted as labour force participation. It may mean a partial account of the work done since women in South Asia are disproportionally active in the unpaid work in the household. This part is explained later in detail in the 4th Chapter.

In this study, the theoretical framework on FLFP mainly considers the supply side of labour force i-e women's decision to be a part of the market economy or opting out. The focus here is primarily on the role of education. Although education has been linked with various theories such as household production theories, neoclassical models of growth, this study explores the two complementary theories, namely, human capital theory and the theory of labour supply.

3.1. Human Capital Theory

Human Capital Theory is one of the most important theories in the education policy discourse. Becker (1975) explains that human capital is the productive investment in the form of skills, knowledge, abilities that the individual gains mostly from education and on-the-job training programs. The basic idea behind this theory lies in the fact that investment in education and training are prerequisites for increasing LFP, higher earnings, and economic growth. This is because such investments would build the capacities of individuals, improve their productivity, and increase their probability of finding paid

employment. The theory further postulates that the higher the education levels, the more the people would be willing to participate in the labour market to benefit from the positive relationship between wage level and educational attainment. Hence, this study aims to test this particular part of the theory in gauging how education plays its role in the FLFP in Pakistan.

Talking about educational attainment, Schultz (1961) argues that there may be a "U-shaped" relationship between the levels of education and FLFP. Accordingly, women with no education would have higher participation rates, the rate would be lower for women with a primary or secondary level of education and higher participation rates for the ones with tertiary levels of education. The most plausible explanation given for such a relation is that high poverty levels force women to actively be a part of the labour economy, as it is essential for survival. However, those with some level of education have preferences for particular occupations and lack of such opportunities would imply opting out of the labour market. Besides this, mostly women with secondary levels of education in developing countries take part in household production or in the informal economy. As informal workers are not counted as part of the labour force, this translates into lower FLFPRs.

Thus, this theory stresses the significance of formal education and, thereby, educational expenditures as a highly instrumental investment for increasing human capital. Ghez and Becker (1975) explain that the size of the stock of human capital is also important. It affects the efficiency in market production and consumption as time allocation between work and leisure is determined simultaneously with the accumulation of human capital. This also explains the reasoning behind gender differences in decisions regarding human capital investments.

Becker (1965) further highlights that the decisions about the division of labour i-e taking part in the household production or part of the labour market are based on the principle of comparative advantage. Historically, women have a comparative advantage in household production such as childcare and men in the labour economy; therefore, women engage more in non-market work than men. This could also explain why traditionally, women invest in human capital that increases household efficiency, and males do that to raise market efficiency. Likewise, women coming from a traditional mind setup would spend less on higher education (Lim, 2017, p. 44).

Lastly, the human capital model within this theory explains that the decision to invest in tertiary education is determined by doing a cost-benefit analysis

of such investment. In this case, the direct costs would involve, for instance, university fees etc., and the benefits would be good employment prospects so on and so forth. Hence, a rational individual would weigh the two sides and invest in human capital if the value gained would exceed the cost incurred.

One major factor that would influence this cost-benefit analysis is the unpaid care work. So, it is very important that an analysis of paid and unpaid work be carried out to better understand FLFP for which the theory of labour supply can be useful.

3.2. Theory of Labour Supply

The traditional neoclassicals through their theory of labour supply analyze the decision for LFP by women through the framework of allocation of time between paid work and leisure. An individual is faced with the choice of either market activities that provide income or leisure that provides utility. Since time is a limited resource, the individual faces the tradeoff between the two. The labour supply decision is reached by choosing an optimal allocation between the two alternatives which maximizes one's utility.

Psacharopoulos and Tzannatos (1989) further explain this model, highlighting an opportunity cost involved in choosing one alternative over the other. For instance, spending too much time on leisure is costly in terms of lost income from working in a market economy. Hence, if the remuneration from work is higher than the gains in utility then an individual may choose to participate in the labour market. Hence, higher wage rates (possibly from the higher education) encourage people and stimulate higher participation.

However, this labour supply decision is based on women's preferences, tastes and personal characteristics such as race, age, marital status etc. (Sprague, 1994). This explains that even if two individuals are offered the same wage, but their decision of participating or not participating would differ given that each would place a different value on the market and non-market activities.

The two theoretical explanations describe factors that influence women's decision for LFP. The theory of labour supply simply highlights the tradeoff between work and leisure. A rational individual would maximize their own utility would choose an optimal allocation between the two alternatives. However, in the practical world, is it always about utility maximization or rational decision making? The theory of human capital also needs to be looked at from a critical perspective.

The foundational narrative of the human capital theory has been challenged for the lack of realism and operating a simplistic, universal lens. A large amount of literature explains prior inequalities, social capital networks, gender as explanations for different educational outcomes rather than an individuals' choice about investing in education (Marginson, 2017). It has been criticized to work mainly in the West with advanced economies and less applicable to the developing world. The theory portrays a utopian world and provides a simple solution for individual and collective growth. However, not everything is as "perfect" in the practical world where strict mathematical or rational laws can apply. In fact, the practical implementation of human capital theory in the developing countries context has been defined as "disastrous in practise" (Ngu, 1982). Mere generalizing about the positive returns of education without the country context is problematic since culture and economy massively impact the role of education in a society. This is true for countries like Pakistan, where gender, norms, social class, religion also affect the decisions to invest in human capital. Therefore, the effectiveness of this model is reduced for its validity and reliability in developing countries as social infrastructure, economic environment, government policies are also significant factors to consider.

Tan (2014) further highlights how the role of education, in theory, is relegated to only monetary gains to serve the needs of business and industry. The point here is not to undermine the value of education, for it does serve as a tool that leads to a knowledge-based economy. However, the point is that the focus should not be on just increasing education statistics but to highlight how correcting the gender disparity in education and LFP is of paramount importance. Since the actual value of education is realized when it acts to promote freedom, human development and most importantly women empowerment.

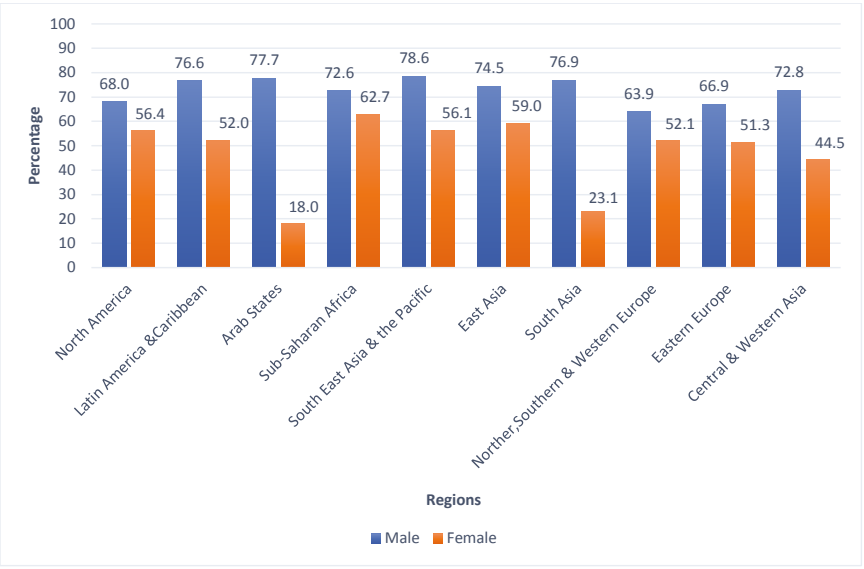
To conclude this section, the two theories would help analyze the data and see how far they are applicable to the case of Pakistan. Before that, the next section explains the FLFP scenario in South Asia, its trend, and dominant sectors. This would provide an overall picture of the labor market, which would help narrow it down to Pakistan's case.

4. Women's Labour Force Participation

4.1. Regional Outlook

This study explores South Asia in particular. On the one hand, it is densely populated, dependent on agriculture and a tradition-bound region. Yet, it comprises a varied, socio-cultural, and ethnic population where religious beliefs and patriarchal gender roles hugely impact women's lives. Moving beyond this region´s generalization, country-specific trends are a lot more puzzling (Chaudhary & Verick, 2014, p. 10). As the figure below highlights, South Asia along with Arab states has the most significant gender gaps in LFP compared to other regions of the world.

Figure 1: Labour force participation rate by gender and region (%), 2020

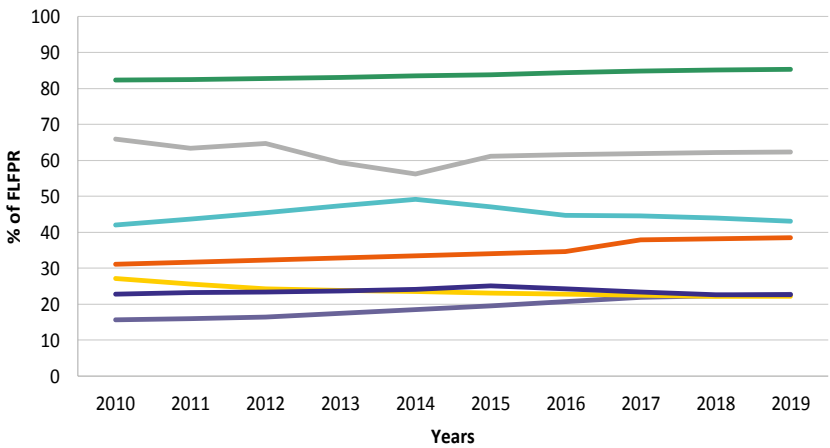


Data source: (International Labour Organization, 2020)

To analyze the trends in FLFP, it is interesting to draw a comparison between the countries in South Asia. The figure below shows FLFPRs in different South Asian countries. Nepal has the highest FLFPRs from 2010 to 2019 (in the selected South Asian countries). Bhutan also has relatively better participation

rates ranging between 50% to 75% throughout the decade. Literature findings suggest that there are relatively fewer restrictions for women to participate in both countries and its mostly agriculture-driven. Another primary reason is the higher poverty levels, especially in Nepal, necessitate women to work (Hammill & Sirimaneetham, 2016, p. 2). Bangladesh has improved drastically in terms of FLFP. Over time, more and more women are being a part of the labour force mainly because of the garment industry and surge in rural female employment (Chaudhary & Verick, 2014, p. 10). The share of women's informal employment as a percentage of non-agricultural employment in Bangladesh is very high i-e 91.3% (Chaudhary & Verick, 2014, p. 11). High FLFP is mainly possible due to the success of a micro-credit scheme in Bangladesh. Grameen Bank, with its success of the micro-credit finance program has financially empowered many women, especially from rural areas. However, it is not very impressive that those employed mostly retain in the vulnerable employment and in the sectors with low returns and poor working conditions. Unfortunately, this has not been the case of micro-credit schemes for Pakistan, where a high default rate on the part of the borrower and lack of sufficient donors renders such schemes relatively unsuccessful (Ejaz, 2007b).

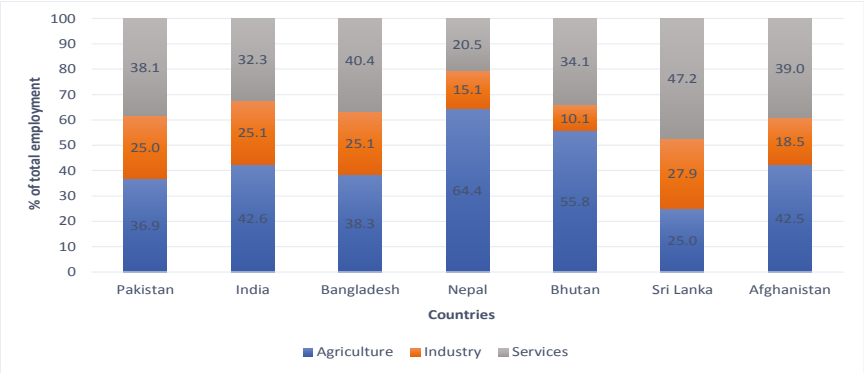
Figure 2: Comparison of FLFPR in South Asian Countries, 2010-2019



Data source: (The World Bank, n.d.-a)

Moving further, it is worthwhile to analyze the industrial composition of employment to gauge which sectors are predominant in these countries. The figure below shows that most countries except Sri Lanka are largely dependent on agriculture, especially Nepal for the year 2019.

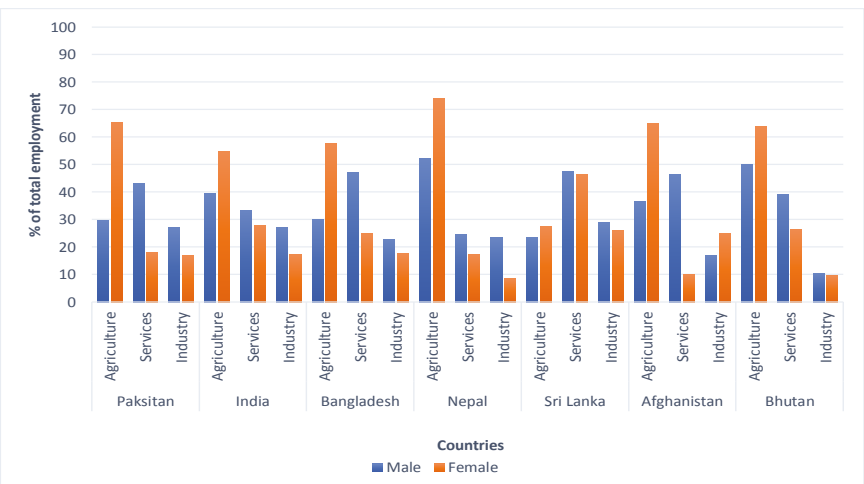
Figure 3: Industrial composition of employment, 2019



Data source: (The World Bank, 2019b, 2019d, 2019f)

Gender-wise distribution of these three sectors i-e Agriculture, Services and Industry show that sectors such as service and industry are mainly dominated by men in almost all selected South Asian countries. However, as seen in figure 4 below, women are highly concentrated in the agricultural sector with the largest gender gaps of 35.4%, 27.43%, 28.4% observed in Pakistan, Bangladesh and Afghanistan respectively in 2019. However, as far as Pakistan is concerned, the women share of agriculture in total employment decreased from 35.2% in 2010 to 29.6% in 2018 (see Appendix-D). This decreasing rate applies to male LFP as well (Pakistan's case is explained below in detail).

Figure 4: Industrial composition of employment by gender in South Asia, 2019



Data source: (The World Bank, 2019a, 2019e, 2019c)

4.2. The case of Pakistan: profile and trends

Per capita income in Pakistan has seen steady growth. For 2021, it has increased by 13.4% on the previous year (M. Z. Khan, 2021). Yet, this growth in per capita income hides structural and development-related issues. Pakistan's growth in terms of macro-economic performance is defined as "growth without development"(Easterly, 2001). Easterly explains how the country systemically underperforms in most of the social indicators for its income level. There are widespread inequalities between men and women, between regions and between urban and rural areas. For example, poverty in Pakistan, at 29.5%, is the highest in South Asia with women likely bearing the brunt of it (World Bank, 2018).

Although there has been a lot of research conducted on women's labour supply in Pakistan exploring its determinants (Aboohamidi & Chidmi, 2013; Ejaz, 2007a), barriers to women's entry into the labour force (Sadaquat & Sheikh, 2010) some scholars have examined the link between FLFP and economic development (Mujahid & Uz Zafar, 2012) etc. however, only a few have engaged with secondary data in detail to study the effect of different educational attainment levels on women's labour supply while also considering other socio-economic factors. Hence, a thorough enumeration of this and the empirical analysis offers insights, providing the basis for a broader policy agenda for Pakistan and policy implications for other countries. This is especially relevant as Pakistan aims to increase FLFP to 45 % by 2025 (Ministry of Planning, 2014, p. 101). In addition, Pakistan's Vision 2025 aims to achieve inclusive growth characterized by a good quality of life for all its citizens across gender, regions and an average growth rate of 7 to 8% that is inclusive (Planning Commission(Pakistan), 2014). This is in line with Sustainable Development Goal (SDG) 5 that calls for greater gender and overall equality, and SDG 8 that looks to promote inclusive growth (United Nations, n.d.).

Such commitments are a reflection of the deep-rooted inequalities and polarization that exist in this South Asian country, although Pakistan has made various national and international efforts to narrow the gender gaps. For instance, Pakistan is a signatory to the Convention on the Elimination of All Forms of Discrimination against Women. Moreover, in 1998, a National Plan of Action (NPA) was also prepared that included 12 areas and 184 priority actions for women. NPA included activities empowering women and health, women and education, women and poverty, women, and human rights, etc. The government of Pakistan also launched a National Policy of Development

and Empowerment of Women in 2002. The objective of this policy was to empower women socially, economically and politically (A. Choudhry & Mutalib, 2019). Despite all such efforts, the country's performance in social indicators is amongst the worst in the world (Easterly, 2001).

Aside from the severe marginalization of women in education and health, women's economic opportunity remains constrained in Pakistan (Siegmann & Majid, 2014). Though the rate of women participating in the labour market has increased since the last decade but in which sector has the numbers gone up? Though access to paid employment remains a relevant issue, the quality of jobs also matters. This was highlighted by Kabeer (2016) and in another study '**Women have made clear gains in terms of the quantity of employment generated by neoliberal patterns of growth, but their gains are far less clear in relation to its quality**' (Seguino, 2016, p. 16). Women in most cases are involved in the "survival jobs" jobs that force these women out of pure economic needs to support their families rather than jobs that "develop a sense of self-worth and dignity' (Chun, 2016, p. 176). Such a scenario is described as an "added worker effect". It implies that secondary workers most often women, are engaged in economic activities during recessions to balance the loss of earnings of other household members as a result of external shocks in the economy. A. Khan (2007) describes a similar situation for Pakistani women who work mainly out of dire economic needs. An illustration of their distressed employment is their poorer share of employment in the formal sector and higher concentration in the informal sector.

LFP in the formal sector stands at 25%, which is the lowest in the region except for Afghanistan. Women's informal employment as a percentage of non-agricultural employment is as high as 92.1 % in 2018 (International Labour Organization, 2018b, p. 118). The latter is especially worrisome as the informal sector sees little regulation, employees are hired without any formal contracts (mostly verbally), are subjected to sexual harassment, verbal abuse and work is often not just insecure but can even be hazardous. Even the labour unions are male-oriented and provide little to no support to such workers (Sarwar & Abbasi, 2013).

Of those women working in the informal sector, 80% of them work as Home-Based Workers (HBWs) in Pakistan compared to only 4% males. Their activities include, for instance, handicrafts, post-manufacturing tasks such as carpet weaving, embroidery, packing etc. The number of HBWs increased to 4.37 million in 2017-18 (when the latest labour force survey was conducted)

from 3.59 million in 2014. This increase is due to the rise in the number of women HBWs of about 0.92 million whereas male HBWs have declined by about 0.15% (Akhtar, 2020).

One cannot ignore the value this sector brings to Pakistan's economy. This sector contributes extensively to the exports of Pakistan. For instance, Pakistan has a share of 80% of the world's match-grade footballs, and this industry alone contributes to $50 million in foreign exchange (International Labour Organization, 2010, p. 13).

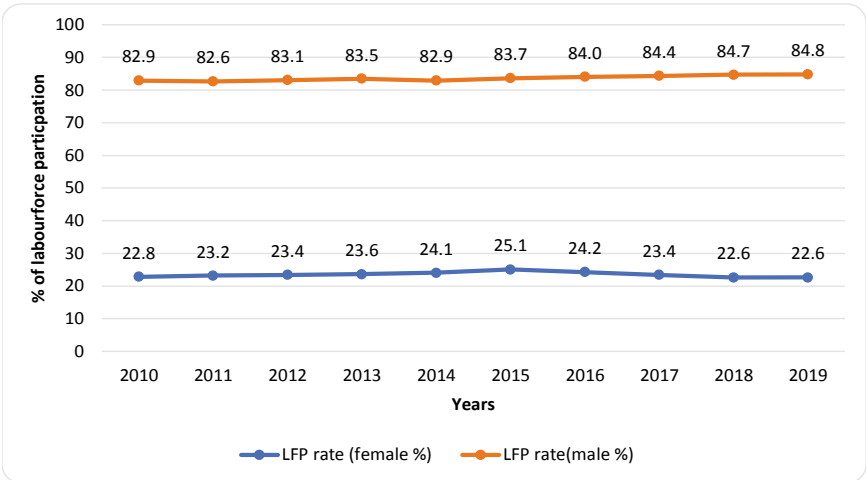
Despite such contributions, HBWs are ignored when it comes to giving them their due rights. Most women HBWs have little to no education and mostly belong to poor households and the fact that millions of HBWs are not even adequately catered to in the labour force surveys gives rise to even more exploitation in terms of work contracts and low wages (Zhou, 2017). These workers work under exploitative conditions in terms of contracts and depend on a middleman for their wages which is even below the minimum wage. Dr. Saboor Gayour, Chairman, Policy Planning Cell, Ministry of labour and Manpower divisions in Islamabad said, "**The existing set of labour laws applicable to the workers in the formal economy, almost ignores the majority of the working women and men in the country. Neither the workers in the agriculture sector nor in numerous informal sectors are covered by the existing laws**" (International Labour Organization, 2010, p. 11).

Although, some efforts are being taken in this regard. For instance, Sindh (a province of Pakistan) passed a Home-Based Workers Act in 2018; however, it has still not been implemented (Dawn, 2019). The objective of the Act is to uplift and empower these HBWs of the Sindh province. Efforts on a national level also exist in the shape of the Draft National Policy for HBWs in Pakistan 2011 (Government of Pakistan, 2011) built on the guiding principles of equality and non-discrimination, elimination of exploitation, women empowerment, social and economic wellbeing and freedom of association. While the (draft) policy seems very promising, enlisting numerous actions to date, it only remains a draft.

Moving further with the general trend of FLFP in Pakistan, statistics reveal persistent gaps in labour force participation over a span of ten years (shown below). Women account for a mere 22.63% of the labour force and men 84.79% in 2019. The gap even seems to get larger over time as there is growth in the male LFP, whereas, for women, it's decreasing consistently

from the year 2015. What could explain the trend just explained? So, the next part describes some factors in detail which may help us understand the reasons for low FLFP in Pakistan.

Figure 5: Comparison of Labour force participation rate in Pakistan, 2010-2019



Source: (Ministry of Statistics, 2018)

4.3. Exploring the FLFP factors in Pakistan

There are social, economic, and religious factors behind low FLFP in Pakistan. This part explains how mobility, social norms, wage inequality and religious implications of purdah[1] for women affect the type of work that women are engaged in and their participation probabilities in Pakistan.

4.3.1. Mobility

Mobility is one of the significant factors that limit the LFP of women in Pakistan. There is an extensive body of literature that shows how mobility acts as a constraint in Pakistan (Cheema et al., n.d.; T. Khan & Khan, 2006) and even the studies that generally document social issues in Pakistan and do not directly address the FLFP issue, nonetheless, shed light on this problem. For instance, Jacoby & Mansuri (2011) present qualitative evidence relating

1. Purdah is seclusion/secrecy from men or strangers by means of a curtain. (https://www.lexico.com/definition/purdah)

to caste and clan effects on education in Pakistan. They found out that particularly low caste parents were wary of sending their daughters to school if the school is located in a different caste boundary due to safety reasons. This has other implications as well. First, the direct effect on their education would impact their LFP in the future. Second, similar issues would arise for women when going to their workplaces outside their homes.

The mobility of women is a problem not only due to safety reasons but also goes against the social norms of society that stereotype women as caretakers of the house. As traveling to work can increase the level of exposure women experience, it violates the social norms. In most cases, they are dependent on male relatives for their commute to work which limits their participation probability even more (Erica Field & Vyborny, 2014).

One of the causes of this problem is the usage of public transport (Adeel et al., 2013). Ejaz (2007b) found out that although ownership of other household durables is negatively associated with FLFP, possessing personal vehicles is positively associated with increased FLFP. Aside from its implication of positive effect on the LFP, this could also indicate a U-shaped relationship between economic development/wealth (typically measured through income) and FLFP as has also been indicated by several other authors (Fatima & Sultana, 2009; Tam, 2011). A closer look at the results of the analysis of the survey shows the effect of income on the mobility of women (see Appendix-E). The location of work categorized between the income quintiles highlights those women belonging to richer households are commonly more mobile as evidenced by their large share of working outside homes as compared to poorer women who comparatively work in their own dwelling.

4.3.2. Social norms

In Pakistan, men are considered to be the breadwinner of the house; therefore, the idea of women working outside the house is stigmatized. It goes against the "honor" of men if their women are working for money and is seen as a shame (Erica Field & Vyborny, 2014). The extent of this, however, depends on the location and household income. Under conditions of extreme poverty, the man's income is not enough to feed the whole family, so women work to supplement the total income. However, the situation changes with increasing household income.

The stigma attached to women working influences occupational segregation as well. Occupations that include a lot of public exposure to unrelated men

are considered less respectable. This gender segregation could be due to other reasons apart from gender as well, such as differences in education levels, geographical boundaries, etc. A study on "Occupational Gender Segregation and Its Determinants, an Analysis of Pakistan Labour Force" in 2013 reflects upon the prevalence of occupational segregation in Pakistan (Irfan et al., 2013). The authors calculated gender segregation in Pakistan using the Duncan index technique. The index considered nine major professions and found the highest segregation in the profession of Manager. They then looked at the determinants of this segregation and highlighted that education is a significant factor that can greatly reduce occupational gender segregation in Pakistan. If the education level increases by one year for people with primary education, the segregation reduces to 0.0074 units, and with one additional year in higher education, the value reduces to 0.0012 units where the more the value is closer to zero, the lesser is the gender segregation. Their results are consistent with the other literature findings (Awan & Farooq, 2008; Yasin et al., 2010).

4.3.3. Wages

Another potential explanation for lower FLFP is wage discrimination. Women earn less than men in Pakistan, and this disparity has persisted for decades (A. Khan, 2007b; Sabir & Aftab, 2007). The Global Wage Report 2018-19 by International Labour Organization explains the gender pay gap variation between countries. For instance, it is 34% in Pakistan and (negative) 10.3% in the Philippines, meaning that women on average earn 10.3% more than men in the Philippines (ILO, 2018, p. 23).

Several reasons could explain the gender pay gap in Pakistan. Factors, for instance, differences in education, experience, skill level, etc., contribute to the variation. Interestingly, occupational segregation counts as a key factor highlighting the predominance of polarization by gender of industries. Women's work in highly feminized occupations in Pakistan explains why they account for just 9% in the top 1% but almost 90 % of wage earners in the bottom 1% (ILO, 2018, p. 49). In Pakistan, women mostly work in the fields of skilled agriculture, craft and trade, and unskilled labour which are also amongst the lowest-paid occupations.

As explained above that occupational segregation could be reduced by increasing levels of education. So, it will be fascinating to determine the extent of educational attainment in reducing the wage differential. Indeed, Awan et al. (2013) used the data from household surveys of Pakistan (1998-

99 & 2001-02) to analyze the income gap using the Mincerian Earnings Function approach to investigate the returns to education. Their study led to three noteworthy findings. First, gender does play a significant role in explaining the wage gap as being a male increases income by 169.9% than being a woman. Second, returns to education increase with additional years of education for both men and women, but the effect is stronger for the latter. Third, a large percentage of women are engaged in unpaid family work, however, education plays a significant role in helping them choose better earning occupations and work as employers or self-employed. For instance, this, in essence, reduces the occupational segregation between gender. Their results are consistent with the findings of other authors (Altas & Bourguignon, 2005; Fields & Soares, 2002). Hence, both the factors above highlight how education plays a role in reducing the gender pay gap and occupational segregation.

4.3.4. Purdah

Pakistan is a Muslim majority country with 96.28 % of Muslims (Pakistan Bureau of Statistics, n.d.), and the religious implications of (purdah/ veil) confine women to limited work opportunities that are often sexually segregated such as schoolteachers, midwives, domestic cleaners, etc. (Ejaz, 2011b). However, the severity of purdah also depends on the location, as in rural areas, it´s stricter. Its level also varies as burqa is full covering from head to toe, chadar or a dupatta just a coverage on the head, with each lower level of purdah[2] associated with increased degrees of freedom.

In one of the first studies that analyzed the relationship between norms of wearing a veil and working in Pakistan, Shaheed & Mumtaz (1983) found out that for HBWs, it was the central reason to work from their homes. Although purdah has to do with the society's conservatism, "but it ultimately manifests itself in the ability to control female labour and ability to control female access to resources through the practice of seclusion" (Akram-Lodhi, 2010, p. 93).

The above factor might help explain the surge of women working in the informal context and that too as HBWs. Hence, women are "kept" segregated in the house separate from the other men, which is essentially ensuring that the political economy of the household is intact. To conclude, the situation of countries like Pakistan that are muddied with a patriarchal society dictating

2. Only in terms of layering of cloth

the "appropriateness of the women's profession" according to the male mindset is well described by Das & Desai (2003a).

"Given the preoccupation with status-appropriate work for women, villagers themselves often rank castes by whether they allow women to work:

only within their courtyards/home steads only at their own farms

only within the courtyards/homesteads of others

only at the farms of others

in other activities within the village

in other activities outside the village.

Under this ranking scale, the more secluded the woman the higher her household's status or prestige" (Das & Desai, 2003b, p. 4).

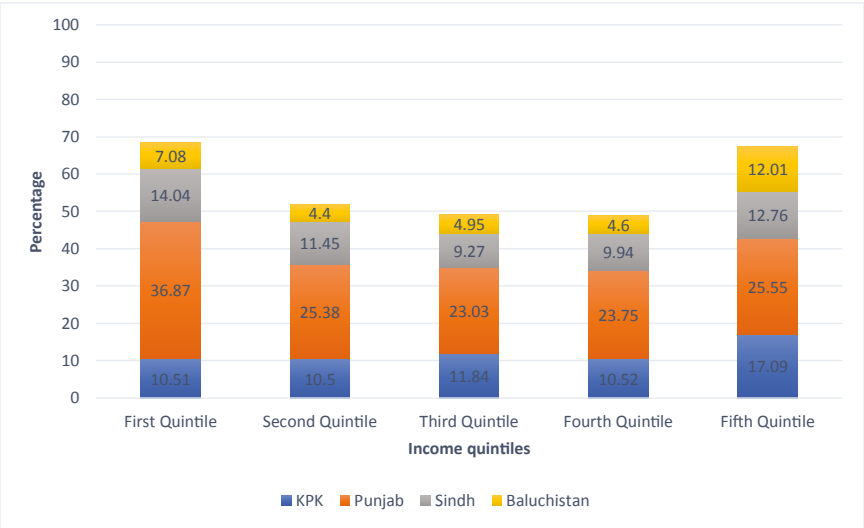
Hence, to improve women´s status and actually make a positive difference in their quality of life, it is significant to engage them in activities valued by society. This implies jobs outside their homes and in the formal sector (Sathar & Kazi, 1990). The percentage is still low, even in urban areas where only one in three women work outside their homes (Siegmann & Majid, 2021). It is not enough to only focus on the expansion of employment opportunities per se.

4.4. Province-wise analysis of the FLFP situation in Pakistan

After analyzing how the FLFP situation is overall in Pakistan, the section below explains how each province in Pakistan is diverse when it comes to FLFP rates, women's education, their sector of work etc. In order to have a better understanding, the following analysis is done according to the overall household income level with the first quintile representing the poorest and the fifth the richest in terms of income.

As the figure 6 below shows that Punjab has the highest FLFP levels at all levels of income and Balochistan has the lowest rates as compared to the other provinces. This could be due to several socio-economic reasons, for instance, better infrastructure, multiple work opportunities, a working environment that results in higher participation rates for women in Punjab province.

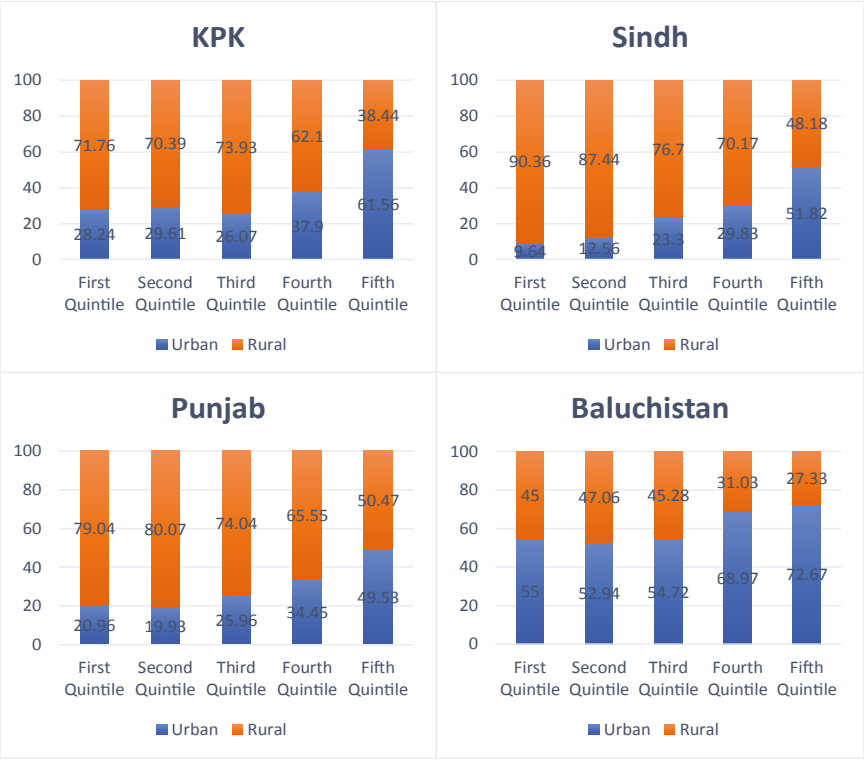
Figure 6: Provincial FLFP level analysis by Quintiles



Source: Author's own calculations based on LFS 2017-18

In addition, the rural-urban divide should also be analyzed to gauge a better picture of the overall FLFP trends and so that the Government of Pakistan can undertake targeted interventions where needed. Figure 7 below highlights that almost all the provinces have higher FLFP rates in rural areas with the gap decreasing with increasing levels of income. One exception is that of Balochistan where urban women have higher participation rates than rural women.

Figure 7: FLFP in Pakistan by region and province



Source: Author's own calculations based on LFS 2017-18

Since the aim of the report was to analyze how different levels of education impacts FLFP rates so a comparison was drawn between different provinces with respect to education levels but first, look at the literacy statistics. The literacy rates of the population in Pakistan show a stark difference between men and women with men outperforming women in all of the provinces. According to the LFS 2017-18, men had 73.3%, 72.2%, 72.8%, 73.0% in KP, Punjab, Sindh and Balochistan respectively whereas for women it was only 38.5%, 57.4%, 49.9%, 33.5% (province-wise) (Pakistan Bureau of Statistics, 2017).

Furthermore, for all the four provinces, as the total household income increases, the LFP of women with higher education increases manifolds and the LFP of women with no formal education decreases with increasing household income. This is in line with the analysis explained in the later section of the report on how factors such as women's education, income, type of contract are all correlated.

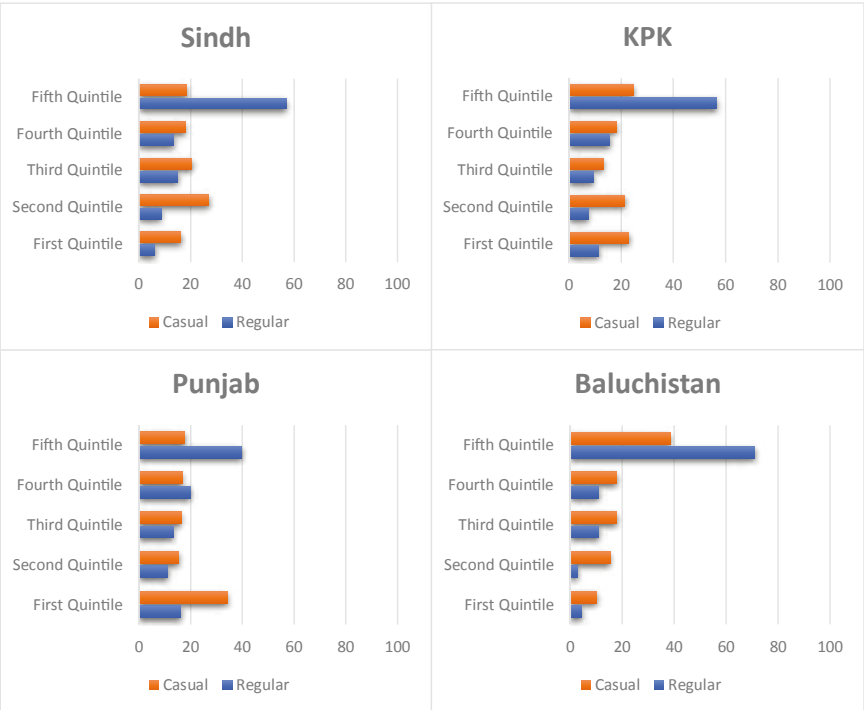
Figure 8: Women's education and sector of work

Source: Author's own calculations based on LFS 2017-18

In order to understand if it is actually the case, the data analysis of the type of contract women are engaged in with respect to the household income affirms the aforementioned claim of correlation. It is the poorest women who are engaged in casual contracts with the percentage of those with regular contracts increasing with increasing levels of income. This difference is massive in Baluchistan where there is a surge in regular contracts for women with every increasing level of income.

This provincial analysis of FLFP shows how women belonging to richer households not only have higher levels of education but also implies that they likely have the necessary skills to be able to bargain for and attain regular contracts.

Figure 9: Women's Contract type



Source: Author's own calculations based on LFS 2017-18

The following part of the report explains the overall education dynamics in South Asia and narrows it down to Pakistan's case.

5. Women and Education

This chapter gives an overall picture of the education scenario in South Asia in general and Pakistan in particular. As the main emphasis of this study is on educational attainment and how it affects the FLFP, this chapter gives a brief overview of education followed by an explanation of factors behind low education in South Asia. This chapter prepares the background for moving onto the methodology chapter.

5.1. Regional Outlook

Girls' education has become a global civil rights issue. Yet, despite numerous international bodies like UNICEF, World Bank, and many national governments strategically highlighting this issue as a fundamental human right, around the world, 132 million girls are out of school (Girls' Education | UNICEF, n.d.). For decades, newspaper headiness report barriers to girls' education, for instance "poverty, child marriages and gender-based violence" but have we made any positive difference?

In South Asia and sub-Saharan Africa, girl's education falls behind boys' education most dramatically. Be it any indicator i-e measures of literacy, dropout rates, enrolment rates, and years of schooling, women lag behind men substantially (S. R. Khan, 1993a, p. 176). Though there has been progress in closing the gender gaps in education in South Asia from 20% in 2006 to 6% in 2020 however, the absolute educational attainment levels are still deficient. The main issue is that of literacy. Though the definition of literacy evolves and varies between countries and even between different data sources, UNESCO recommended a uniform definition for international comparisons. Moving beyond the conventional definition of people who could read and write a short statement, literacy is now explained as "**a means of identification, understanding, interpretation, creation, and communication in an increasingly digital, text-mediated, information-rich and fast-changing world**" (Literacy, n.d.). As of 2020, only 46% of women are literate compared with 71% of men in Pakistan (World Economic Forum, 2020).

5.2. Factors for low Education

Deep-rooted inequalities and cultural stigmas attached to women's education have led to low educational attainment for women in the South Asian region. While the region is rich in diversity, it comprises some of the world's poorest countries with highest mortality rates and low living standards (S. R. Khan, 1993b). Hence, multiple economic and social factors explained below contribute to staggering low rates of women education in South Asia.

Widespread poverty in the South Asian region is one of the most significant factors that negatively influences women's education. Low-income families with already few resources perceive women's education as an additional cost to bear as the monetary pressure of dowry already burdens them. With finite resources, when parents are faced with either educating a girl or a boy, most individuals prefer educating a male child for various reasons. According to a study conducted by National Centre for Education Research and Training in India, multiple reasons including domestic responsibilities, early marriages, betrothal, and parental indifference towards women education accounts for 55% dropout rate from schools at the primary level (S. R. Khan, 1993a, p. 187).

Moreover, in a few conservative societies in South Asia, feminine honour codes are defined which puts the burden of maintenance of the social reputation of the family on women. Women education is considered to be a threat to these honour codes. Consequently, adolescent girls are withdrawn early from the schools to preserve their good reputation and hence the honour of the family. A similar attitude of poor rural parents is reported in Nepal where women education is viewed as a threat to decency and morality in the society (S. R. Khan, 1993b).

Mobility is another significant factor. Parents are reluctant to send their daughters far off to avail of education. As discussed in the earlier section, mobility constraints affect women's education and their labour participation in the longer run. Therefore, while other factors being unchanged the likelihood of women attending school increases with a shorter distance to school. According to a report published by UNESCO 2010, girls' enrolment and distance depict an inverse relation as with each 500 meter increase in distance to school , there is a sharp decline in women enrollment, accounting for 60% of the gender gap in education in Pakistan (A. N. Choudhry et al., 2019a).

To conclude, women education is contingent upon the financial resources of the family (middle or upper class in terms of living standards), location of the household (rural or urban), size of the household (number of children), and most importantly, awareness of the rights of women. To what extent these factors apply to the case of Pakistan as well? For that, the next section presents the education scenario in the country.

5.3. The case of Pakistan

Shortly after independence in 1947, Pakistan's founder Muhammad Ali Jinnah sent a message to the conference saying, "**the future of our state will and must greatly depend on the type of education we give to our children**" (Quaid-e-Azam Educational Complex, n.d.). A commission in 1959 especially stressed the women's education that stated "**unless a mother is educated, there will never be an educated home or an educated community**" (UNESCO, 1987). There had been multiple education commissions till 1993 but education has always remained "unabashedly elitist" (Easterly, 2001, p. 19). Not only this, but culture and other socio-economic reasons are a constraint to women's education in Pakistan.

The factors are not different from South Asia in general. They include but are not limited to mobility constraints, especially in rural areas where girls have to walk to school, child marriages, poverty and a culture in which girls' education is undervalued compared to boys. Consequently, women are kept at home for house chores (Hunter, 2020). These reasons stem from a lack of decision-making power in the house. This is not only concerning education but all other decisions which could potentially make the women aware of their rights are curtailed and infringed upon as well-explained "**A male power elite could decide to keep women uneducated so that women do not have the skills necessary to petition for more equal treatment**" (Easterly, 2001, p. 4). According to Pakistan Social and Living Standards Measurement Survey 2005-06, in more than 75% of the cases other household members decide where the woman should work (Eric Field & Vyborny, 2016).

Another significant point to mention here is the difference in the "choice" of male and female subjects. As Mendick (2013) rightly says, "**gender is constructed within social practices, including science and mathematics**" (Mendick, 2013, p. 207). Therefore, aside from the internal factors, numerous sociological debates center around external factors, for instance, patriarchal

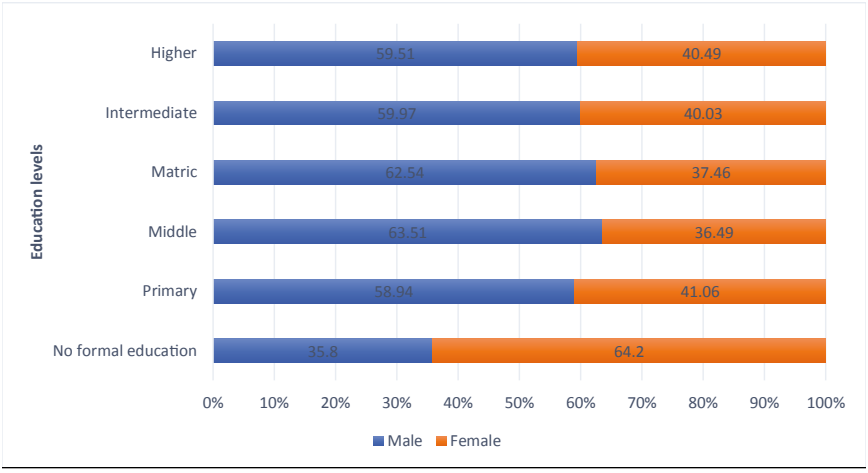
systems, sex, class, socialization in taking control of a woman's decision in her choice of subjects. As a result, categorization between "feminine" and "masculine" subjects becomes part of the individual's identity and has a huge impact on the future career choices primarily based on gender (Dom & Yi, 2018). Hence, subjects in the field of engineering, science, agriculture, technology are male-dominated whereas humanities, education, health and welfare are female-dominated (The World Bank, 2012, p. 88). Similarly, a study conducted in Pakistan by Iqbal et al. (2010) reveals how women have to alter their subject choices to balance their career and family amongst the many other obstacles they face.

Such factors could explain why the statistics for women's education are too low. The Net Secondary Enrollment (2018) in Pakistan was only 37% compared to the regional average of 63% and even lower than the average of its income group of 57% (The World Bank, 2020). There are stark differences between men's and women´s basic and intermediate education attainment in Pakistan (see Appendix-F). The percentage of labour force (women) with basic and intermediate education in 2011 was 13.7% and 11.05% and men 75.8% and 69.9% respectively. The trend was more or less the same even after seven years as in 2018, it was 10.5% for women and 71.89% for men who attained secondary levels of education.

The data analysis is on the LFS for the year 2017-18. Before proceeding onto the methodology chapter, look at the trend vis-ŕ-vis education observed in the LFS for this particular year and for each educational category. Analysis of the survey shows men outperforming women in all the education categories[3] (shown by the figure below).

3. Below Matric comprises less than ten (10) years of schooling, Matric but less than intermediate encompasses ten (10) to eleven (11) years of education, Intermediate but less than Degree entails twelve (12) to thirteen (13) years of education, Degree & above comprises fourteen (14) or more years of education

Figure 10: Education attainment by gender, 2017-18

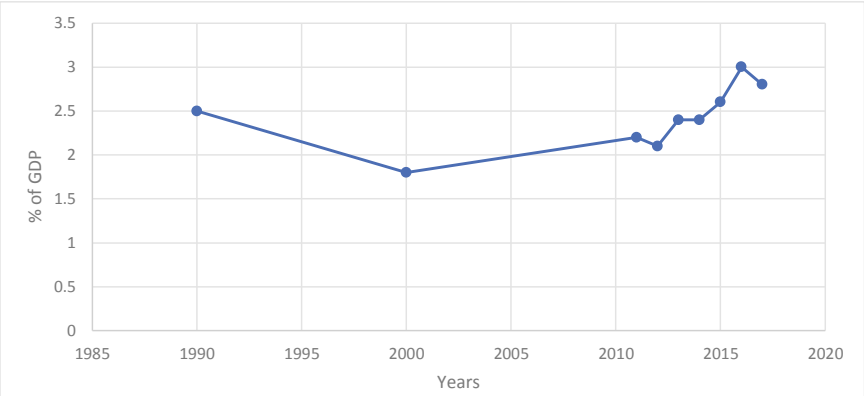


Source: Author's own calculation based on LFS Pakistan (2017-18)

Are such lower levels of women's education explained by inadequate efforts on the part of the State? One such measure to gauge this could be to look at the funding and expenditure done in this regard. For example, Pakistan's expenditure on the education sector is a minimal of 2.9% of its GDP (shown in the figure below), far below its regional average of 3.8% and even below its average income group of 4.5% (The World Bank, 2020). In contrast, the government can invest in nuclear weapons and a $1.2 billion expressway between Lahore and Islamabad. If we look at international funding, Pakistan is the third-largest recipient of foreign development assistance and received $58 billion4 from 1960-98. The country has also benefitted from several generous loans from IMF and World Bank, where the former alone provided $20 billion from 1952 to 1999. Yet, the investment in social sectors like education and health are unsatisfactory.

4. In 1995 Dollars

Figure 11: Government expenditure on education, total (% of GDP), 1985-2020



Data source: (The World Bank, n.d.-c)

Comparatively, countries like Afghanistan had 4.06% in 2017, whereas Bhutan and Nepal had 7.23% and 5.52% in social expenditure. Interestingly, Bangladesh's expenditure on education has declined consistently from 2.13% to only 1.33% in 2019. The higher female participation rates in Bangladesh despite low government expenditure could imply that participation rates do not depend on government expenditure entirely and there are other factors to be considered.

To conclude, it is significant that Pakistan can educate the surging youth population, especially the girls. Failure to do so would be a "disaster in the making" as the Washington Post called it and would inadvertently destabilize Pakistan's already fragile society (**Education in Pakistan**, n.d.). This calls for increased investments in education and a change in attitudes towards women as well.

Finally, having presented the overall background of labour market scenario and determinants of FLFP, the next chapter tests these factors empirically. The following chapter describes the model used to analyze the data. To reiterate, the idea is to gauge what impact does each level of education have on the LFP decision of a Pakistani woman while considering other socio-economic factors.

6. Empirical Approach and Data

6.1. Methodology

The primary variable of interest is labour force participation, usually measured in a binary way. For this reason, the main model will use probit. This model is primarily used to capture how different educational attainment levels affect FLFP in Pakistan. The other independent variables´ category measures the individual and demographic factor, including age household size, urban/ rural area, sector of employment and marital status. The description of the variables used, results of the model and limitations of the study are explained later in the chapter.

6.1.1. Source of Data

Research on labour force in Pakistan is predominantly based on cross-sectional data generated through labour force surveys (Arif et al., 2003). This study uses the most recent years of the Pakistan Labour Force Survey (LFS) 2017-18 collected at a single period. Pakistan Bureau of Statistics (PBS) is the sole public sector organization responsible for the questionnaire and methodology of the surveys. It is a national statistical body surveying since 1963 (Statistics, 2017).

Labour Force Surveys are conducted on an annual basis since its inception and so far thirty four surveys have been completed (Statistics, n.d.). PBS has 34 field offices all over Pakistan responsible for the collection of data from the field. Data is collected through interviews. Mostly the head of the household is selected for providing information but in case of non-availability, any other informed member of the household present at the time of the interview is chosen.

The universe for more recent rounds of the LFS consists of all urban and rural areas of the four provinces of Pakistan defined as such by the 1998 Population Census excluding Federally Administered Tribal Areas (FATA) and military restricted areas – the population of excluded areas constitutes about two percent of the total population. The sampling frame for both urban and rural domains is that each city or town is divided into enumeration

blocks, consisting of 200 to 250 households on average. Enumeration blocks are considered primary sampling units (PSUs) and are selected based on probability proportional to size (PPS) method of sampling. Households within sample PSUs are taken as secondary sampling units (SSUs) with sixteen from rural and twelve from urban PSUs selected using a systematic sampling technique with a random start.

The LFS is representative at the regional, i.e. rural and urban level, and it is possible to get representative figures for the provinces and Pakistan in general. The LFS has been specifically designed to capture key characteristics of Pakistan's labour force. It includes information at the household and individual level such as gender, age, relationship with household head, education levels, hours worked in both primary and subsidiary sectors and occupations, wages, and average monthly income earned.

6.1.2. Description of variables

To determine the extent to which educational attainment affects the FLFP in Pakistan while considering other socio-economic and cultural factors, this report uses cross-sectional data with a total number of 191,229 observations. Below is a brief discussion of the different variables used in this model.

Female: The main emphasis of this study is to show how there are disaggregated impacts of educational attainment on LFP based on gender, so the main variable of interest is this gender variable. This categorical variable is converted into a dummy variable which takes the value of 1 for female and 0 for male. There are about 73% of male respondents compared to 27% of females in the survey.

LFP: The dependent variable, in this case, is the *lfp* and it is categorised into individuals who are part of the labour force (employed and unemployed) or not part of the labour force. Statistics reveal that almost 46% of the respondents are part of the LF while 54% are not part of the LF.

Education: As discussed in the theory section, one of the most important determinants of LFP is Human Capital. Due to conflicting literature on the effect of different levels of education on LFP, it is significant to categorize the education variable. In addition, as it is quite unrealistic for the impact of an additional year of education on the probability of LFP to remain constant across different years of education, hence the education variable is split into multiple dummy variables namely no education, primary education, secondary education, higher education using no education as a reference

category. Primary education, which includes respondents who have studied till 8th grade, secondary education till 12th grade, and tertiary education has more than 12 years of education. The highest percentage is of people with primary levels of education i-e 43.26%, followed by no formal education 38.13% and secondary and tertiary levels of education 14% and 5% respectively.

Age: This variable captures the effect of various life stages a woman experiences in her life i-e adulthood, motherhood being a few which can significantly affect women's economic participation. Another reason for including this variable is because the age composition of women in the labour force is affected by the changing levels of education (Yee Beatrice Lim, 2017, p. 100). All observations less than 10 years of age are dropped in this research since the LFS does not ask the labour force participation questions for children younger than 10 years of age. A breakdown of age categories shows that there are about 50% of the respondents within the 18 to 65 years bracket, so this can give us a decent picture of the working age population for the analysis.

Marriage: This variable is included in the model as marriage considerably affects the decision to participate (discussed in the literature review). It takes the value of 1 for being married (51% in survey) and 0 for unmarried, which includes categories of people who are never married, widowed, and divorced (49%). The reference category in this group is the unmarried individuals. This would allow comparing the participation decision with that of married individuals.

Rural: The location of the individuals is also taken into consideration as belonging to an urban area as compared to rural can have varying effects on the FLFP. The reference category used in the model are those living in urban areas.

Informal: Whether an individual belongs to formal or informal sector is identified based on the definition used by PBS. The informal sector includes all household enterprises owned an operated by self-employed workers. In addition, all enterprises owned and operated by employers with less than 10 persons are included in the informal sector variable used in this model. Excluded are all enterprises engaged in agricultural activities or wholly engaged in non-market production. The reference category used in the model is that of formal sector.

Interaction terms: Taking into consideration the possibility of the impact of education categories to vary depending upon gender so interaction terms were also added to the probit model to draw better comparisons. For instance, the term *female_primary* variable would allow us to compare women with primary levels of education directly with males with no formal education. Such interaction terms can clearly highlight the gender impact on LFP based on levels of education.

6.1.3. Probit Model

$$LFP = Bo + B_1PF + B_2EA + u$$

BO is a constant term representing the predicted probability of participating if personal factors and educational attainment are zero

B_1 and B_2 are the coefficient that measures the effects of PF and EA on LFP

PF is a vector of variables including gender female, age, sector of employment, location, household size and marital status

EA is a vector for educational attainment levels which includes primary, secondary and tertiary levels of education

U is the residual term showing the difference between estimated LFP and the observed LFP

6.1.4. Empirical Results

This section discusses the findings of the study. The focus of this research was to resolve the unexpected relationship between education and LFP and if empirically illiterate women have higher LFP than people with some levels of education in Pakistan. The results of probit regression are tabulated below listing the coefficients and standard errors of all the variables used in the model.

Table 1: Results of the Probit model, 2017-18

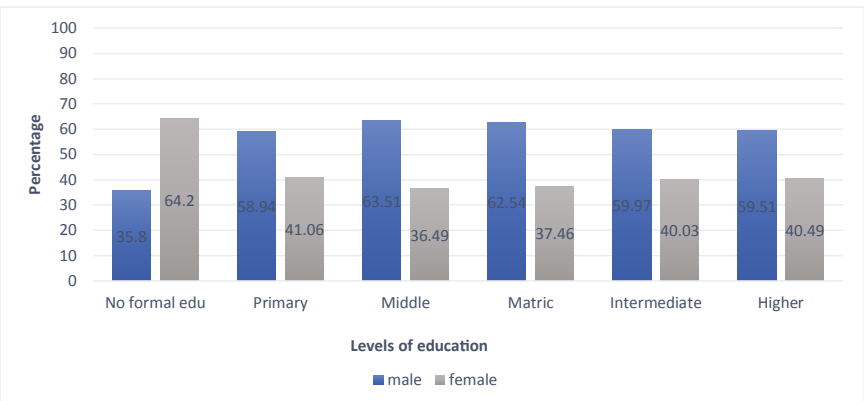
	(1)
VARIABLES	LFP
Age	0.103***
	(0.00147)
Age Squared	-0.00119***
	(1.78e-05)

Female	-0.334***
	(0.0219)
Primary	-0.404***
	(0.0144)
Secondary	-0.353***
	(0.0189)
Tertiary	0.0545
	(0.0335)
Female x Primary	-0.110***
	(0.0186)
Female x Secondary	-0.0740***
	(0.0226)
Female x Tertiary	-0.0474
	(0.0321)
Rural	-0.760***
	(0.0141)
Rural x Primary	0.312***
	(0.0194)
Rural x Secondary	0.309***
	(0.0222)
Rural x Tertiary	0.535***
	(0.0323)
Married	-0.330***
	(0.0141)
Married x Primary	0.556***
	(0.0175)
Married x Secondary	0.584***
	(0.0211)
Married x Tertiary	0.419***
	(0.0315)
Household Size	-0.0157***
	(0.00107)
Female x Household Size	0.0192***
	(0.00255)
Informal Sector	3.461***
	(0.0440)
Constant	-1.564***
	(0.0247)
Observations	191,229
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Data source: Author's own calculation based on the LFS 2017-18 results

Beginning with the gender variable used in the model, the results highlight that women have a 33.4% lower probability of participating in the labour force than males as also pointed out in the literature (Andlib & Khan, 2018; Shaheen et al., 2011). The main variable of interest in this report is education, and the results are significant. Using no formal education as the reference category, the regression results reveal that individuals with a primary level of education have a 40.4% lesser chance of being in the labour force. In comparison, there is an 35% lesser chance for people with secondary levels of education. However, for people with tertiary levels of education, their probability of participation in the labour market is 5.4% higher as compared to individuals with no formal education at all. A better way to understand the gender effect would be through the coefficient of the interaction terms(the results are in Appendix-G) of females with the levels of education. The results highlight those women with primary education have a 2.4% lesser chance of being in the labour force than males with no formal level of education. Women with secondary education have only a small percentage of 0.05% higher probability than those males who do not have formal level of education. Females with tertiary education have a 10.9% higher probability than a male with no formal level of education. It can be said that the gap is larger at the initial years of education and narrows down with increasing years of education. The graph below gives us a picture of the economic participation by both men and women based on the levels of education.

Figure 12: Labour Force Participation (%) by Education levels in Pakistan, 2017-18



Data source: Author's own calculation based on the LFS 2017-18 results

The results are consistent with the other findings who indicate a similar "U-shaped" relationship between education levels and LFP (Chatterjee et al., 2018; Khadim & Akram, 2013; Klasen & Pieters, 2012; Najeeb et al.,

2020; Shaheen et al., 2011). This could be due to several reasons. One major reason is the high proportion of women with no formal education working in agriculture. Distribution by major industry divisions shows that 67.2% of the women were employed in agriculture/forestry/hunting and fishing as compared to 30.4% of the males according to the results of the labour force survey 2017-18. The distribution of labour by gender highlights how women are more concentrated in sectors such as agriculture, whereas men dominate wholesale and retail trade, transport and communication with almost equivalent percentages in the manufacturing sector (see Appendix-H).

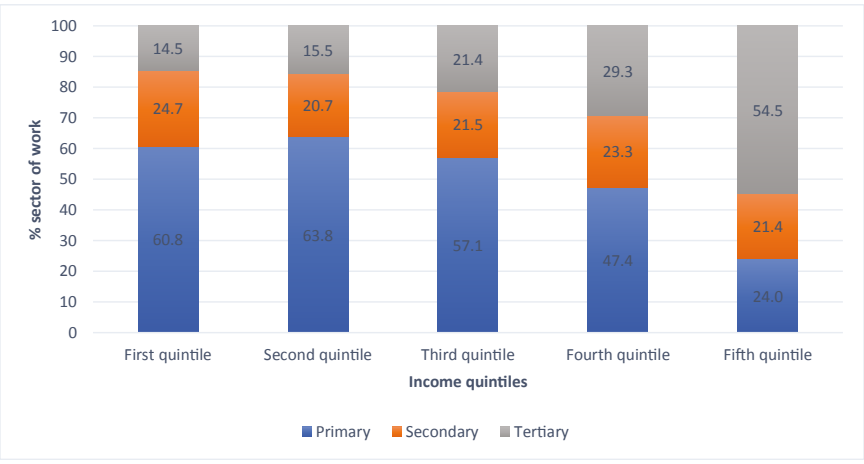
One reason for such a high proportion of women working in the agriculture sector is that Pakistan's economy is largely based on agriculture where 75% of the people live in the rural areas compared to 25% in the urban. This sector generates almost 45% of the total labour force with women being the backbone of this sector (Begum & Yasmeen, 2011). They are involved in all types of activities related to weeding plants, seed cleaning, storage, and binding of crops. Aside from the responsibility to financially support their families, women work in this sector due to obligations from the influential landlords and/or male heads of the household. According to a study on the analysis of Women's LFP in Pakistan (2013), women are preferred over males in this sector due to their low wage demand and submissive attitudes (Sarwar & Abbasi, 2013).

The reason for such a high percentage of women working in the agriculture sector is also because these women are the poorest of the poor and hence work in the fields since there is a correlation between women's work, distance from home, poverty, and social standing within a society which is explained below (Siegmann & Majid, 2021).

Beginning with the poverty, it is imperative to analyze the relation between FLFP and education from this perspective. The data shows that with increasing household income, individuals with no formal education significantly reduces and proportion of people getting higher levels of education increases (see Appendix-I). In addition, the higher the income levels, the more the individuals work in the tertiary sector with a vast majority of the poorer households working in the primary (agriculture sector) depicted in figure 9 below. This, when analyzed with the type of contract women are engaged in, it is the poorer women who have the highest incidence of casual contracts however, with increasing income levels or with higher levels of education there is a sharp decline in the casual contracts and a surge in regular ones (see figure 10). For instance, the survey data shows that 20 % of women with primary

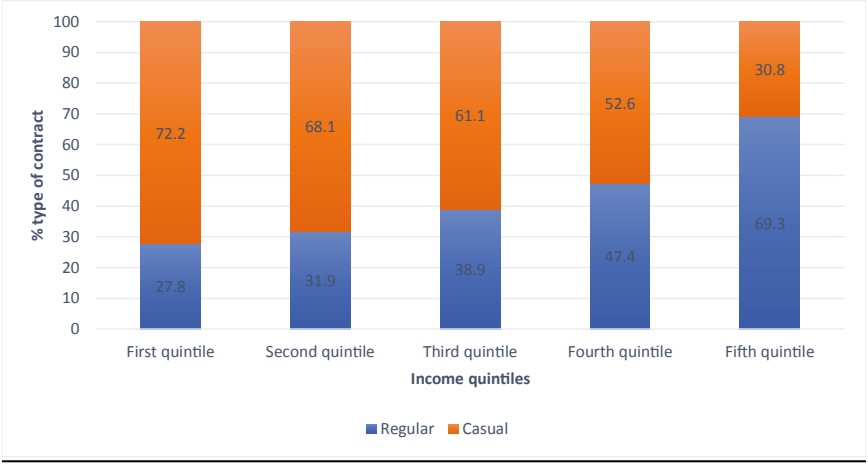
education, 42 % of women with secondary level, and 95% of women with bachelor's and higher levels of education were on regular contracts. So, the percentage of casual contracts decreases with increasing levels of education and income.

Figure 13: Sector of work based on income levels in Pakistan, 2017-18



Source: Author's own calculation based on the LFS 2017-18 results

Figure 14: Females with type of contract based on income levels, 2017-18



Source: Author's own calculation based on the LFS 2017-18 results

It suggests that while the semi and unskilled employment opportunities are being filled with those with some schooling (primary and below), for the skilled jobs it is likely that those with "higher" levels of education are being hired with more competitive labour market requiring higher skill levels from its labour (M. Z. Faridi et al., 2009; Mehmood et al., 2015). Since more educated women may find that the opportunity cost of staying at home is higher for them given the time and financial resources invested as compared to women with primary or secondary levels of education hence their participation probability is higher.

Childcare is another factor worth exploring in this regard. Although according to data results, married individuals have a 33% lesser chance of participating in the labour force than unmarried people. On the contrary, married respondents when compared with unmarried individuals who have primary, secondary and tertiary levels of education have higher probabilities of participation than unmarried people with no formal level of education. Azid et al. (2010) found similar results but also found that women's education, household poverty, rural locality, number of daughters aged 15 and over have a significant positive impact on the LFP decision of a married woman. Though the supporting literature on this is not extensive as in more conservative societies, there are more restrictions and responsibilities of a married woman than an unmarried one (A. N. Choudhry et al., 2019b). However, this variable cannot be gauged in isolation without measuring the impact of having children. It could be the case that married women without children have similar chances of participation as unmarried women (Khadim & Akram, 2013).

As shown in the table below, the childcare burden of women with bachelor's and higher levels of education is substantially lower than those with lower levels of education. It could explain why women with tertiary levels of education have higher participation probabilities than those with lower levels of education.

Table 2: Number of children based on education levels of women, 2017-18

Education level	No child	Children aged less than five in the household	Children aged between five and ten in the household
No formal education (%)	64.16	58.67	71.17
Primary (%)	12.60	14.00	11.97
Secondary (%)	17.78	21.17	13.79
Tertiary (%)	5.45	6.19	3.07

Source: Author's own calculation based on the results of LFS 2017-18

The other remaining variables are that of age, location, household size and sector of employment. As far as age variable is concerned, a better analysis would have been if age was divided into different categories and then see each category's impact on the labour force participation probability. According to the official report on this survey, the participation rates are highest from the age group of 20-24 till 50-54 after which it starts decreasing for both genders though the difference in their participation percentage is massive (Government of Pakistan, 2017, p. 24). This is in line with the age(squared) variable which explains the slope and the negative value of 0.12% indicates that the probability of participation decreases with increasing age.

Location also plays a significant role. Those belonging to whether a rural or urban area has a heterogenous impact. As the model estimates indicate that belonging to rural areas, reduces the participation probability by 76%. However, if this location variable is seen in relation with the levels of education, the results are different. For instance, individuals from rural areas and having primary levels of education have a 31.2% higher participation probability than those in urban areas with no formal education. Similarly, the probability increases massively for tertiary levels of education i-e 53.5% higher chances as compared to individuals from urban areas with no education.

Household size is another important independent variable and an interaction term with female is used in this model. The variable describes the impact of household size on the female's labour force participation probability. The coefficient of this variable i-e 0.008% indicates that the size of the household has insignificant impact on women's decision to participate in the labour market. This result is in line with the other research findings (Azid et al., 2001; Hafeez & Ahmed, 2002).

The last variable is that of sector of employment i-e formal vs informal. Informal employment accounts for a large proportion in Pakistan than the formal sector and as indicated by a large positive coefficient of the informal sector variable shows that the probability of participation is much higher than the formal sector employment. The results are consistent with the other literature findings as well.

Turning back to the two theories discussed, let's see how far they were applicable for this report. As the theory of labour supply explained, a comparison between the paid and unpaid work in terms of gain would lead to participating or non-participation in the labour market. So, to gauge that, first, it is important to know how much time Pakistani women allocate to household activities so that a comparison could then be drawn with the gains they receive from paid employment.

The Time Use Survey 2007 (Ministry of Finance, 2009) in Pakistan (the only TUS conducted so far) reveals that after taking housework and dependent care into account, women who are not in the labour force spend as much time in productive activities as men who are in the labour force. Moreover, employed women do just as much housework and dependent care as those who are unemployed. However, their work hours are mostly at the expense of leisure (Erica Field & Vyborny, 2014). For a comparison of time use by gender and employment status (see Appendix-J). Women spend ten times more hours than men on the household chores, child and elderly care which has no economic value attached to it and due to lesser time left for their leisure activities, women in Pakistan are more "time poor" than men (F. Iqbal et al., 2020).

Another side of the comparison is the gains from paid work. One proxy for this is the remuneration received from working in the labour economy. First, as according to the Human Capital theory, education acts as an investment and could lead to higher market participation mainly due to higher wages. According to the survey data, the wage rate does increase by the education levels so the more the individual is educated, the higher are the wages earned for both men and women (see Appendix-K). This could encourage individuals to invest in education to reap the benefit of higher wages. However, causality cannot be inferred from this positive relationship as a linear relation between education, productivity and work cannot be drawn between heterogenous factors of education and paid work (Marginson, 2017).

Furthermore, there are differences in the wage rates received by men and women for the similar levels of education. So, the relation between education and LFP cannot be analyzed from a simple lens that this theory tries to encapsulate. There are many other factors into play. Hence, as there is no monetary value attached to the domestic work and that too at the cost of their leisure. On top of it, is the lack of well-paying jobs for women so they may decide to opt-out of the labour market under such circumstances.

To conclude, the point of this regression was not to tell exact estimates for the model may suffer from methodical issues some of which are explained below, but it does provide valuable insights and provide a holistic picture of the determinants which either directly or indirectly affect the women's LFP decision so that targeted interventions can be taken for women's education and their LFP.

6.2. Limitations of the study

One main concern in this study is the problem of biased estimates. The model used may have methodological issues arising from the endogeneity of the education variable. Though the empirical results discussed above indicate that higher education has a positive impact on women's labour force participation in Pakistan. However, this does not imply a causal relationship between the two as there could be other unobserved factors (not included in the model) that could affect both variables. For instance, individuals who belong to well-off families with a good social network may end up with employment opportunities and gain higher education. The reverse causality could also be valid as employed people would have the financial resources to pay for their higher education.

One way to deal with this endogeneity issue in the model is to use Instrumental Variable (IV) for the endogenous variable "education". It is a standard method to take control of measurement errors which are common especially in surveys. Finding a valid IV is not as straightforward. Certain conditions must be satisfied for a valid IV. To be considered valid, any potential IV must affect the LFP only through education and not otherwise (*An Introduction to Instrumental Variables*, n.d.). There are several IVs that have been used in the literature. For instance, Kuepie et al. (2013) have used parents' education as a potential IV. Other authors have used the number of schools (Duflo, 2001) changes in the compulsory schooling laws, child labour laws (Riddell & Song, 2011) to create instrumental variables for education in their study. Another

significant reason that could make estimates inconsistent is the validity of the data itself which is explained below.

As part of this research, such tests are not computed as its objective was not to provide rigorous econometric study but only to highlight through a quantitative analysis of the problem that prevails and needs due attention of the concerned authorities in Pakistan.

6.2.1. Problems of Survey Data Reliability in Pakistan

There are many studies conducted on how the labour statistics gathered through field surveys are gender-biased especially in third-world countries (Nazir, 2017). True labour statistics are significant for a clear reflection of the actual labour dynamics in a society. Such data has an impact in steering the social and economic development of a country in the right direction.

The study conducted by Nazir (2017) shows how labour force surveys in Pakistan underreport women's work. This invisibility stems from the gender roles and societal norms where women are perceived as housewives hence keeping them "out of the labour force". The two main actors in conducting field surveys are the enumerator and the respondent. The fact that PBS has never appointed women enumerators in conducting labour force surveys and the respondent -the head of the household is mostly a male member speaks volumes of the male bias in the survey results (Nazir, 2017). Agarwal (1985) highlights how in patriarchal societies, the enumerator would identify even a 12-year-old boy as the head of the household or he himself would do so, in case of the absence of a male adult. Besides the reason of perception about women, the seclusion (or *purdah*) which forbids women to interact with unknown males makes it difficult for interviewers to have women respondents. Thus, as most interviewers are officially male, cause *women and their work to be invisible*.

An example of underreporting of women's work is the absence of HBWs as a separate category in the Labour Force Surveys. Several researchers in Pakistan explored these using questions from LFS of Pakistan. Their results concluded a handful of population i-e 1.69 million in 2008-09 with women comprising a 70% share (Akhtar, 2011, p. 43). However, for the same year, HBW figure was reported to be around 12 million according to research conducted by Roots for Equity (Roots for Equity, 2011, p. 103). Such inaccuracies in data highlight the need for systematic methods of data collection to implement needed interventions.

These invisible women mostly dominate the kind of work that falls under the category of informal sector characterized by inadequate benefit, irregular and unstable income and absence of a contract, which is one reason why women themselves or the males do not report their economic activities (Ustek, 2015). Not only men, but women also strategically label their work as "housework" "*... as a means of gaining access to work in public places while appearing to comply with the norm that their actual place is in the home or that the man is the family breadwinner*" (Franck & Olsson, 2014, p. 219).

To conclude this section, survey results may not accurately represent the true figures and hide women's productive work. This could not only result from measurement errors in conducting the survey, but the society and culture have been shaped in a way that tends to underreport women's economic activities. Hence, several actions should be taken which are discussed in the last chapter of this report.

7. Discussion and Outlook

7.1. Discussion of Findings

This study was an attempt to highlight a long-standing pressing issue of women's labour force participation. The descriptive analysis of the selected South Asian countries paints a bleak picture of FLFP where mobility, religious beliefs, patriarchal gender roles, social norms are much more pronounced than any other region in the world. Though the LFP is much lower for women than men, this does not hold if we bring the type of work into consideration. In Pakistan, for instance, there is a vast proportion of women rather than men, mainly from lower-income households working in the informal sector. The unjustified and hazardous working conditions that control women's informal employment in Pakistan show how these women work primarily for survival and do not allow them to realize the empowering effects of income generation.

Provincial analysis of FLFP in Pakistan shows a varied trend amongst the four provinces with Punjab having the highest participation levels at all income levels. This could be not only due to relatively higher population size but various other socio-economic factors at play that allow women to participate in the labour economy. The rural-urban divide shows that almost all the provinces have higher FLFP rates in rural areas with the gap decreasing with increasing levels of income. One exception is that of Baluchistan where urban women have higher participation rates than rural women. In addition, for all four provinces, with reduced poverty levels, the incidence of no formal education decreases and the percentage of higher education increases. This is also the case for causal and regular contracts. It should be noted that it is not only due to the poverty factor but a chain of factors for instance, coming from an urban area as opposed to rural area, the province (in this case Punjab), lesser mobility constraints, better access to education facilities so on and so forth that allow higher FLFP.

However, education plays a vital role here. The analysis from the labour force survey 2017-18 of Pakistan shows that with increasing levels of education, there is a higher incidence of regular contracts (lower casual ones), and more

women become part of the formal sector. Hence, the research question mainly focused on the education factor and how it impacts the LFP of women in Pakistan. As much as education is quintessential and a prerequisite for solving socio-economic problems, statistics on women's education in South Asian countries are daunting. Access to education remains a concern where factors like social stigmas attached to women's education, mobility, gender roles, and preference of educating boys amongst many stands in the way of girls' education.

To gauge what impact each level of education has on LFP in Pakistan, a Probit regression was done using variables of education, age, marriage (as in most cases, it acts as a barrier to continuing education and working for paid employment), sector of employment, location, and household size. The results were similar to most of the other literature findings that suggest a U-shaped relationship, meaning that individuals with little to no formal education have higher participation probability than the ones with primary and secondary levels of education. However, at tertiary levels of education, the participation probability is high. Married individuals, however, had lower participation rates than unmarried ones. This was then analyzed with the number of children a woman has, as childcare takes most of the women's time at the cost of paid employment. It was found that the ones with tertiary levels of education have the least amount of childcare burden which could explain their higher participation rates. In addition, individuals working in an informal sector had higher participation probabilities than the ones in formal sector. For those residing in a rural, their participation probability is a lot lesser than the ones living in urban areas. In addition, the results also showed that with increasing age, the participation probability reduces which is in line with most of the other research findings. The household size was found to be insignificant for females in determining the decision to participate in the labour market

Hence, to understand the overall pattern, other factors, for instance, income of the household, wages, mobility, childcare, type of occupation were analyzed. The research findings suggest a correlation between these factors i-e the higher the education level, the more the women are mobile and go out for work, engages in regular contracts, and earns higher wages. With each additional year of education, occupational gender segregation also reduces, suggesting that women could also work in other sectors apart from working in the primary sector as unpaid family help or on casual contracts. While correlation here does not imply causality, but it does highlight the positive externalities of education. Finally, more gender-equal education is

not the only solution to address the inequalities in the labour market. As discussed in the study, various other social and economic factors at play need to be seen holistically to improve the FLFP scenario.

7.2. Policy Outlook

This report provides a thorough analysis of South Asia's actual labor market conditions and sheds light on poor social indicators that need dire attention. Steps to counter the gender disparity in education and FLFP go hand-in-hand. Following are some recommendations that, if implemented on a local and national level, can bring about drastic improvements to FLFP and the overall economic and social autonomy of women in various regions including Pakistan. Important to highlight in this regard is that to have any meaningful impact, measures taken by the policy makers and political leaders must go above and beyond merely increasing the average educational levels. Instead, they must be targeted at eliminating the radical disparities between the male and female genders in Pakistan.

Targeted Social Support Initiatives

One of the strategies that can be employed is providing cash or in-kind benefits to parents, especially in rural and poor regions of Pakistan (and in countries alike), to induce them to keep their daughters enrolled in schools. This method has proven to be successful in several countries (Heath & Jayachandran, 2017). One such example of a cash program is *Oportunidades* which has been implemented in Mexico. Through this program, a large amount of cash is given to parents on the pretext that a much larger amount is needed to encourage them to educate their daughters than to educate their sons. Similarly, in the state of Bihar, India, free bicycles are awarded to girls who attain secondary level education. As a result, women's school enrolment was reportedly increased by 30% (Muralidharan & Prakash, 2013). It is imperative for Pakistan's policy makers and leaders to learn from such examples to influence societal norms and perspectives about female education. It can be argued that a female support program, namely the Benazir Income Support Programme (BISP) which was introduced in 2008 as an unconditional cash transfer for poor women, is already seeking to eliminate gender disparities. It is, however, important to note that its lack of targeting in the education sector may mean that it wouldn't suffice for the needed paradigm shift.

The imperative role of media

Another strategy that can be used to alter perceptions of educated and working women is to appropriate various forms of media to change gender stereotypes. A positive portrayal of women in leadership positions can significantly impact normative attitudes towards women's higher education and labour force participation. Media can also be used to highlight the importance of financial independence and social autonomy for women both directly and indirectly. This can be corroborated by the findings of Fogli & Veldkamp (2011) who claim that exposure to women working or in leadership positions can help change gender norms.

Role for legislators and policy makers

Another aspect of FLFP is the drastic inequality between male and female work opportunities. An especially worrisome aspect of women's work in South Asian countries is that women workers are considered subordinate to their male counterparts. This is evidenced by the nature of their work as well as the majority of opportunities available to them. There is a significant role for legislators and policy makers especially vis-ŕ-vis the high incidence of casual contracts. The policy makers and leaders of the two major provinces of Pakistan, Punjab and Sindh, are taking steps for improving working conditions of the home-based workers signal improvements. However, if we wish to significantly enhance the participation rates of women in the workforce, it is vital that women be made to feel safe in their workplaces. Although the 2010 Protection Against Harassment of Women at the Workplace Act is instrumental in this regard, the workplace is interpreted in a narrow formal-office context. It excludes agricultural work (The Protection Against Harassment of Women At the Workplace Act 2010, 2010). It is, therefore, crucial that an impact assessment follow such amendments in the law. In addition, there is a need for social protection schemes for the informal workers. Even the social protection schemes for instance in Punjab, PESSI – the Punjab Employees' Social Security Institution, EOBI – the Employees' Old-Age Benefits Institution, WWF – the Workers' Welfare Fund theoretically aims to protect all workers but not even a single worker from the informal sector is a part of such schemes. Hence, there is a dire need that a rapid assessment be taken for all such social protection schemes in terms of adequacy, coverage, and impact. Other provinces should also take a similar approach and make it more inclusive.

Additionally, policies aimed at alleviating women's mobility restrictions can play a significant role in improving FLFP. There are several areas in Pakistan whereby lack of access to safe transportation is an added constraint to the pervasive gender stereotypes. In fact, this structural constraint reinforces the social attitudes associated with women working. Thus, policies should ensure accessible transportation facilities for women so that transport to and from workplaces and schools is safe and affordable for women. For instance, women-only transport as recently adopted in the largest province of the country i.e Punjab, may have a significant effect on improving FLFP. Such basic facilities must be made available in all other provinces and care must be taken to ensure that their quality is maintained and sustained.

Improving the quality of labour statistics-from data collection methods to ensuring quality

Lastly, another crucial step that should have, ideally, been taken a long time ago is the introduction of a systematic data collection method and a more detailed study of the microdata. Women in South Asia are extensively engaged in unpaid care work. This, however, is not reflected in the labour force survey data. While the new international definition of work includes unpaid care work, amendments have not yet been made to the labour force survey of Pakistan (Siegmann & Majid, 2014). Without this, the economic analysis would be partial. Hence, the two surveys should complement each other for a refined analysis of gender and employment.

Time Use Survey analysis showed how most women in Pakistan spent their time in housework. The domestic duties take most of the time especially childcare, leaving them with lesser time for labour force participation. Studies have been conducted where the introduction of labor-saving technology could save women time and increase LFP. For instance, taking the example of US, due to the decrease in prices of home appliances contributed to 10-15 % of the increase in FLFP in the period from 1975 to 1999. Another much needed intervention is the implementation of child-care policies. Women should have access to generous and paid maternity leaves with access to subsidized childcare, day care facilities etc. as with such initiatives women are less likely to withdraw from the labour force. However, before this step be considered, important is to have data readily available on the time spent by women and men. For that, Time Use Survey is crucial, and the only Time Use Survey was conducted in 2007 and since then it hasn't been conducted. Hence, it is important that these surveys should be conducted at regular intervals because without efficient data, no recommendations can

be proposed. Hence, the state should ensure regular data collection and assessment.

Focusing on the Pakistan's young women

As indicated earlier that women's education in the field of Science, Technology, Engineering and Mathematics (STEM) is not at par with males. Not only is the ICT sector flourishing globally but in times like this global pandemic necessitates the need of men and women to have ICT knowledge. Hence, these emerging jobs in ICT could provide opportunities to women and it should be promoted. Freelancers work at flexible working hours and is one of the many ways women too can tap into this sector. Hence, it is time that women are encouraged to utilize such opportunities. There are several ways to achieve this. For instance, educating them in these fields beginning from the primary schools, creating safe working spaces for women with stable internet connections, networks, and mentors. Reducing this digital divide is of paramount importance and for that the state must make human and capital resources available for all.

Another significant intervention is not to overlook the problems faced by Pakistan's youth especially young women in their labour market opportunities. There is information asymmetry when it comes to finding work opportunities hence, efforts should be made in job search assistance, for instance, organize job fairs, efforts to increase transparency on the availability of jobs, set up clinics to provide assistance in resume building. In addition, as evidenced that the agricultural share of employment amongst especially female workers is very high so, efforts should be made to increase agricultural productivity. For instance, extensive use of ICT, technology adoption and commercial crops etc.

To conclude, unless proscriptions around women's roles and their presence in the workplace are lifted, it remains unlikely that they will emerge from their homes as educated and paid workers, being equally represented as well as duly compensated in the workforce. As the government looks to raise FLFP, it is increasingly important that those who participate in the labour force see their rights, access to benefits, and wages protected.

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Appendix

A: Share of jobs that can be done at home for industries dominated by female and male workers

Occupation description	Female emplyoment share	# Female workers	% tasks switchable to online	% used in internet	% used computer	% has computer
Personal care workers	7%	61k	26%	11%	5%	0%
Teaching Professionals	5%	1256k	76%	56%	28%	22%
Food processing, wood working, garment and other craft and related trades workers	3%	2098k	23%	12%	3%	6%
Cleaners and helpers	0%	510k	22%	7%	0%	5%
Agricultural,forestry and fishery labourers	3%	2489k	9%	2%	0%	1%
Handicraft and printing workers	9%	242k	14%	14%	1%	2%
Subsistence farmers, fishers,hunters and gatherers	7%	1498k	15%	8%	0%	1%
Health professionals	6%	204k	72%	48%	23%	19%
Health associate professionals	5%	118k	60%	39%	8%	14%
Market-oriented skilled agricultural workers	0%	4262k	15%	6%	0%	2%
Customer services clerks	3%	30k	82%	72%	65%	42%
Software and applications developers and analysis	2%	13k	100%	87%	78%	21%

Adapted from: (Hasan et al., 2020)

B: Comparison of South Asian countries in WBL indicators

	Does the law prohibit discrimination in employment based on gender?	Does the law mandate equal remuneration for work of equal value?	Can women work the same night hours as men?	Are women able to work in the same industries as men?	Is paid leave of at least 14 weeks available to mothers?
Afghanistan	No	No	No	No	No
Bangladesh	No	No	Yes	No	Yes
Bhutan	Yes	Yes	Yes	Yes	No
India	Yes	No	No	No	Yes
Sri Lanka	No	No	No	No	Yes
Maldives	Yes	No	Yes	Yes	No
Nepal	Yes	Yes	Yes	Yes	No
Pakistan	No	No	No	No	Yes

Source: Women, Business and The Law database, World Bank (http://wbl.worldbank.org/)

	Are mothers guaranteed an equivalent position after maternity leave?	Does the government provide childcare services?	Does the law mandate paid or unpaid maternity leave?	Does the law mandate paid or unpaid paternity leave?	What is the length of paid maternity leave?
Afghanistan	No	Yes	Yes	Yes	90
Bangladesh	No	No	Yes	No	112
Bhutan	Yes	No	Yes	Yes	56
India	No	No	Yes	No	182
Maldives	Yes	No	Yes	Yes	60
Nepal	No	No	Yes	No	52
Pakistan	No	No	Yes	No	84
Sri Lanka	No	No	Yes	No	84

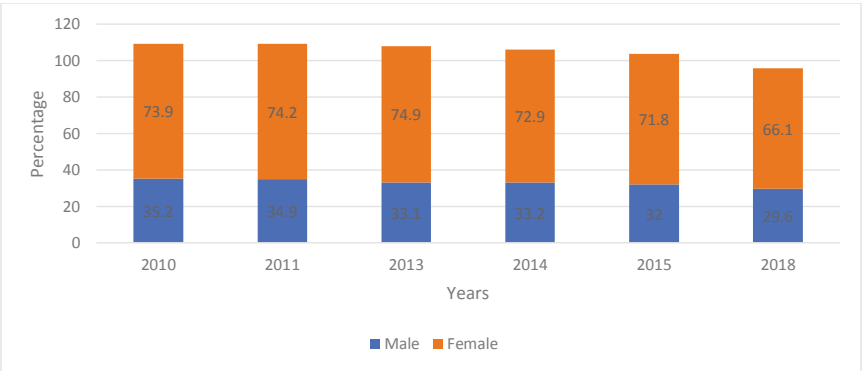
Source: Women, Business and The Law database, World Bank

C: Women, Business and Law Index of South Asian countries (2018)

Country	Income Group	WBL Index
Afghanistan	Low income	38,1
Bangladesh	Lower middle income	49,4
Pakistan	Lower middle income	49,4
Sri Lanka	Upper middle income	68,1
Bhutan	Lower middle income	71,9
Maldives	Upper middle income	73,8
Nepal	Low income	73,8
India	Lower middle income	74,4

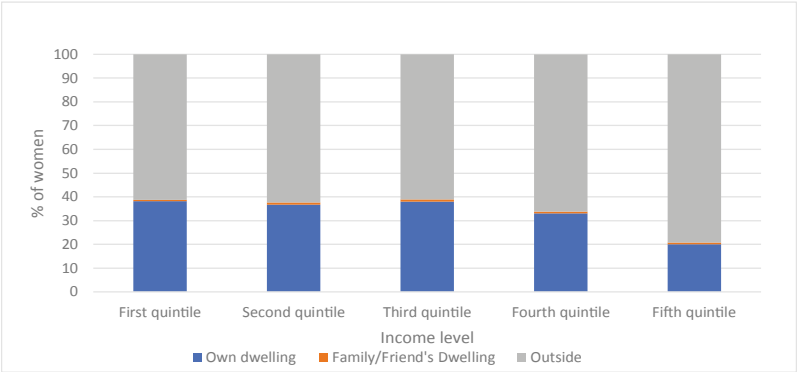
Source: Women, Business and the Law Data, The World Bank

D: Share of agriculture in total Employment in Pakistan



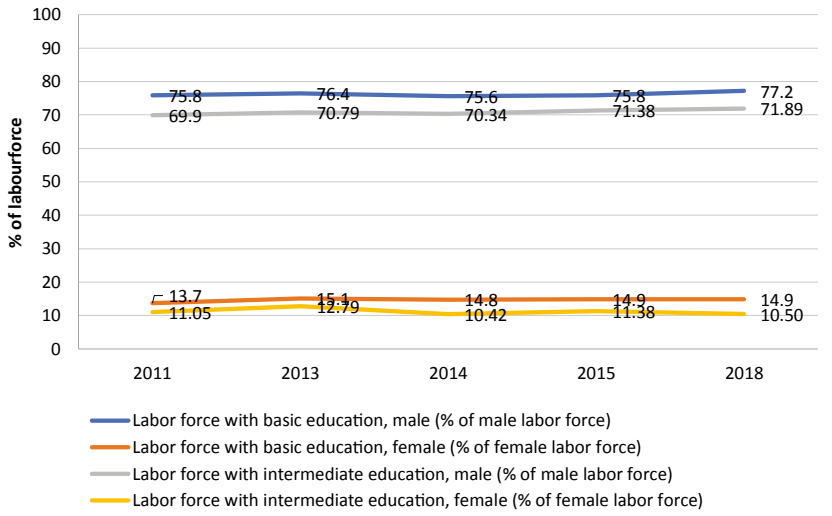
Source: World Development Indicators, The World Bank

E: Location of work of women in Pakistan



Source: Author's own calculation based on the results of the LFS 2017-18

F: Percentage of Labour force with Basic and Intermediate Education in Pakistan



Source: World Development Indicators, The World Bank

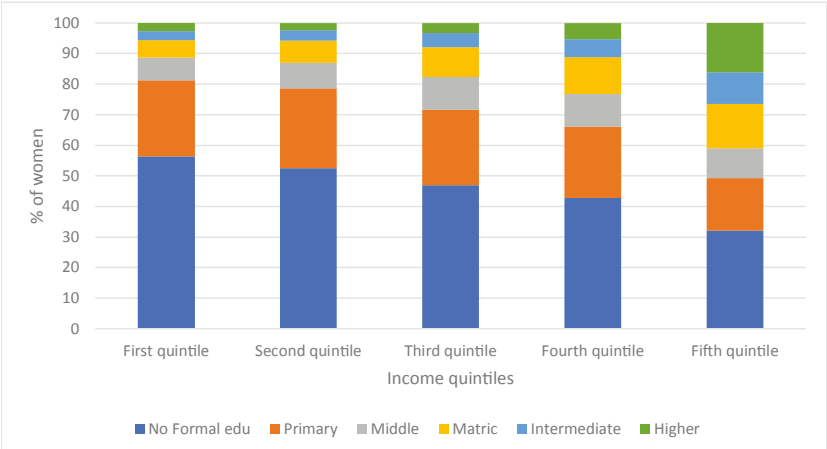
G: Employed - distribution by major industry division

Major Industry Division	Total	Male	Female
Total %	100.0	100.0	100.0
Agriculture/ forestry/hunting & fishing	38.5	30.4	67.2
Manufacturing	16.1	16.1	16.0
Construction	7.6	9.7	0.3
Wholesale & retail trade	14.9	18.7	1.5
Transport/storage & communication	6.2	7.9	0.2
Community/social & personal Services	14.7	14.8	14.6
*Others	2.0	2.4	0.2

Source: Labour Force Survey 2017-18 results

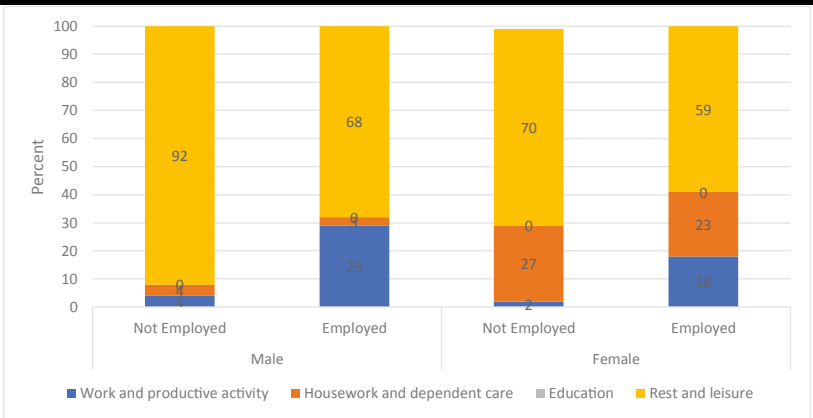
*Others (includes mining & quarrying, electricity, gas & water, financing, insurance, real estate & business services and extraterritorial organizations and bodies)

H: Women's education by income levels in Pakistan



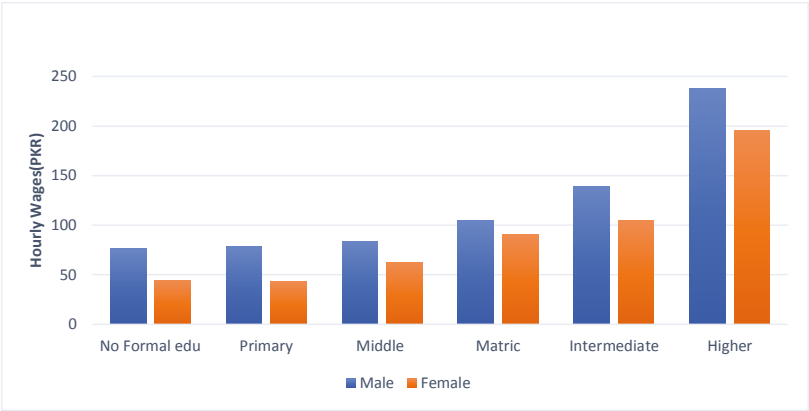
Source: Time Use Survey (2007)

I: Time Use by Gender and Employment Status Respondents over 25 years old



Source: Time Use Survey (2007)

J: Hourly Wage Gap by Education



Source: Author's own calculation based on the results of the LFS 2017-18

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