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Examining diversity management at the organizational level

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Abstract

The aim of the research is to study the cultural diversity of the actively present workforce in organizational life and to explore its advantages and disadvantages. The thesis examines the extent to which the performance and efficiency of individuals and organizational groups are influenced by the impact of different cultural identities resulting from cultural diversity in the labor market. To conduct our research, we chose the questionnaire procedure, which is a type of quantitative research method. The questionnaire method proved to be a sensible choice for us as it results in smooth data collection, especially in the current epidemic situation caused by COVID-19. The results of the study describe the attitudes, impressions and positive and negative experiences of employees who may work in other intercultural spaces and acquire routines, as well as employees' attitudes to work, what influences their performance and what they influence to build their careers. By summarizing the data collected in connection with the questionnaire survey, we come to the conclusion that the positive benefits of diversity management triumph over the inherent disadvantages. In addition, diversity management has a significant impact on organizational creativity while not influencing an individual's professional career.

1. Introduction

The term "culture" used in everyday life has many meanings and is used to justify different definitions. Its wide-ranging message suggests a task that one learns from birth. In other words, culture can be interpreted as the amalgamation of the arts and the manifestation of the spiritual values of individuals (Chanan, 2017). It embodies exceptional and unparalleled spiritual energy, manifested in unique characteristics as: the material creations of humanity, the socio-cultural coordination of individual behavior, the ideas, communication, actions that govern personal behavior and the nation (Šenšelová, 2014). Culture is a social motive that manifests itself in the form of heritage in society (Eriksson & Hägg, 2016). It is one of the most fundamental parts of the puritan world, outlining the learning process for humanity to recognize how to become an exemplary person (Edewor & Aluko, 2007). Its studies go back to infinity, it is the theoretical core of the humanities, theology and the social sciences. From ancient times, it has been a cumbersome definition, with a number of choices and approaches to what it really means and how to describe it (Gallagher, 2016). It awakens people's awareness of who they are and what they represent, shows them what behaviors they need to learn and how to act. It is generally seen worldwide as a driving force for individual attitude (Moran et al., 2007). Hofstede sees the scheduling of the mind as a cognate expression of culture that actually highlights the impact of a lengthy knowledge acquisition process on an individual's behavior, keeping in mind the situations that arise (Nogueira & Henriques, 2012). According to Hofstede, cultural differences are significant not only for leadership but for any type of social and organizational opportunity in a given country (Chanlat et al., 2013). Hofstede's work spectacularly details that not only are cultural values influenced by people's minds, behaviors, and performance, but also by the behaviors they exhibit in the world of work (Török, 2012). About value system theory initially a four-dimensional model was known that included power distance, masculinity and femininity, avoidance of uncertainty, individualism, and

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collectivism. His model was then supplemented with the following two dimensions, namely long-term and short-term with future orientation and indulgence (Nowrin, 2018). Culture is a complex event that can be analyzed in many cases: international, national, regional, business. Commonly used interpretations of cultural diversity include racial, sexual, corporate, professional and national diversity (Schahaf, 2008). Culture is one of the most important elements in classifying the successes and failures of organizations. It plays an important role in the transfer of experience and expertise as well as in the formation of social relationships (Allali, 2016). Culture can influence sales in a myriad of ways (De Vito, 2014). Companies and subordinates do not operate in a vacuum that is isolated from the outside world, but in an existing cultural and social environment. In order for a company to do an efficient job and maintain its stability against competition, it must pay due attention to the proper application of diversity in the workplace (Mecheo, 2016).

Through complex and in many cases changing social and economic processes, it is almost inevitable to build a relationship based on human interaction in everyday and business life. It is therefore important to analyze and learn about the cooperation between representatives of different cultural communities. The cornerstone of the study is the presentation of the organizational elements of culture. In relation to the topic to be examined, we wanted to learn about the attitudes and impressions of employees, and thus the positive and negative experiences of those who may be working in other intercultural spaces, how they relate to work, what influences their performance. In our primary research, we chose the questionnaire method, which is a kind of quantitative research method. Our goal is to summarize knowledge and review the labor market impacts of diversity management, as well as the impact of culture on the organization and employees. The aim of our study was to achieve a striking and generally interpretable result that concisely depicts the subject of the research. We set up the hypotheses listed below, which in the empirical phase of the study we wanted to prove or disprove:

H0: A multicultural professional career has no effect on organizational creativity.

H1: A multicultural professional career has an impact on organizational creativity.

H0: Knowledge of a foreign language does not affect an individual's professional career in a culturally diverse medium.

H2: Knowledge of a foreign language influences an individual's professional career in a culturally diverse medium.

H0: Corporate success is not equally important for women and men.

H3: Corporate success is important for both women and men.

2. Literature review

Over the centuries, the universe has never been as open-minded as it is today. Increasing migration and mobility have an impact on the development of technical science, knowledge sharing, and at the same time the chances of exchanging intellectual and cultural abundance (Kriglerová et al, 2009). Cultural diversity has debuted as a prominent commercial issue in business in recent decades, as the combination of expanded international sales and large-scale monetary regionalization also governs individual nations and organizations (Chanlat et al., 2013). There has been a huge increase in the number of companies operating across borders in several countries (Yao Ma & Xi Ran, 2011). In fact, diversity is a phenomenon that can have many positive and negative effects on both employment and education (Chanan, 2017). The universal economy international companies are gaining an increasingly diverse workforce. In the process of universalization, organizations need to be open and adapt to a different kind of business environment, so they need to regularly update their strategies to meet changing demands. When developing a universal perspective, it is important to understand the relationships between people and the milieu around them, so culture is an elementary factor to focus on (Eriksson & Hägg, 2016). Today, the interaction of individuals from different cultures and other traditions is becoming increasingly important. In recent times, diversity has played a key role in management and is becoming increasingly important in view of the times to come (Anjorin & Janzari, 2018). The principle of variability lies in creating an open work environment in which all employees make the most of their opportunities and increase their efficiency, regardless of which other groups they represent individually (Merx, 2007). It is a recurring phenomenon that institutions employ employees of different nationalities to represent the diversity of the population and to meet the needs of a diverse clientele, which is more likely to increase sales. Companies generally require employees in a culturally diverse community to adhere to the policies of the majority present in the workplace environment (Chidiac, 2015). The diversity perceived in the structure of companies will have an impact on creativity and productivity, communication, and underpin individual's relationships with others (Mecheo, 2016). The diversity of a company, along with its positives and negatives, can also cause difficulties and positive outcomes. It is risky and raises many obstacles in front of the facility. Most companies employ a

diverse workforce according to individual ideas with the goal of becoming an idea-rich and open-minded company (Dike, 2013; Guzman, 2014). The mission of leadership is to achieve an organizational state of mind based on understanding (Polat et al., 2017). The leader needs to be aware of how he or she will train himself or herself and his or her staff to deal with differences arising from diversity. Great attention should be paid to mixed groups in the workplace, as cultural shock can occur as an unexpected phenomenon. The term cultural shock is the result of the tension that results from abandoning traditional social norms when we encounter a foreign culture (Baier, 2005); (Osland & Turner, 2011). In the complex process of integration, the individuals involved are placed in a foreign environment where they were not raised in the past and are still completely inexperienced (Moore, 2011). It is important that workers from cultural minorities do not feel disadvantaged and have a supportive vision (Leyerzapf, 2019). Although cultural training and education is supported by many institutions, in most cases the course is implemented in the short term and only once (Al Mahrouqi, 2018).

There is no generically accepted definition of organizational culture, although there are many similarities between the many interpretations. There is a strong meaning behind the culture, as it is a phenomenon based on independent thinking that explains the corporate compatibility of the actors (Ludányi & Pacsuta, 2013). In a solid and resilient corporate culture, the same approach prevails among subordinates and they act in sync with the corporate value system. In a mild and weak institutional culture, it is difficult for employees to identify corporate merits and tasks (Tedla, 2016). Organizational culture excellently regulates the behavior of individuals throughout their careers, and in connection with this approach, researchers and managers are also informed about the development, management, and maintenance of effective and strong organizational cultures. Edgar Schein, a university professor of leadership, is the father of a grandiose share of expertise in contemporary organizational culture (Osland & Turner, 2011). Organizational culture includes virtues, delusions, patterns of behavior, and the company's vision and human capabilities, illustrating a holistic culture. It can be said that culture can be described as a characteristic of an organization and also promotes the way in which a company manages its subordinates, customer base and its own sales campaign (Chidiac, 2015) (Eriksson & Hägg, 2016). In common parlance, it can be interpreted as a kind of adhesive that unites the whole company (Pirger, 2015). Its task is to achieve a healthy balance between ambivalent value systems and to achieve harmony and good teamwork (Matkó, 2013).

3. Research methodology

The starting point of the research is the collection and interpretation of secondary and primary information. First, we searched for a bibliography closely related to the topic. Secondary information comes from various international literature. In connection with our surveys, in addition to the secondary information, we also took care of obtaining the data that could be obtained during the primary research. For our primary research, we chose the questionnaire procedure, which is a kind of quantitative research. A standard data collection technique that has the capabilities explains the purpose of the survey to the respondent and collects the respondent's responses with a formal questionnaire. The questionnaire method proved to be a reasonable choice for us as it results in a smooth data collection, especially due to the current COVID-19 epidemic situation. The anonymity of all respondents was ensured in connection with the survey, we only learned a few demographic information about them. The multitude of respondents showed a relatively varied pattern. To obtain a usable sample, we used a Likert scale from 1 to 10 for several questions, which is suitable for measuring attitude while ranking and evaluating by the respondent. The collected data were systematized and entered into a database, and then the PSPP statistical analysis program was used for evaluation. Using graphs and tables, we presented the data obtained during the survey using Microsoft Excel.

4. Results of research

Through the answered data sheets, we were able to gain insight into the world of employees currently active in the labor market, as well as to learn about the phenomena and suggestions experienced in their workplace. They shared their comments on diversity as well as their positive and negative experiences. In the first section of the data sheet, we recorded the demographics of the respondents. The following questions were related to employee behavior, private careers, and work habits, and then our questions were related to the central theme of our study, that is cultural variability. We wanted to know why work together can benefit people from different cultures. A total of six positive statements were made, of which a maximum of 2 could be nominated by respondents. The result is shown in Table 1. In particular, 60.4% voted in favor of learning about other cultures and visions, 54.7%, and then in favor of sharing knowledge, experience and expertise. It was also considered important to emphasize the development of international relations. Complementing each other in the workplace was only 10.4%, with the fewest percent turning to solve the problem.

Table 1. Benefits of cultural cooperation

Practicing a foreign language	Complementing each other in the workplace	Getting to know a different vision and culture	Problem management	Building international relations	Sharing knowledge, experience, expertise
39.6%	10.4%	60.4%	6.6%	52.8%	54.7%

Source: Questionnaire research based on own editing

In addition to the advantages presented, we also wanted to find the disadvantages of working with individuals from different cultures. As we did with the positives, we also left several alternatives for the negatives for the respondents, of which no more than two types could be indicated. A total of six passive statements were formulated, which are presented in Table 2. The majority of respondents 57.5% feel that the first source of problems is none other than the conflicting values, followed by communication problems, 50.9%. There is no high percentage increase in terms of assimilation difficulties, religious differences, and intolerant behavior. Discrimination is relatively low at 15.1%.

Table 2. Disadvantages of cultural cooperation

Communications problems	Intolerant behavior	Assimilation difficulties	Conflicting value system	Religious differences	Discrimination
50.9%	23.6%	25.5%	57.5%	22.6%	15.1%

Source: Questionnaire research based on own editing

In connection with the questions explaining the advantages and disadvantages of cooperation between different cultures, we had the opportunity to perform a correlation analysis that explores the relationship and proximity of two or more variables. The correlation coefficient can be between -1 and 1. Based on our calculations, the correlation coefficient is significant as its value is -0.544. The relationship between the advantages and disadvantages of international cooperation indicated a stronger-than-average, negative inverse relationship.

The following result was also obtained from the evaluation on the Likert scale, which is illustrated in Table 3. For those working in a multicultural work environment, communication, organizational values, attitude to work, and teamwork were the most influential factors, receiving an average rating of 8. The number 6 was then assigned to stereotypes, i.e., negative discrimination, which has a more than average effect on subordinates in an eclectic work environment. All other aspects received a consistent 5 rating, which means they have a moderate manipulative role. However, in the case of racism as a factor influencing workers, similar criticism was expressed in two cases with a distribution of 14.2 %, it follows that 3-no effect and 5 moderately effective options appeared in equal amounts. We couldn't show this further on the graph, so it got 0 ratings.

Table 3. Factors affecting those working in a multicultural environment

Religion	5
Communication	8
Habits and traditions	5
The value system of the organization	8
Stereotypes (negative discrimination)	6
Attitude to work	8
Dressing	3
Teamwork	8
Racism	0
Ethnocentrism (favoring their own ethnic group)	5
Managing change within the organization	5
Emotional manifestation	5
Management decision making	5

Source: Questionnaire research based on own editing

The results show also that, 47.2% of respondents speak a foreign language perfectly, 44.3% understand themselves on some level, and 8.5% do not speak a foreign language, which is shown in Table 4.

Table 4. Assessment of foreign language skills

I speak a foreign language perfectly	47.2%
I understand myself on some level	44.3%
I don’t speak a foreign language	8.5%

Source: Questionnaire research based on own editing

In connection with knowledge of foreign languages, we performed a K-mean cluster analysis in relation to age. Cluster analysis is a method in which we can take data arrays into homogeneous groups, that is classify them. The data within each group are extremely similar, but those outside the group are significantly different. In the present case, we formed five clusters in terms of foreign language skills and age. In terms of age, the mean value can be observed within each cluster, and within foreign language skills, the number of statements we code can be observed, so in this case 1 is the excellent speaking option, while 2 is the I understand myself at some level option. Roughly the 20 to 35 age group speaks an excellent foreign language, while the older ones understand themselves on some level.

Table 5. K-means cluster analysis as a function of foreign language skills and age

Cluster					
Age	26	32	41	52	60
Foreign language skills	1	1	2	2	2

Source: PSPP database, own editing

We examined the factors of G. Hofstede's remarkable national cultural model, more precisely, in the case of the two-member factors, each member was listed separately, so instead of the six factors that make up the scheme, we listed nine. Using the model, we wanted to map people’s attitudes to work by classifying them according to factors on a given scale of 1 to 10. The factors of individualism and collectivism have the greatest impact on the work culture of individuals, so the two factors are in most cases it received 8 ratings. The characteristic of

individualism is that individual interests dominate, while the peculiarity of collectivism is that it attributes to the group the greater loyalty. All others received a 5 rating in terms of frequency, so it is considered to have only a moderate impact on individual's work culture.

Table 6. The impact of the Hofstede's cultural dimensions to the work culture of the individual

Power Distance	5
Uncertainty avoidance	5
Individualism	8
Collectivism	8
Masculinity	5
Feminity	5
Long-term orientation	5
Short-term orientation	5
Indulgence	5

Source: Questionnaire research based on own editing

Table 7. illustrates that the majority of employers allow employees to attend corporate professional events, with 48.1 % of the feedback showing this. Courses and various personality development programs are also very popular among individual companies, which means that their incidence rate is at 44.3%, while not far behind by 40.6%, employee trips are also sponsored by many employers. Several stated that they also have the opportunity to participate in various leisure events in their workplace, as well as the opportunity to play outdoor and indoor sports. Relatively few, in the form of 10.4%, noted that there is no guaranteed team-building opportunity in their workplace.

Table 7. Team building opportunities in the workplace

Outdoor and indoor sport opportunities	30.2%
Corporate professional events	48.1%
Leisure events	39.6%
Courses and personality development programs	44.3%
Team building games for adults	24.5%
Common charity	26.4%
Trips organized for employees	40.6%
Other	10.4%

Source: Questionnaire research based on own editing

Furthermore, we learned that in the majority of cases, 45.3%, the success of a company is important to the workforce, however, their specific successes are the most important. In an insignificant 5.7% distribution, they said corporate success was not important to them. Less often, it has been voiced that it is not important to them at all and they work exclusively for pay. On a Likert scale of 1 to 10, we have shown that the multicultural background does not affect an individual's professional career. With respect to the median function, the value 5 can be detected, which is the average value of the set of numbers arranged in a row. In this case, we were able to perform an analysis of variance. For example, we found a correlation between educational attainment and professional career. Value obtained by one-way Anova analysis by significance level 0.331. The two variables are significantly they are similar to each other, i.e., educational attainment has an impact on an individual's professional career. Furthermore, on the Likert scale, we also showed that cultural diversity has a fairly impact on organizational creativity. This time, the median value is the number 7.

4.1 Hypothesis testing

Examining the hypotheses, we wanted to know what is the relationship between a multicultural professional career and organizational creativity. To test the first hypothesis, we used regression analysis, during which we have found out how strongly each variable affects the other variable. In our case, we gave organizational creativity as the dependent variable, while professional career was given as independent. The measurement scales for both variables were feasible on the ratio scale. R = 0.27, which indicates a weak relationship. Thus, a professional career with a multicultural background has no explicit effect on organizational creativity, so we rejected Hypothesis H1 and accepted H0. In our next hypothesis, we wanted to get an answer to what kind of connection can be discovered between the knowledge of a foreign language and a professional career achieved in a multicultural environment. To test Hypothesis H2, we used Pearson's correlation, which type of analysis provides an answer to whether there is a relationship between two variables, if so, at what intensity. In this case, foreign language skills were identified as dependent variables and professional careers as independent variables. The value of the correlation coefficient is -0.075, so there is a loose and inverse relationship between the two variables, as the value took on a negative sign. It follows that hypothesis H0 was confirmed and hypothesis H2 was rejected. To test Hypothesis H0, we used the statistically common Pearson's Chi-square test, which can be used to verify that the variables are independent of each other. According to Pearson's Chi-square test, the two variables are significant, since the value of Chi-square is 21.13 and the degree of freedom (df) is 18. The strength of the relationship is 0.45 based on Phi and 0.32 according to Cramer's V, while the Contingency Coefficient is 0.41, so the symmetric indicators are all significant because the significance condition holds (<0.05). The significance level of Lambda is 0.016, so it is less than 0.05. The values of the variables are not the same, so the two variable does not affect each other to the same extent. In our last hypothesis, we wanted to decipher what relationship can be perceived to corporate success in terms of gender. To examine the third hypothesis, we used analysis of variance, as gender was measured on a nominal scale, while corporate success was measured on a ratio scale. One-way Anova analysis used in PSPP was used for analysis of variance. The significance level is almost 1, more precisely 0.935, which implies that corporate success is almost equally important for women and men. In this regard, hypothesis H0 was rejected and H3 was accepted based on the result obtained.

5. Conclusions

The starting point of the conclusions associated with the researched topic can be traced back to the questionnaire survey, as they were formulated as a result of the statistical evaluation of the results obtained in this way. Almost three-quarters of the respondents have a university degree and many have a college degree, so participants in higher education contributed the most to expanding the research database. In connection with the recording of demographic data, we also learned that only individuals of Hungarian nationality responded. Three-quarters of respondents hold an employee position and, in most cases, work in service delivery, suggesting that they are likely to be able to interact with others often in their work. The sector and position within the work do not influence each other, which was also supported by the result obtained in Pearson's correlation analysis. Respondents rely as much as possible on themselves to shape their professional careers, and are therefore characterized by extreme self-confidence and determined behavior. They accept advice from their families to an almost similar extent for their personal success, hence we assume that they may have received family-centered upbringing. Employee performance is crucially influenced by opportunities for personal development and flexible scheduling, and to the same extent, stressful working conditions and overload affect an individual's performance. As for the attitude to work, the majority of our respondents you definitely know what you want to achieve as well as performance-oriented. Our respondents usually adapt easily in their workplace and always arrive sooner. We believe that the relaxed acclimatization practices of individuals are essential to the conditions for trouble-free work, which is why it is important to take strength and break down barriers to integration. The survey of the respondents also revealed what qualities are endowed with the ideal leader for them. According to them, the most essential merit is consistency and constant purposeful action, as well as conscientious work and long-term thinking. Almost half of the participants in the questionnaire speak a foreign language perfectly, suggesting that they can prevail not only at home but also in a cross-border environment. We would recommend expanding your language skills as this trains memory, is essential for further learning and career building, while at the same time making travel more enjoyable and allowing unhindered communication between the parties. We have also been able to reveal that people are now largely inclusive within a multicultural environment, but in some cases their behavior is still questionable and raises more doubts. Openness to others is primarily related to individual personality traits, the issue of upbringing, and the depth of lack of trust. Our comment on this cannot be stressed enough that the triad of empathy, tolerance, and willingness to compromise is the basis of working with others that must be put in everyone's minds. It also revealed how much attention is paid to addressing cultural differences in respondents' workplaces. Anyone with experience believes that their employer is acting consistently in this matter, but there have also been several who work in a culturally homogeneous workplace.

Finally, we learned about the submissions of the respondents regarding how to correct the association between individuals from different cultures. Most of the respondents would guide people towards understanding, humane behavior and eliminate communication difficulties, as well as creative team building. We recommend taking various language courses to break down communication barriers, as good language skills lead to a much more relaxed relationship. It may be relevant to avoid discrimination and stereotypical patterns of behavior getting to know, understanding and accepting each other's cultures. In our opinion, team coaching, i.e. the method of developing small groups, can also offer optimal solutions and ensure more effective cooperation between the parties involved. This intervention, by taking advantage of the dynamism of the collective, gives impetus to the remedying of problems in the organization with a concerted effort.

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Structures of constraint and women's paid work in Pakistan

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Abstract

This paper examines the role of different structures of constraint in restricting women's access to paid work in Pakistan. Using data from the Pakistan Bureau of Statistics and Pakistan Demographic Health Surveys, it offers a descriptive analysis of men and women's labor market outcomes in Pakistan, evincing gender inequalities. Although female labor force participation rates in Pakistan have risen over 1990-2018, much of this increase might have come from informal employment in rural areas, within the category of self-employment and family work. Female employment is largely segregated to the agricultural sector (66%), followed by the manufacturing sector (16%). From 2013 to 2018, employment in the manufacturing sector grew faster for women than for men. However, much of this increase came from a sharp growth in the female share in the category of self-employment and contributing family work (by 39 percentage points); men's share in that category declined slightly (by 3 percentage points). Female shares in wage and salaried employment declined both in agricultural (15 percentage points) and manufacturing (27 percentage points) sectors while the corresponding male shares rose (albeit marginally). This essay argues that various structures of constraint on the supply-side such as early childbearing patterns, patriarchal rules regarding seclusion and marriage, and a larger burden of unpaid care-work under the joint-family system restrict women's participation in paid work. Similarly, on the demand-side, pervasive systematic discrimination, wherein job ads explicitly demand male candidates, discourages women's preferences for and access to paid work.

1. Introduction

Gender inequalities in labor market outcomes in Pakistan remain stubbornly high. A report by Gallup Pakistan (2021), based on analysis of the data from Pakistan Labor Force Survey 2017-18, shows that the incidence of unemployment is much higher among females than males. Among those who are above 18 years of age and have an undergraduate or above degree, 41% of the women are unemployed compared to the 6% of the unemployed men. Within the same cohort, the labor force participation rate was 48% for women and 94% for men. The report revealed that nearly 83% of the unemployed women in this cohort showed a willingness to accept employment with compromising terms and conditions, compared to the 59% of men who showed such willingness. This suggests that women in Pakistan, despite having suitable qualifications, and willingness to pursue paid work, are more likely than men to be unemployed.

A quick look at the historical data on male and female labor force participation rates shows a slow improvement in the female rate over the past three decades. According to International Labor Organization estimates, the difference between male and female labor force participation rate (for ages 15 and above) was around 70% in 1990. By 2019, this difference stood at around 60%. Pakistan Labor Force Survey reports over 1990-2018 show that the difference in male and female labor force participation rate has remained high in urban areas (1999-2000: 56.2%; 2017-18: 55.6%) while rural areas have made some improvement (1999-2000: 57%; 2017-18: 43.2%). In rural areas female labor force participation rate (FLFPR) rose from 16.1% in 1999-2000 to 25.6% in 2017-18, an increase of 59 percentage points. Comparatively, the female labor force participation rate in urban

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areas increased by merely 26 percentage points, from 8.8% in 1999-2000 to 11.1% in 2017-18. This finding contrasts the patterns in female labor force participation rates in the developing countries in the neighborhood, India and Bangladesh. In India, for example, FLFPR over 1987-2012 showed a declining trend in rural areas while rising or stagnating in urban areas (Klasen and Pieters, 2015). Similarly, in Bangladesh, the development of garment factories have resulted in expanded work opportunities for women and increasing FLFPR; whereas in rural areas, due to a lack of suitable work opportunities and traditional norms of *purdah* (seclusion of women), FLPR has remained stagnant relative to that of men (Tanaka et al., 2020).

In this paper, I examine gender differentials in labor market outcomes in Pakistan over 1990-2018 and the potential factors that might explain them. The objective is to provide alternate views to identify various constraints that help explain Pakistani women's labor supply patterns. This paper has a two-pronged strategy. First, it will use data from Pakistan Labor Force Surveys (LFS) and Pakistan Demographic Health Surveys (PDHS) to provide an overview of labor market outcomes with an emphasis on gender differentials in indicators related to education, household formation, childbearing patterns, and paid work. Second, it will provide a brief review of literature on gender and labor markets in Pakistan to offer a context on demand and supply-side constraints that restrict women's paid work. In terms of demand-side constraints, I would mainly focus on discriminatory practices on the part of employers. For supply-side constraints, I would focus on factors such as unequal bargaining power in the marriage market and the household, unpaid childcare/eldercare, and religious/cultural stigmas associated with women's paid work.

This paper is structured as follows. The next section discusses a conceptual framework to understand structures of constraint that help explain, in part, differences in labor market outcomes for men and women. The purpose of section three is to elaborate on the differences in men's and women's labor market outcomes in Pakistan over 1990-2018. Section four, then, aims to explain these differences by examining the role of constraints on the supply-side—such as unequal marital rules—and demand-side— discriminatory hiring practices—that discourage women's involvement in paid work. The final section concludes.

2. Conceptual links

Elson (1999) provides a conceptual framework to understand gender differentials in the labor markets. According to this framework, labor markets operate at the intersection of "productive economy" (market-oriented work) and "reproductive economy" (unpaid work and other un-marketed activities critical for the functioning of the productive economy) in ways that are "bearers of gender". For example, labor markets often penalize those engaged in the reproductive economy and do not reward interpersonal skills that develop from caring activities and managing a household. Moreover, labor markets exacerbate the dilemma of who should pay for the kids, as Folbre (1994) points out, by only accounting for costs that employees incur in caring activities (i.e. in the form of time taken off from paid work and development of skills that labor markets reward) and disregarding the benefits created for the productive economy. Labor markets also don't reward sufficiently the benefits of personal development emanating from caring activities (i.e. enhancement of interpersonal skills in the form of empathy, respect, and a drive to solve collective problems).

According to Elson, labor markets are organized around unequal rules that reinforce the idea that the "burdens of the reproductive economy will be, and should be, borne largely by women." This is reflected in a widespread prevalence of maternal leaves, compared to paternal leaves. Similarly, labor markets often perpetuate social stereotypes about what a "male profession" (i.e. construction and repair services) and what is a "female profession" (i.e. teaching and nursing) by discouraging women from entering male-dominated professions, paying them lesser than men with similar qualifications, and using differential criteria to measure performance and grant promotions. Employers may play a strong role in branding certain jobs as "male jobs" by consistently precluding women from certain professions, i.e. by advertising a preference for men in job ads (I discuss in the subsequent sections of this paper). This would not only discourage women from pursuing what is declared as a "man's work" but also lead them to underinvest in their skills and professional development (as they are not rewarded equally in the labor market). This also carries implications on the supply-side as consistent rejections in the labor markets, and ensuing gender stereotypes may shape women's preferences towards paid work as well as their choice of occupations.

On the supply side, social norms and stigmas pose constraints that may shape women's preferences for paid and unpaid work. This includes patriarchal norms that influence women's bargaining position in the marriage market and in the household, which in turn shape married women's labor supply. Folbre (1994, 2020) has provided a useful conceptual framework to understand how constraints can 'define the realm of choice'. She argues that 'structure of constraints' can be conceptualized as 'sets of asset distributions, rules, norms, and preferences that empower given social groups'—i.e. constraints based on gender, class, race, and so on— at the expense of less powerful groups. Political rules that permit certain acts while penalizing others are examples of these constraints.

For example, property rights— that restrict women's control and ownership rights in comparison to men— can leave women in a weak bargaining position in society and the household. Social institutions that award males a control of productive and/or reproductive rights of women reflect and reinforce men's collective interests. Cultural norms, by imposing a certain 'price' for nonconformity, can be also categorized as constraints.

Folbre notes that constraints can be more limiting for some individuals and groups than others. More powerful groups might face lower and less binding constraints than less powerful groups. Norms regarding socially desirable and acceptable gender roles are often strictly enforced through individual and collective punishments, in the form of violence, social exclusion, and financial sanctions, etc. (the punishment for breaking these informal rules are more likely to be harsher for women than men, i.e. the practice of *Karo Kari* — honor killing, primarily carried out against women who, without 'permission', marry outside the family or engage in 'socially unacceptable relations' with men).

Jayachandran (2020) has argued that gender norms may explain differentials in women's employment among societies at similar levels of economic development. She notes five aspects of social norms that might constrict women's paid work: safety issues in public areas, restriction on women's mobility and social interactions, control over household finances, the norms around the male-breadwinner model, and the sexual division of unpaid work wherein women share a disproportionately larger burden for domestic chores and other care activities. Similarly, Heintz et al. (2018) use survey data of 5198 women in Bangladesh to examine the role of cultural norms on Bangladeshi women's likelihood to be economically active. They show that women who support traditional gender norms are less likely to participate in economic activity (even though religion didn't appear a significant factor in this regard, adherence to traditional and religious norms, such as observance of *purdah or veil*, appeared to significantly reduce women's participation in economic activities outside the home).

This paper extends the relevant frameworks by examining the role of unequal marital rules in restricting women's paid work. In the Pakistani context, the patriarchal society, marked by highly 'gendered'[1] social, cultural, and religious institutions, dictates women's subordinated role in the society. This includes a dominant patrilineality (the family line is pursued through male members and mothers might lose custody of their children in the event of divorce), a strict gender division of labor with a male-breadwinner/female-homemaker model (women are primarily relegated to the domestic sphere to contribute to the production and reproduction for family needs), and customs of purdah (women's can't come in direct contact with men designated as their *namahram*—with whom marriage is legal). Unequal marriage rules also perpetuate women's dependence on men for their social and economic survival.

In general, a woman's self-worth is determined in terms of her identity as a daughter, sister, wife, and mother. Her individuality, as an independent decision-maker, is sanctioned through social customs (i.e. exclusion from family affairs or gatherings). In the labor market, this corresponds with a woman's decision about paid and unpaid work as well as how the labor market treats her. Women's familial links decide how they weigh their decision to join either paid or unpaid work, as the decision about their labor supply is not of a labor-leisure sort that can be mediated by compensating wage differentials; rather, it is a decision largely controlled by their male kin. Since daily wages are generally low and care services are not easily available (due to social stigma associated with women's work outside the home), it becomes profitable for families living in a joint family system (with several generations living together under the same roof) to enforce a strict division of labor wherein men earning a bare minimum wage can survive on the unpaid domestic care provided by the women. The inequalities in education and labor market outcomes might, therefore, persist as long as they benefit the interests of the collective social groups.

In the next section, I show differences in indicators related to men's and women's labor market outcomes in Pakistan over 1990-2018.

3. Gender differences in labor market outcomes in Pakistan

In this section, I use selected labor force statistics over the period 1990-2018 for men and women to examine trends and patterns over the years. I then turn to the related literature to highlight possible explanations for these patterns.

Figure 1 shows a gender difference in labor force participation rate (for ages above 15) over 1990-2019. The rate for men has remained stable at slightly above 80% (84% in 1990 and 82% in 2019). Participation rates for

[1] I use this term in the similar context that Elson (1999) has used. Institutions can be "bearers of gender" in their ability to define and reinforce gender stereotypes and ideas about masculinity and femininity.

women, however, increased from 14% in 1990 to 22% in 2019.[2] Table 1 highlights gender differentials in labor force participation at the provincial level in Pakistan.

A quick observation of the data reveals a puzzle. Urban areas experienced a greater reduction in the difference in male and female literacy rates over 1998-2018 (17% in 1998 and 12% in 2018) compared with rural areas (27% in 1998 and 26% in 2018). However, a greater reduction in the gap in male and female labor force participation rates seems to have occurred in rural areas (from 57% in 1999 to 43% in 2018) relative to urban areas (remaining at 56% in 1999 and 2018). It appears that rural areas have driven an increase in female labor force participation rates over 1998-2018, despite lower female literacy rates compared with the rate in urban areas.

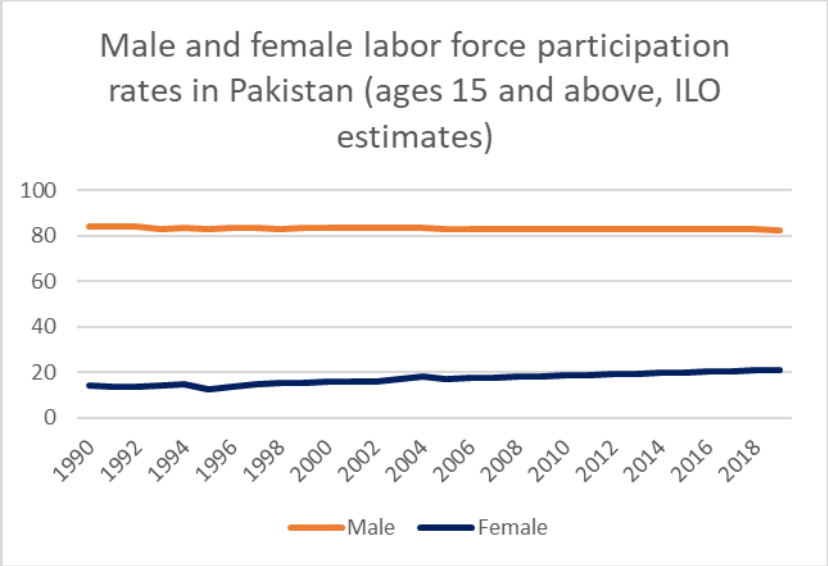

Figure 1. Trends in male and female labor force participation rates over 1990-2019

Source: World Bank Data, 2021

This poses a question why urban women in Pakistan, despite having higher literacy rates and better access to education, public transportation, and other facilities, have lagged behind their rural counterparts in labor force participation. The key takeaway from the table, that higher literacy rates for women do not necessarily coincide with their increased labor force participation, is also elicited further from the regional data on these indicators. For example, the differential in men's and women's literacy rates in Khyber Pakhtunkhwa (KPK) was higher in both periods (31.7 & 34.8) compared to that in Sindh (21.2 & 22.9); however, differentials in paid work appeared much lower in the former region (53.3 & 49.8) as compared to the latter region (60.1 & 56.4).

Additionally, taking the latest period of 2018, the female literacy rate in Sindh appears second-highest (around 50 percent) after Punjab (57.4 percent) yet female labor force participation rates appear to be one of the lowest (12.1 percent). In Sindh, the gender gap in literacy rate appears much lower than that in Balochistan yet both share an almost identical gender gap in labor force participation (around 56 percent). A similar comparison can be drawn between Sindh and KPK: the latter shows a higher gender gap in literacy rate along with a lower gender gap in the labor participation rate.

[2] Over the same reference period, growth in female labor force participation rates appears lower in some South Asian countries (in Bangladesh, for example, the rate grew by 43 %) and negative in others (in India the rate declined by 30%).

Table 1. Literacy rates and labor force participation rates (%) by region, 1998-2018

	Literacy rates (1998)			Literacy rates (2018)		
Region[3]	**Male**	**Female**	**Diff.**	**Male**	**Female**	**Diff.**
All Pakistan	56.5	32.6	23.9	72.5	51.8	20.7
Rural	47.4	20.8	26.6	66.3	40.4	25.8
Urban	72.6	55.6	17	82.2	70.6	11.6
Punjab	58.7	35.3	23.4	72.2	57.4	14.8
Sindh	56.6	35.4	21.2	72.8	49.9	22.9
Khyber Pakhtunkhwa (KPK)	52.8	21.1	31.7	73.3	38.5	34.8
Balochistan	36.5	15	21.5	73	33.5	39.5

	LFPR (1999)			LFPR (2018)		
Region	**Male**	**Female**	**Diff.**	**Male**	**Female**	**Diff.**
All Pakistan	70.4	13.7	56.7	68	20.1	47.9
Rural	73.1	16.1	57	68.8	25.6	43.2
Urban	65	8.8	56.2	66.7	11.1	55.6
Punjab	72.7	16.8	55.9	69.9	26.5	43.4
Sindh	67	6.9	60.1	68.5	12.1	56.4
Khyber Pakhtunkhwa	65.4	12.1	53.3	61.1	11.3	49.8
Balochistan	69	5.1	63.9	63.8	7.9	55.9

Source: Pakistan Labor Force Survey reports, 1999-2018

Data from the Pakistan labor force survey 2017-18 shed further light in this regard. Figure 2 plots male and female labor force participation rates by education attainment for rural and urban areas.

[3] Data for Gilgit and Baltistan is not included

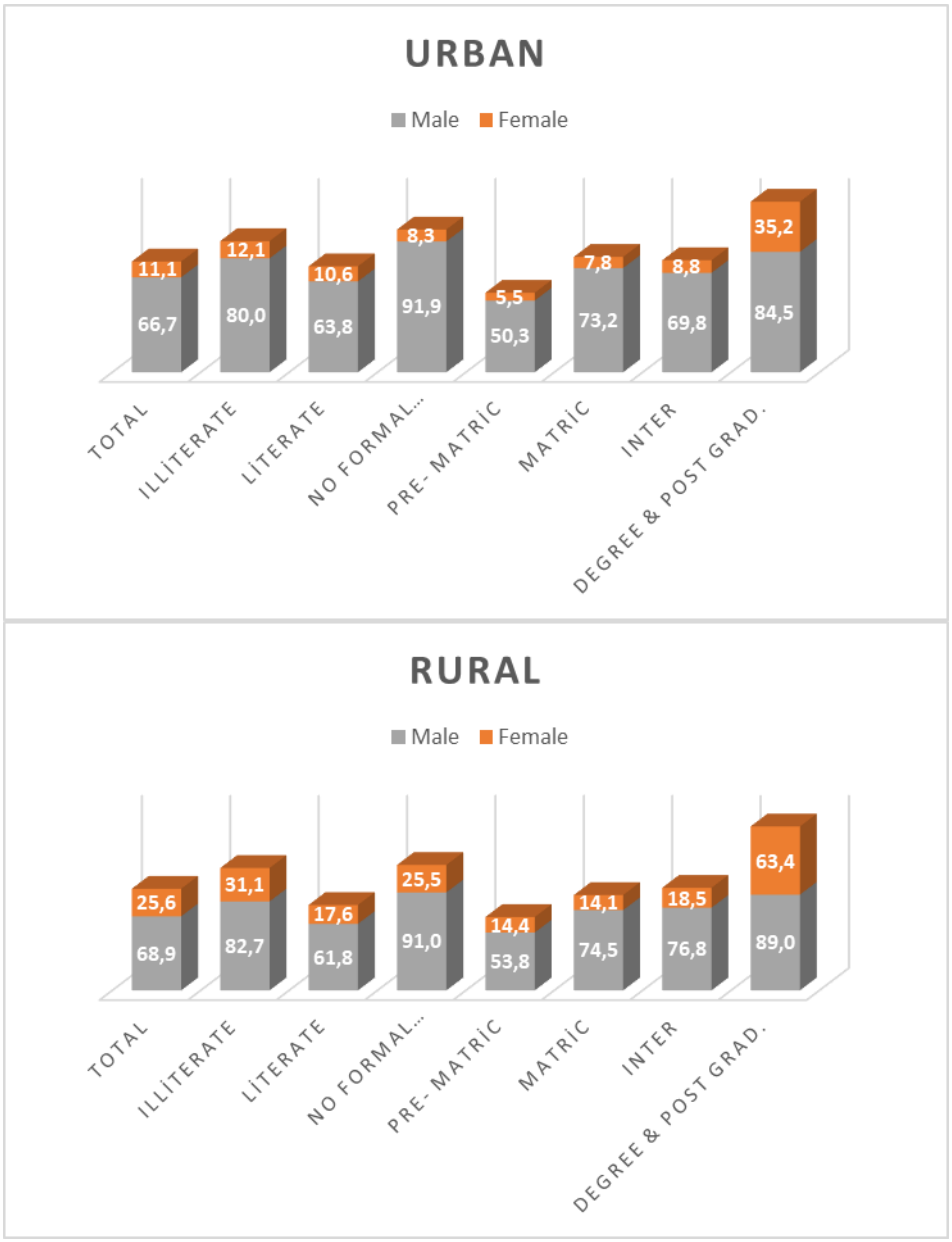

Figure 2. Labor force participation by sex and educational attainment, rural and urban (2017-18)

Source: Pakistan Labor force Survey 2017-18

In rural areas, the labor force participation rate for women is highest at the tertiary level of education (bachelors and postgraduate level), 63 percent, followed by the rate for illiterate women, 31 percent. The gender differential in labor force participation also appears to be the lowest at the tertiary level of education (25.6 percent) and highest with no formal level of education[4] (65.5 percent).In urban areas, the gender differential in labor force participation with no formal education expands to nearly 84 percent, suggesting that while men with no formal education might seek paid work, women don't. Informal education in terms of Madrasa education (religious education) might be a possible explanatory factor why women with no formal education might not seek paid work.

Similarly, the differential at the tertiary level appears much higher (49.3 percent) than that in rural areas (25.6 percent). This finding is striking given that one might expect the participation rate for highly educated women to be lower in rural areas due to a lack of suitable employment opportunities which might otherwise be prevalent in urban areas. However, in urban areas, a lack of white-collar opportunities commensurate with the demand might be a deterrent to female participation in paid work in this group.

[4] No formal education might suggest education at religious, informal institutions such as Madrasas.

Table 2 helps shed some light on gender segregation in employment within each sector. A key observation from Table 2 is that, for the reference period 2017-18, female employment is largest in the agricultural sector (66%), followed by manufacturing (16%) and wholesale and retail (1.6%). Another observation is that, from 2012-13 to 2017-18, the share of female employment in the agricultural sector has declined (from 75% to 66% respectively) rising in the manufacturing sector (from 11% to 16.4% respectively). On the other hand, the share of female employment in the manufacturing sector increased from 11 percent in 2012-13 to 16.4 percent in 2017-18. As of 2017-18, the share of female employment in the services sector remains very low (7.6 percent), especially in education, health, and social work (2.3 percent).

As shown in table 3, a major reason behind women's high involvement with the agricultural sector is that a large share of women tends to work as contributing family workers (unpaid workers employed by family-run farms and enterprises). As of 2017-18, nearly 88 percent of the female employees in the agricultural sector are categorized under "own account and contributing family workers" (those working occasionally on family-run farms and enterprises). In the agricultural sector, the share of wage and salaried workers declined by 3 percentage points over the reference period, falling sharply for women (15 percentage points) and rising slightly for men (2.5 percentage points). It appears that the decline in the female share of employment in the agricultural sector is partly driven by the decline in the share of wage and salaried work.

Table 2. Gender segregation in employment by sector, 2013-2018

Sector	**2012-13**	**2013-14**	**2014-15**	**2017-18**
Agriculture				
Both sexes	42.0	42.0	40.8	37.3
Male	32.9	33.1	31.7	29.5
Female	74.9	72.8	71.5	66.1
Fishing				
Both sexes	0.2	0.2	0.2	0.1
Male	0.2	0.2	0.2	0.1
Female	-	-	-	-
Mining				
Both sexes	0.2	0.2	0.2	0.2
Male	0.2	0.3	0.2	0.3
Female	-	-	-	-
Manufacturing				
Both sexes	14.3	14.4	15.5	16.2
Male	15.3	14.9	15.9	16.2
Female	10.9	12.7	14.4	16.4
Electricity, gas, and water				
Both sexes	0.8	0.3	0.8	0.7
Male	1.0	0.7	1.0	0.9
Female	0.1	0.2	0.0	0.1
Construction				
Both sexes	7.7	7.5	7.5	7.8
Male	9.7	9.7	9.6	9.8
Female	0.2	0.3	0.2	0.2

Wholesale and retail trade				
Both sexes	14.7	14.9	14.9	15.1
Male	18.4	18.8	18.9	18.8
Female	1.6	1.7	1.4	1.6
Hotels and restaurants				
Both sexes	1.6	1.6	1.6	2.0
Male	1.9	1.9	2.0	2.4
Female	0.2	0.2	-	0.2
Transport and communication				
Both sexes	5.7	5.2	5.6	6.4
Male	7.2	6.7	7.2	8.1
Female	0.2	0.1	0.1	0.2
Finance				
Both sexes	0.5	0.5	0.6	0.5
Male	0.6	0.6	0.8	0.7
Female	0.2	0.1	0.1	0.1
Real estate and business activities				
Both sexes	0.3	0.3	0.4	0.5
Male	0.3	0.4	0.5	0.6
Female	-	0.1	-	-
Public administration				
Both sexes	2.7	2.4	2.5	3.7
Male	3.4	3.1	3.2	4.6
Female	0.3	0.3	0.2	0.4
Education				
Both sexes	3.8	3.7	4.0	4.2
Male	3.1	3.1	3.2	3.3
Female	6.5	3.0	6.6	7.6
Health and social work				
Both sexes	1.4	1.5	1.3	1.6
Male	1.3	1.4	1.3	1.4
Female	1.7	1.7	1.4	2.3
Other community, social, and personal services activities				
Both sexes	4.2	5.2	4.1	1.3
Male	3.9	4.0	4.2	0.7
Female	4.8	1.0	2.1	3.6

Source: Pakistan labor for surveys, 2013-2018

Similarly, in the manufacturing sector, the female share of wage and salaried workers declined from 2013 to 2018 (from 60% to 44%, respectively, or an increase of 27 percentage points), rising sharply for 'own account and contributing family workers (from 39.6% to 55%, respectively, or an increase of 39 percentage points). One conclusion from this trend is that the increase in the female share of employed workers in the manufacturing sector is partly driven by the rising share of workers who are self-employed or work for family members.

Table 3. Gender segregation in sectors by wage work, 2013-2018

Sector	**2013-14**		**2014-15**		**2017-18**	
	Wage and salaried workers and employers	**Own account and contributing family workers**	**Wage and salaried workers and employers**	**Own account and contributing family workers**	**Wage and salaried workers and employers**	**Own account and contributing family workers**
Agriculture						
Both sexes	12.5	87.5	11.7	88.3	12.1	87.9
Male	12.0	88.0	10.6	89.4	12.3	87.7
Female	14.2	85.0	13.4	86.6	12.0	88.0
Fishing						
Both sexes	72.8	27.2	64.8	35.2	76.9	23.1
Male	72.9	27.1	64.8	35.2	77.7	22.3
Female	50.5	49.5	-	-	-	100.0
Mining						
Both sexes	87.9	12.1	9.3	7.0	97.3	2.7
Male	88.2	11.8	92.9	7.1	97.3	2.7
Female	-	100.0	100.0	-	100.0	-
Manufacturing						
Both sexes	66.2	33.8	62.9	37.1	67.0	33.0
Male	72.5	27.5	71.1	28.9	73.4	26.6
Female	60.4	39.6	32.0	68.0	44.1	55.9
Electricity, gas, and water						
Both sexes	97.12	2.9	98.8	1.2	97.9	2.1
Male	97.0	3.0	98.7	1.3	97.8	2.2
Female	100	-	100.0	0.0	100.0	-
Construction						
Both sexes	94.0	6.0	93.7	6.3	94.9	5.1
Male	94.0	6.0	93.6	6.4	94.9	5.1
Female	85.3	14.7	96.9	3.1	93.7	6.3
Wholesale and retail trade						
Both sexes	25.7	74.3	26.6	73.4	30.9	69.1
Male	26.0	74.0	37.0	73.0	31.3	68.7
Female	17.5	82.5	11.2	88.8	13.0	87.0
Hotels and restaurants						
Both sexes	48.8	51.2	48.4	51.6	51.6	48.4
Male	49.4	50.6	48.9	51.1	52.3	47.7
Female	26.0	74.0	31.2	68.8	27.6	72.4
Transport and communication						
Both sexes	53.4	46.6	52.9	47.1	50.4	49.6

Male	49.6	50.4	52.8	47.2	50.2	49.8
Female	65.5	34.5	79.2	20.6	85.9	14.1
Finance						
Both sexes	98.9	1.1	97.9	2.1	98.5	1.5
Male	97.7	2.3	97.9	2.1	98.4	1.6
Female	100.0	-	-	-	100.0	-
Real estate and business activities						
Both sexes	28.0	72.0	26.6	73.4	37.1	62.9
Male	27.4	72.6	26.4	73.6	36.9	63.1
Female	100.0	-	40.8	59.2	79.7	20.3
Public administration						
Both sexes	99.9	0.1	99.9	0.1	89.0	11.0
Male	99.9	0.1	99.9	0.1	89.0	11.0
Female	98.0	2.0	100.0	-	89.4	10.6
Education						
Both sexes	96.6	3.4	95.6	4.4	96.7	3.3
Male	97.7	2.3	96.9	3.1	97.5	2.5
Female	94.5	5.5	93.4	6.4	95.4	4.6
Health and social work						
Both sexes	76.4	23.6	75.8	24.2	80.5	19.5
Male	72.6	27.4	72.3	27.7	77.0	23.0
Female	87.1	12.9	86.6	13.4	88.4	11.6
Other community, social, and personal services activities						
Both sexes	67.3	32.7	58.4	41.6	47.0	53.0
Male	47.2	52.8	53.8	46.2	47.8	52.2
Female	53.3	46.7	83.3	16.7	40.4	59.6
Activities of private households						
Both sexes	96.0	4.0	100.0	-	92.2	7.8
Male	97.5	2.5	100.0	-	97.7	2.3
Female	94.9	5.1	100.0	-	88.3	11.7
All sectors						
Both sexes	41.0	59.0	41.0	59.0	43.8	56.2
Male	45.0	55.0	45.3	54.7	48.0	52.0
Female	27.2	72.8	25.4	74.6	28.6	71.4

Source: Pakistan labor for surveys, 2013-2018

Note: Own account worker is defined as a person working during the reference period, with one or more partners at a self-employment job, with no employee engaged on a continuous basis. One or more family workers or employees are engaged on an occasional basis. These types of workers include owner cultivators, sharecroppers, and contract cultivators. A contributing family worker is defined as a person who works without any payment in cash or kind, on a family-run enterprise (operated by a member of the household or kin).

Overall, both in agricultural and manufacturing sectors the female share of wage and salaried workers has declined, rising, on the other hand, for own account and contributing family workers. The increase in female labor force participation rates, during the relevant period, therefore, might have been driven by the rising female share in the latter category. Social stigmas associated with women's paid work outside the home and religious factors that restrict women's mobility and interaction with men might be some of the reasons why women's

employment in the agricultural sector, within the category of self-employment and family work, remains higher compared to that in other sectors and the wage and salaried category.

Even though gender differentials in education are considered a major hindrance to Pakistani women's integration in paid work in the formal sector (Shah and Sathar, 1986), the role of cultural norms, with regards to marriages rules, household formation, and childcare/eldercare also spell out substantial constraints for women in their preferences with regards to paid and unpaid work.

In the related literature, Pakistani women's lower participation in paid work has been associated with their socioeconomic status (Shah and Sathar, 1986), marital status (Shah et al., 1976), presence of a male figure (Chishti et al., 1989), observance of purdah[5] (Ibraz, 1993), lower education (Naqvi and Shahnaz, 2002) and presence of children (Faridi et al., 2009). For example, Shah et al. found that women's marriage had a significantly positive effect on women's participation in paid work. They suggested that since married women have greater social permissibility to move around, this may theoretically explain women's greater likelihood to engage in paid work.

A key observation from the pertinent literature emanating from Pakistan is that there is a dearth of studies that examine the extent of social and economic constraints for women by the type of marriage rules. In Pakistan where nearly 62 percent of the marriages are cousin marriages (marriage to first or second cousin either from the father's side or mother's side), there is a need to examine differences in social and economic constraints for women as marriage rules might vastly differ within cousin marriage and non-cousin marriage. The next section discusses how certain constraints, both supply-side— i.e. marriage rules, household formation, and childbearing—and demand-side— i.e. discriminatory hiring practices—might have shaped women's labor supply patterns in Pakistan.

4. Supply and demand-side constraints on women's paid work in Pakistan

As Folbre (1994, 2020) argues, structures of constraints, based on group identity and interests, can be in the form of rules, norms, and preferences that empower one group over the other and may be the cause of persistent inequalities in the social and economic spheres. In the labor market, such constraints, both supply-side— i.e. unequal rules regarding marriage, household formation, and childbearing—and demand-side— i.e. discriminatory hiring practices— may play a strong role in constricting women's participation in paid work.

4.1. Supply-side constraints

Childbearing patterns

Historical data from Pakistan shows that in terms of childbearing patterns there doesn't seem any radical changes in the median age of women at the birth of their firstborn. Table 4 shows that in 1990-91 this age was 21.3 years. After nearly three decades, it stands at 22.2 years. There has, however, been a significant development in teenage pregnancies. The percentage of teenage mothers (ages15-19) who began childbearing declined from 15.7 percent in 1990-91 to 8.1 percent in 2017-18. All the provinces have shown significant development in this regard.

[5] Cultural and religious segregation of men and women. Practice of purdah is not restricted to Muslim women only, it has been an important feature of in many South Asian countries (see Papanek [1973] for how purdah norms and practice differ for hindu and Muslim women)

Table 4. Onset of childbearing: median age at first birth and teenage motherhood by region, 1990-2018

Province/region	**1990-1991**	**2006-2007**	**2017-2018**
All Pakistan	21.3	21.8	22.8
Punjab	21.6	22.1	23.2
Sindh	20.6	21.1	23.0
NWFP (KPK)	21.4	21.2	21.5
Balochistan	20.3	22.3	22.2
Teenage motherhood: Percentage of women age 15-19 who had begun childbearing			
	1990-1991	**2006-2007**	**2017-2018**
All Pakistan	15.7	9.1	8.1
Punjab	16.9	8.3	6.2
Sindh	14.4	11.2	10
NWFP (KPK)	13.9	9.2	14.8
Balochistan	20.5	7.4	11.6

Source: DHS reports over 1990-2019

Both marriage and childbearing patterns are important determinants of women's paid employment. Recent studies from Pakistan that have explored the relationship between the presence of children and women's paid work seem to be largely based on qualitative field surveys (see Faridi, Sharif and Anwar, 2009; Sarwar and Abbasi, 2013 for a review of studies on determinants of women's paid work in Pakistan). In this regard, Naqvi and Shahnaz (2002) use probit and multinomial logit models for cross-sectional data from the Pakistan Integrated Household Survey, 1998-99 to investigate factors associated with women's paid work. In their study, paid work was defined as involvement in economic activity for pay, profit, or work in farms or shops. They included a wide range of explanatory variables for personal characteristics (age, education, marital status), household head's characteristics (age, education, employment status of the head of the house), household characteristics (gender of the head of the house, presence of children, family size, living with a nuclear family, and economic status), and a regional dummy for and residence of the household in a rural area. Their results show that an increase in the number of young children (under 5 years of age) by 1 reduced the likelihood of women's participation in paid work by 1.1 percent. The presence of a male member in the household reduced the likelihood of women's paid work by 0.5 percent. (possibly due to extra demands of domestic work or men's restrictions on women's paid work outside the home).

Marriage rules/ household structures

In the Pakistani context, a focus merely on marital status is insufficient to understand the complexities of marriage dynamics and their implications for women's involvement in paid employment. The type of marriage matters as the associated marriage rules influence intrahousehold bargaining. Hence, I begin this subject in the broader light of kinship endogamy/exogamy and intra-household bargaining—specifically, bargaining over women's allocation of time between paid and unpaid work—on which the literature abound. Debate on the role of marriage forms and women's autonomy and intra-household bargaining outcomes is multifaceted, without a consensus on the mechanisms through which marriage forms influence women as well as their overall impact on women's welfare. According to one view, cousin marriage— a form of kinship endogamy common in patrilineal, patrilocal societies among land-owning classes—offers women the social protection of male kin by consolidating their bonds with in-laws and insuring them against domestic violence, in the absence of integrated social welfare systems. Dowry is neither necessary nor important in consanguineous marriages, default over which in exogamous marriages often contributes to domestic violence. In this regard, Rammohan and Vu's (2018) empirical analyses from the Indian Human Development Survey 2011-13 and District Level Household and Facility Survey 2007-08 showed that controlling for the level of economic development, urbanization, caste, religion, husband's education, household income, and region, patrilocal exogamy worsened gender gaps in

education. At the household level, their results showed that relative proximity of marital residence to the natal one was negatively associated with lower gender gaps in education and higher female schooling.

Contrary to this view is the notion that women's socioeconomic outcomes might be worse under kinship endogamy as the marriage market is captured and dominated by males. Under this argument, men in consanguineous marriages may easily get away with non-payment of *mahr*— an otherwise obligatory payment to the bride under Islamic marriage. Mahr is a financial payment that may provide possible resources that might improve women's intra-household bargaining[6].

However, in close-kin marriages such as in cousin marriage, men fully control the marriage market. Fathers and brothers can easily control the transaction over the bride as sons and nephews are in the same pool making it easier for even the poor men to leverage through barter or watta satta[7] (Edlund, 2018). Since women in consanguineous marriages have limited outside options than those in exogamous marriages they marry early, devoting their time to home management skills. Through this link, we might expect that consanguinity can result in lower levels of education among women in these types of marriages (Agha, 2016).

Male control over women's productive and reproductive capacities might be much more pronounced in consanguineous marriages than in out-marriages as men not only have greater control over women but also have social and economic incentives to do so. For example, Folbre (1997, p. 265-269) has argued that gender-specificenvironmental parameters that counteract the interests of women as a group provide incentives for individuals – who gain from this—to engage in gender-specific forms of coalitions. In this context, it is economically advantageous for males to inculcate caring preference among women by enforcing social norms that reward female altruism and punish deviations. Consanguinity, thus, can be envisaged as a form of gender coalition with intrinsic, material, and psychological rewards for 'well-behaved' women with clear punishments against 'defaulters'. Agha's (2016) case study, conducted in Khairpur village in rural Sindh Pakistan, showed that male kin rewarded domestic caring skills, discourage attainment of education, and punished women who married outside the *biradari* (kinship) by cutting all social ties with her and her kin group.

Rao's (1997) case study, based on both ethnographic and empirical exercises, examined endogamous communities from three villages in the South Indian state of Karnataka. It looked at power relationships, wife-beating, and fertility and health decisions. The findings, based on focus group interviews and empirical exercises, showed that controlling for husband's education, wife's monthly income, rest of family income, number of wife's brothers and number of living male, shortfalls in dowry payments and fewer number of male children along with female sterilization were significant determinants of wife-beating and abuse. An interesting finding in the study was that a husband's education raised the likelihood of wife-beating. Rao argued that since the higher education of the husband leads to higher demands for larger dowry payments, women married to more educated men were more likely to be beaten than those married to less educated ones. Rao didn't, however, provide a comparison of the situation with women in exogamous marriages which would have been useful to understand how women fare under different forms of marriage.

In this regard, it is important to highlight how marriage forms influence women's social and economic situation. Table 5 provides a snapshot of how the incidence of cousin marriage coincides with indicators associated with women's intra-household bargaining outcomes (see Pakistan Demographic Health Survey Report 2017-2018). Among married women aged 15-49, the highest incidence of cousin marriages (58.3 percent) is reported in Sindh.

[6] The separate spheres bargaining model of Lundberg and Pollak (1993) can apply to Pakistan's rural context where social stigmas associated with divorce restrict its use as a threat point; therefore, control of resources within marriage might determine internal threat points. Whether mahr improves women's intra-household bargaining power is based on anecdotal evidence.

[7] Marriage by exchange of sisters

Table 5. Cousin marriages and women's intra-household bargaining outcomes

		Punjab	**Sindh**	**Khyber Pakhtun-khwa**	**Balochistan**
Average annual growth rates of GDP 1999-2000 to 2014-2015 (percent)		4.1	4.3	5.2	2.5
Incidence of cousin marriages (percent of women married to a first cousin, both father's and mother's side)		48.1	58.3	43.5	51.2
Unrelated marriages		38.4	29.4	38	33
Participation in decision marking: Percentage of married women who participate in household decision making by themselves or jointly with husband					
i)	Own health care	56.5	59.4	29.2	27
ii)	Major household purchases				
iii)	Visiting family or relatives	49.5	54	24	17.3
		52	63.5	28.8	18.4
Control over own earnings: the person who decides how the wife's earnings are used (percentage)					
i)	Mainly wife	49	51.8	37	39.7
ii)	Wife and husband jointly				
		41.6	40.4	39.7	22.1
Ownership of title or deed for a house owned (among married women who own house, percentage distribution by whether woman's name appears on the title or deed)					
i)	Name is on title/deed	46.2	48.2	26.6	24.3

Source: Except for economic growth rates- for which data comes from Institute for Policy Reforms' report[8]-, all other data has been compiled from DHS data 2017-18

Compared to other provinces, Sindh reports the highest percentages of married women who participate in intra-household decision making (59.4), control their earnings (52%), and are included in the ownership of assets (48.2%). However, the relation between cousin marriage and women's autonomy (for their choice of paid work and overall say in the household) might be complex to map given the intersectionality of other social and cultural factors.

4.2. Demand-side constraints

Systematic discrimination in access to paid work

A key observation from women's labor market outcomes in Pakistan is women have persistently higher unemployment rates than men. Table 6 shows is that over nearly two decades, the gender gap in the unemployment rate (with an exorbitantly high female unemployment rate compared to the male rate) has persisted, especially among the degree holders.

[8] Pasha, H.A., 2015. Growth of the provincial economies. *Institute for Policy Reforms (IPR). http://ipr. org. pk/wp-content/uploads/2016/04/GROWTH-OF-PROVINCIAL-ECONOMICS-. pdf.*

Additionally, the gender gaps in unemployment rates appear to remain lower at the lower levels of educational attainment but rise faster once the candidates attain secondary schooling or a college degree. In 2017-18, the female unemployment rate among the degree holders (minimum college) appears 41.1 percent; a rate more than seven times higher than the male rate of 7.3 percent.

There could be various factors behind women's high unemployment rates. In favor of brevity, I restrict my discussion here to demand-side constraints in the form of employment and wage discrimination in the labor market. A comprehensive overview of other demand-side factors is discussed by Blau and Kahn (2017), for the US, Klasen, and Pieters (2015), for India, and Tanaka et al. (2020), for Bangladesh.

Table 6. Unemployment rate by educational attainment and sex, 2001- 2018

	Less than one year of education		Pre-primary		Primary (below middle)		Middle (below matric)		Matric (below intermediate)		Intermediate (below degree)		Degree	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
2001-02	4.5	14.8	6.8	13.3	6.4	19	8.4	23.1	8.2	25.3	8.3	20.3	7.4	15.3
2003-04	4.2	11.1	7.1	12.4	5.3	16.5	8.5	15.4	9.4	20.9	9.8	22	7.2	17.1
2005-06	4.1	8.7	4.8	9.7	5.5	9.8	5.5	10.5	6.9	14.6	6.9	16.5	5.9	12.5
2006-07	3.5	7.6	4.2	8.3	3.7	9.6	5	10.9	5.3	15.3	5.6	13.9	4.6	9.7
2007-08	5.3	5.8	4.3	4	3.7	11.6	4.2	12.5	5.3	20.9	5.5	18.3	3.5	12.9
2008-09	3	5.6	2.5	11.9	3.9	10.2	5.2	10.9	5	21.3	5.7	19.6	4.2	15.1
2009-10	5.2	4.3	4.3	4.1	3.7	9.5	4.5	12.1	5	18	5.8	23.9	5.8	19.5
2010-11	3.8	3.5	3.8	5.4	4.1	10.3	5.2	14.8	6.4	22.2	8.3	26.8	6.3	19.3
2012-13	2.8	4	4.9	5.2	4.5	10	7.6	15.1	6.7	20.7	7.5	24.3	7.6	22.1
2013-14	0.2	0.2	2.2	0.7	18.4	11.4	16	7.2	16.9	12.1	8.9	9.4	10.9	15.5
2014-15	0.3	0.3	1.8	0.3	13.5	4.3	15.5	8.7	14.7	8.7	10.1	14	12.9	21.1
2017-18	2.9	2.9	5	3.3	3.5	4.8	5	6.9	6.2	8.7	10.6	20.6	7.3	41.1

Source: Pakistan Bureau of Statistics (Compiled by the author from various Pakistan Labor Force Survey reports)

Note: Unemployment is defined as comprising of individuals ages 15 years and above who during the reference period were: a) Without work i.e. those not in paid-or self-employment; and b) Currently available for work i.e. those available for paid work or self-employment: or c) Not currently available for work due to the following reasons: illness, will take a paid job within four weeks, is temporarily laid off from a paid job, is an apprentice and is not willing to work: or d) actively seeking work during last week. The unemployment rate is calculated as the unemployed population as a percentage of the currently active population.

Demand-side discrimination is important as it might restrict women's options in the labor market and, in addition to the supply-side factors already discussed, contributes to observed gender inequalities. In Pakistan, employers have the freedom to state their gender preferences explicitly in their job advertisements (and they frequently do). These practices can not only discourage women from investing in their education and skills, but can also contribute to persistent segregation in the labor market— e.g. as employers advertise an explicit preference for

female applicants for 'feminine jobs' such as office secretary, teachers, and nurses and a preference for males for 'masculine jobs' such as mechanical engineers, machine operators, etc.

If workers with equivalent characteristics associated with productivity are treated differently in the labor market, it is taken as evidence of employment discrimination (Neumark et al., 1996). Neumark (2018) cites a clear definition of discrimination in the labor market based on the code of Federal Regulations (29 & 1604.2) in the US which defines discrimination as differential treatment not associated with observable productive capacities.[9]

Due to a lack of institutional regulations on equal employment opportunities in Pakistan, employers can explicitly state the preferred sex of the potential job market candidates in their advertisements (a practice more common on online job sites than in newspapers where such practice is almost non-existent)[10]. On Pakistan's largest job site, www.rozee.com, advertised preferences for gender serve as standard filters along with job type, experience, skill, career-level, industry, etc. Despite the freedom to explicitly state the preferred gender of potential applicants, many employers advertise themselves as 'gender-neutral'— stating no gender preference in their job ads. One explanation for this could be the tendency among some employers to advertise themselves as gender-neutral to build goodwill around their organization as well as product and services.

To examine how explicit preferences for male candidates vary across various job categories in Pakistan, I examine that data on all the job ads posted on Pakistan's largest online job site (www.rozee.com) during June-July 2019.

Figures 4 and 5, based on the collected data, show the fraction of job ads that state an explicit preference, across 53 functional categories, for male and female candidates for Pakistan. In figure 4, almost 70% of jobs posted in warehousing preferred men over women.

Apart from the job ads for warehousing, the highest fraction of job ads with an explicit preference for a male candidate can be found in manufacturing, maintenance, security, system analyst, and hotel management. Male applicants seem to be least preferred in job ads for researchers, writers, media (print and electronic), database administration, and management consulting. In contrast, figure 5 shows that advertised preferences for women are more common in jobs related to clerical, executive management, teachers, health & medicine, and administration. Job ads in computer networking, engineering, software and web development, distribution and logistics, and maintenance and repair show the least preference for female candidates.

[9] Discrimination is defined as "The refusal to hire an individual because of the preferences of coworkers, the employer, clients or the employer, clients or customers…" and "The principle of nondiscrimination requires that individuals be considered on the basis of individual capacities and not on the basis of any characteristics generally attributed to the group." It also renders statistical discrimination illegal: "[t]he refusal to hire a woman because of her sex based on assumptions of the comparative employment characteristics of women in general. For example, the assumption that the turnover rate among women is higher than among men."

[10] I periodically scanned job advertisements on Pakistan's largest job site www.rozee.com, Sunday career sections of widely circulated newspapers such as Dawn and The Nation over a period from August 2018 – March 2019.

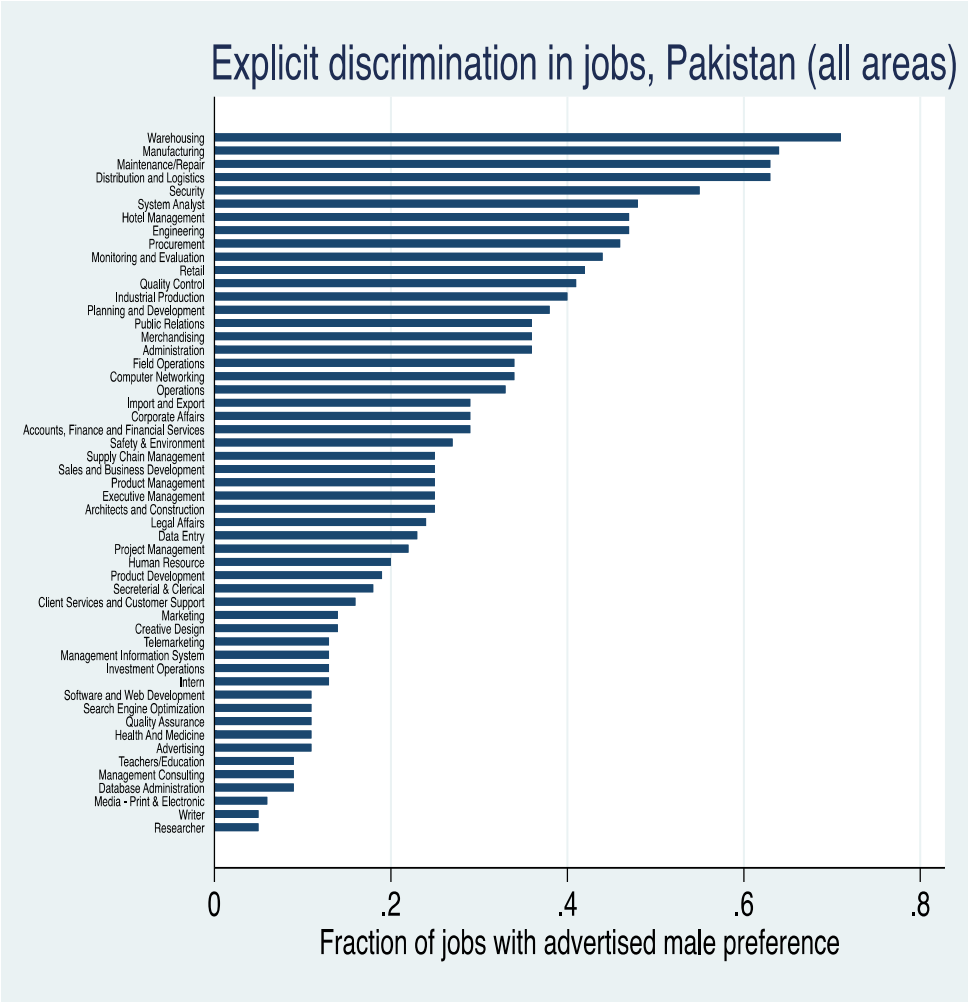

Figure 4. Explicit employment discrimination in job ads in Pakistan: Extent of male preference

Source: Data compiled from www.rozee.com during June-July, 2019

In the relevant literature, evidence of gender discrimination in Pakistan's labor market is primarily based on non-experimental studies—standard wage regression estimates from the labor force and household survey data (see Siddiqui, et al., 2006). Under this method, researchers have used standard Oaxaca-Blinder wage decompositions[11] and quantile regressions to offer evidence of gender wage discrimination in Pakistan. Examples of non-experimental studies on gender discrimination in employment in Pakistan include the studies by Siddiqui et al. (1998) and Sabir and Aftab (2007).

[11] Under this method, to infer gender wage discrimination, separate wage regressions for men and women are estimated. The method decomposes the differentials into two components. One that is explained by differences in characteristics the market associates with productivity (such as education, experience, etc.) and the second that is unaccounted after controlling for all observable characteristics of workers, industry and occupation. The second component of gender disparity in earnings- captured by estimated value of the constant term and coefficients- is interpreted as differential not explained by observable characteristics included in the regression and therefore associated with discrimination.

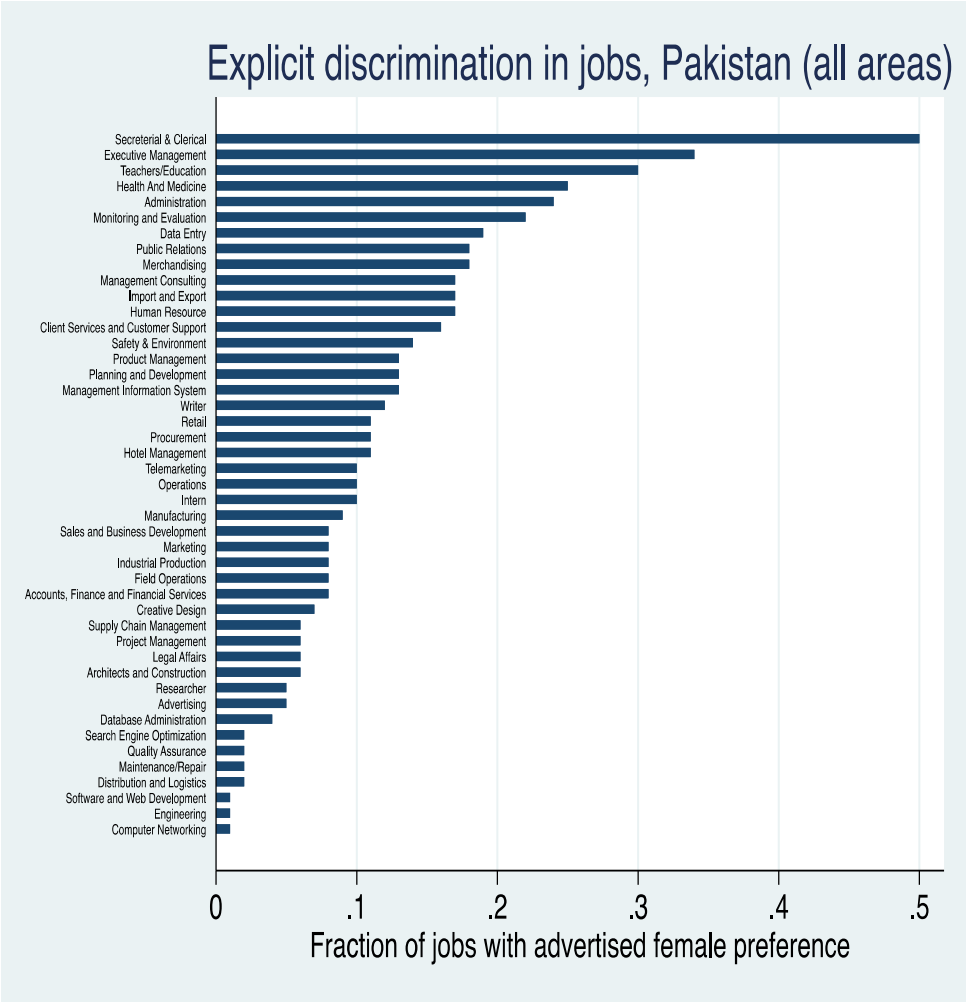

Figure 5. Explicit employment discrimination in job ads in Pakistan: extent of female preference

Source: Data compiled from www.rozee.com during June-July, 2019

Siddiqui et al. have used the Household Income and Expenditure Survey of 1993-94 to decompose male-female earnings differentials in Pakistan. Under their wage decomposition method, they controlled for age, education, experience, number of working days, area, region, type of work, industrial distribution and employment status, and size of the firm. They found that around 55-77 percent of the earnings differential was unaccounted for after controlling for observable characteristics; they interpreted this as evidence of discrimination against women.

Sabir and Aftab (2007), relying on Pakistan Labor Force Survey data, examine gender pay gap for wage employment in Pakistan over two periods: 1996-97 and 2006-06. They control for age, educational level-captured by dummies for each level of schooling from primary till post-graduate- public sector employment, and region (dummy for urban areas), white-collar (defined as professional and managerial jobs), and blue-collar jobs (defined as technical, clerical, crafts and other service-related jobs). They do not, however, include controls for occupational status which they term as their judgment call given the potential endogeneity of the occupational status variable. Apart from the standard Blinder-Oaxaca method, they supplement their model with quantile regression to explore gender wage differential at selected points of the conditional wage distribution. They show that from 1999 to 2006, changes in observable characteristics such as educational level, employment in white or blue-collar jobs, and residence in urban areas accounted for most of the expansion of the gender pay gap at the mean. They also find that expansion of the gender wage gap was sensitive to selected points on the conditional wage distribution. At the 10th and 25th quantile, and the median of the wage distribution, the unexplained portion associated with gender discrimination appears as an important driver of the gender pay gap.

They conclude that expansion in the wage gap associated with observable characteristics in the first half of the period, and increased gender discrimination after 2000 accounted for the overall expansion in the gender pay gap.

5. Conclusion

This essay offers a background of various indicators, and the related literature, associated with women's labor market outcomes in Pakistan. Overall, it highlights demand-and supply-side constraints that restrict Pakistani women's involvement in paid work. On the supply-side, factors such as social and religious ideals of female propriety, customs of purdah, stigmas associated with women's paid work, the burden of unpaid domestic labor (which is higher for women living in joint family systems), and marriage rules (where women in consanguineous marriages might face a larger burden of unpaid work and a greater degree of surveillance than their counterparts in out-marriages) might restrict women's access to economic opportunities outside the home.

On the demand side, employers' discriminatory practices, especially as employers in Pakistan can freely state their preferences for male and female applicants, can discourage women's involvement in paid work. A general tendency, easily discernable on online job sites in Pakistan, is that employers are more likely to demand male applicants in nearly all professions (except for education and health care where employers are more likely to advertise a preference for female applicants) regardless of the fact whether such professions are considered 'feminine' or 'masculine'. For example, in the Pakistani context, jobs in sales, marketing, and advertising seem to be male-dominated due to the higher degree of face-to-face contact with customers and a greater need for mobility. Women's options for pursuing paid work appear few and far between. On the policy front, there is a need to create awareness and debate on factors such as the persistence of cousin marriages in Pakistan as well as a need to address rampant discriminatory hiring practices in the labor market by developing laws that penalize employers engaging in discriminatory hiring practices. Quotas for female employment in public sector firms could also be a good option for increasing women's participation in paid work.

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Awareness levels of university students in career planning and statistical analysis of other effects: The example of -Usak University- according to 2020 data

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Abstract

In today's world, parents plan their children's careers according to their wishes and dreams instead of their abilities. This situation has become an extremely important problem for children. Career planning is the beginning of an important process that will continue throughout life. University education is an important starting point that affects people's choice of profession. Uşak University has a structure that provides education in different fields. Although it was founded in 2006, it is a university with 191 different departments and more than 29 thousand students. As of 2021, when the study was conducted, there are 24,408 graduate students. As with every university in Turkey, the students studying at Uşak University aim to acquire a profession and employment opportunity. Accordingly, career planning for students begins with education.

In the education system in Turkey, there are also schools for gaining a profession before university education. However, since public employment is a highly preferred area in our country, higher education has become a necessity for everyone. Since the number of non-public institutionalized enterprises is limited, almost everyone's only address to find a job is public institutions. It is possible to employ those who receive education on a particular occupation for employment without getting a college education. This is extremely limited.

Another problem is that education planning for employment in our country is only at the level of advice. For this reason, every individual can determine his profession after the university exam. In other words, the career planning of the students starts after they are placed in the university.

Especially in Turkey, it is seen that employment after higher education is mostly in the public sector. Therefore, it is known that students see taking part in public employment as a job guarantee. Accordingly, the factors in career planning will be determined in the study and it will be tried to see how they guide their future plans.

1. Introduction

The concept of a career, which can be defined as the ranking of the activities that a person doe1.s and will do during their life, shows the path that a person has drawn throughout their life (Cascio, 1998). Along the way, a person can develop independently through their own efforts, as well as be forced to develop by a business that they own or employee (Werter and Davis, 1993). In general, since people plan a career for power, status, and money, they work for jobs that will lead to these goals and they would be happy or live unhappy by making a labor gain assessment. A career is one of the indicators that reveal a person's place in society and shows the status of the person. As set out in Maslow's Hierarchy of Needs, as a person satisfies his physiological and emotional needs, he will become a more useful individual to himself and society (Kozak, 2001).

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It is known that the career had a hierarchical structure in the previous periods and progressed in a stable environment so that the career was predictable, safe, and linear. Because of the change and fluidity in today's organizational system, a career is unpredictable, vulnerable, and multifaceted. Although traditional methods have been abandoned, many organizations operate in a relatively stable environment and implement well-designed strategies for management (Baruch, 2006).

It is called Dynamic Career that the career process is controlled not by an organization but by the person himself. In this process, the person observes the changes in the environment and there is a continuous update in the development of the person according to the changes in the environment. In this development process, people have been sophisticated through experiences. (Hall, 1996). A person can see himself as successful based on his inner feelings but the main factors of success are considered to be moving up the career ladders, progressing towards high income, status, and power (Baruch, 2006)

2. Literature[1]

Kucuk (2009) examined the relationship between career management and management information systems. In the study, which aims to reveal the effects of management information systems on factors such as training in career management, position determining, promotion, and career planning, a survey was applied to 150 company employees. In the study, which was stated that management information systems provide speed and efficiency in operational processes in enterprises, it was also stated that the compatibility of management information systems with the working methods of individuals shows that there is a positive relationship with career management.

Ok (2009) examined the effect of career management on organizational commitment. In the study, which stated that factors indicating organizational commitment, such as loving your job, acting by business rules, protect your job, and not wanting to leave your job, affect the quality of products and services, data was collected from 100 companies managers by survey method. In the study, a positive relationship was found between the emotional commitment and the factors that make up career management such as recruitment with correlation analysis, orientation, manager development, promotion, and dismissal.

Aydın (2010) examined the effects of the economic crisis on career planning. In the study where he stated that the economic crises have deeply affected the sectors, especially the service sectors, he studied accommodation establishments operating in the tourism sector. The career planning perspectives of the enterprises were examined with the data obtained through the interviews made with the human resources departments of five-star hotels operating in Izmir. As a result of the study, it was revealed that the employees were negatively affected by reasons such as dismissal and unpaid leave, and they delayed their career planning.

Kurtoglu (2010) examined the effects of career management on the effectiveness of public institutions. In the study, which stated that changes happening in business life and technology along with the services given in the public corporations should be given effectively and efficiently, it was stated that coordination should be supplied between the goals of the individuals and the goals of the institution. The chi-square test was conducted with the data obtained from the survey conducted with 135 people working as civil servants in Çorum province. As a result of the study, it was stated that public institutions could not achieve sufficient success in keeping up with economic and social changes. In addition, it has been stated that the important factors for career plans such as appreciation other than wages, in-service training, making job descriptions, and promotions and practices that will enable individuals to work effectively are in public institutions.

Karaca (2013) examined the effect of a performance management system on career management. In the study, in which the effectiveness of career management in Fırat Development Agency was measured, it was emphasized that failure to meet the expectations of individuals for their careers leads to low motivation. It has been revealed that performance management systems provide data for career management, increase the career planning motivation of the employees, determine the career path of the employees and the organization, and make positive contributions to the relations between the employees.

Çaglikose (2015) examined the problems encountered in career management in higher education institutions and it was stated that the most important factor in a service business is individuals and the success in working life for individuals is measured by career. In the study conducted with the screening model, it was concluded that women participate more than men in career management practices, and as the education level of individuals increases, their willingness to make a career increases.

[1] This study was prepared by making use of our 2018 Uşak University BAP project. The data, title, evaluation, analysis and conclusion part were rearranged.

3. Research Method

This study, it is aimed to measure the effects of family, social environment, and expectations on career planning of students studying at various departments of Uşak University. Students were asked questions using the survey method. The survey could not be conducted face-to-face due to the pandemic. It was conducted online through Google Forms. Primary data was acquired from students who were contacted online with the survey. The first part of the survey contains information about the demographic factors of students. In the second part, there is a career planning scale that reveals the career plans of students. The career planning scale was taken from the study that Aktaş (2004) used by translating it from Schein (1996) into Turkish. The scale includes entrepreneurship, independence, managerial, technical/functional, safety/stabilization, private life, competitiveness, and prestige dimensions. The scale consists of 16 statements. In the third part, there is a scale aiming to measure the family influence in one's career planning. The scale developed by Fouad vd (2010) was translated into Turkish by Akın and Seller (2012) and used. The scale consists of 23 items and includes sub-dimensions such as Information Support, Family Expectations, Financial Support, and Values-Beliefs.

Data obtained by the survey method was analyzed using IBM SPSS 23 program. It was aimed to determine whether the quantitative properties differ between the groups by using the T-test and ANOVA.

4. Demographic findings[2]

The prepared survey was conducted to Uşak University FEAS- Health Sciences - Theology - Communication, and Vocational School students. It was aimed to reveal the demographic characteristics of the students with the first 16 statements of the survey.

Table 1. Distribution of Students by Gender

	Frequency	***%***
MALE	133	37,6
FEMALE	221	62,4
Total	354	100

Accordingly, 354 students were reached from the faculties and vocational schools that were surveyed. The gender distribution was 37.6% male and 62.4% female.

4.1. Student distribution by gender

In the distribution according to faculties, FEAS provided the highest participation with a rate of 48.3% and 171 students. Participation from other faculties and Vocational Schools, respectively, is as follows. Faculty of Health Sciences participated with a rate of 19.8% and 70 students, Faculty of Communication participated with a rate of 16.4% and 58 students, Faculty of Theology participated with a rate of 9.3% and 33 students, and from Vocational Schools with a rate of 6.2% and 22 students.

Table 2. Distribution of Students by Gender in Departments

		FACULTY					
		Feas	Communication	Theology	Health Sciences	Vocational School / College	Total
Gender	MALE	65 - %38	19 - %33	24 - %73	16 - %23	9 - %41	133 - % 38
	FEMALE	106 - %62	39- %67	9- %27	54- %77	13- %59	221- %62
TOTAL		171	58	33	70	22	354

[2] The survey and questions used in this study were used in the BAP project completed in 2019.

In the distribution by gender in departments, although there are 38% and 65 male among the students of FEAS, 62% and 106 people are females. The faculty with the highest participation rate is FEAS. In other faculties, it was observed that women were higher than men except for the faculty of theology.

Table 3. General Participation Rates in Faculties by Gender

	Feas	*Communication*	*Theology*	*Health sciences*	*Vocational school*	*Total*
MALE	18%	5%	7%	5%	3%	38%
FEMALE	30%	11%	3%	15%	4%	62%

It was observed that 18% out of 38% male participants were from the FEAS, 7% from the Faculty of Theology, 5% from the Communication and Faculty of Health Sciences, and 3% from the Vocational Schools. For women, the highest participation rate was the FEAS with 30%, respectively, from faculties of health sciences at 15%, communication at 11%, vocational schools at 4%, and Theology at 3%.

Table 4. Student Distribution by Mother Education Level

MOTHER EDUCATION LEVEL	***Faculty***					
	Feas	Communication	Theology	Health Sciences	Vocational School / College	*TOTAL*
Primary Education	120	42	28	59	12	261
Secondary Education	33	13	3	6	4	59
Associate Degree	6	0	1	1	1	9
Undergraduate	11	3	1	4	4	23
Graduate	1	0	0	0	1	2
Total	171	58	33	70	22	354

According to the data of Table 4, graduation with the highest mother education in all departments is primary education and proportionally, among 354 students, 74% of the mothers were primary school graduates, 16.3% were secondary education (high school) graduates, 2% associate degree, 6% undergraduate, and 0.5% graduate.

Table 5. Student Distribution by Father Education Level

	Faculty					
FATHER EDUCATION LEVEL	Feas	Communication	Theology	Health sciences	Vocational school / college	*Total*
Primary Education	100	37	23	39	8	207
Secondary Education	46	16	5	24	9	100
Associate Degree	7	3	3	0	1	14
Undergraduate	17	1	2	6	3	29
Graduate	1	1	0	1	1	4
Total	171	58	33	70	22	354

Considering the distribution of students by father's education level, it was seen that there is 58.4% primary education, 28.2% secondary education, 3% associate degree, 8% undergraduate and 1.1% graduate education.

4.2 Gender relationship analysis T-Test application with career planning sub-questions

There are 2 scales in the study titled Career Planning and Family Influence. The variables made suitable to the T-test by averaging each scale in the analysis. Accordingly, we first need to examine the questions of career planning based on gender and family influence.

H_0 absence and H_1 alternative hypotheses are as follows;

H_0: "Sex discrimination has no effect on career planning",

H_1:''There are clear differences by gender when planning a career.''

The relationship between two independent variables was examined in the t-test application. One of our arguments here was gender and the other was career planning. To analyze whether gender, which is a categorical variable, caused a difference in career planning, an independent t-test was applied. According to the results of the analysis, it was seen that there were 133 men and 221 women, the average of male (avg = 3.94, sd = 0.59) and female (avg = 3.96, sd = 0.55). It was observed that the average standard errors (se (m) = 0.51 and se (f) = 0.37). It was observed that there was no normal distribution among variances in the Levene's Test for Equality of Variances field in the independent samples test table. The significant value here: 0.818. This value should be below 0.05. For this reason, we use the values in the t-test for equality of means field. Here it is seen that our sig value is 0,000. For this reason, the H_0 hypothesis is accepted and it is seen that gender did not make a difference.

Table 6. Career and Family Scale T-test by Gender

Variables	***Groups***	***N***	***X-Point Avg.***	***sd-standard deviation***	***t-test***		
					t	df	p
Career Planning	Male	133	3,94	0,59	0,21	352	0,83
	Female	221	3,96	0,55			
Family Opinion	Male	133	3,29	0,66	0,24	352	0,58
	Female	221	3,26	0,56			

In this research, firstly, the relationship between career planning and family opinions with gender was examined. According to the results of the independent sample T-Test, it was measured as (AVG = 3.96, SD = 0.55) for female and (AVG = 3.94, SD = 0.55) for male. According to these data, it is seen that there is no significant difference between men and women in career planning questions. With the p-value calculated as 0.83, it was observed that it was a value greater than the expected value of 0.05 and there was no significant difference. Looking at the questions under the heading of family opinions, it is seen that the male have AVG = 3.29, SD = 0.66, and female have AVG = 3.20 SD = 0.56. It is seen that there was no significant difference here, too. According to the results of the t-test, the gender discrimination p-value was calculated as greater than 0.05 and it was found that there was no significant difference.

The results obtained from examining the answers to career planning questions in terms of gender are as follows.

Table 7. Career Planning Scale T-test Analysis by Gender

	Career Questions	*Gender*	*N*	*Mean*	*Std. Deviation*
1	The important thing is to take part in a creative project.	MALE	133	3,74	0,92
		FEMALE	221	3,69	0,795
2	It is important to me to be the boss of my own business.	MALE	133	4,12	1,045
		FEMALE	221	3,89	0,962
3	It's important for me to work in a manager position.	MALE	133	4,06	0,983
		FEMALE	221	3,96	0,943
4	If I'm not going to work in my branch, I prefer to change my job.	MALE	133	3,53	1,091
		FEMALE	221	3,42	1,048
5	It is important to me to work in a position that has a job guarantee.	MALE	133	4,17	0,875
		FEMALE	221	4,23	0,886
6	It is important for me to use my creativity in new projects and programs.	MALE	133	4,09	0,857
		FEMALE	221	4,23	0,833
7	It's important that my job should allow me for socializing.	MALE	133	4,23	0,893
		FEMALE	221	4,28	0,809
8	Competition and success are the priorities of my career.	MALE	133	3,96	0,965
		FEMALE	221	4,00	0,939
9	My job should allow me to take initiative.	MALE	133	3,97	0,87
		FEMALE	221	3,82	0,926
10	I prefer working in a well-known institution to work in another institution.	MALE	133	3,35	1,169
		FEMALE	221	3,41	1,077
11	I prefer to work on specialization-required tasks.	MALE	133	3,81	0,931
		FEMALE	221	3,85	0,89
12	It is important for me to work in an institution that is respected by society.	MALE	133	3,98	1,004
		FEMALE	221	4,17	0,907
13	I prefer to work in an institution that is unlikely to be fired.	MALE	133	3,86	1,127
		FEMALE	221	4,06	1,064
14	I always evaluate the business opportunities that provide a competitive and winning environment.	MALE	133	3,98	1,048
		FEMALE	221	3,99	0,919
15	I prefer jobs where I can use my knowledge and skills to advance in my job.	MALE	133	3,98	1,004
		FEMALE	221	4,17	0,907
16	I care about doing successful tasks by managing people within the organization.	MALE	133	3,86	1,127
		FEMALE	221	4,06	1,064

When each question was evaluated separately, it was seen that the average answers were different among the obtained results. When the questions were evaluated in terms of average scores, it was seen that the questions with the highest and the lowest averages were the same for males and females. It was observed that the question that females and males scored with the highest average was the same. In question 7, “It's important that my job should allow me for socializing. “, women gave an average score of 4.28 and men gave an average score of 4.23.

For this question, it was calculated as t(352)=-0.546; P=0.585 and sd=0.58. Since the significance value was above 0.05, it was seen that gender did not reveal a significant difference for this question.

Table 8 . Results of Family Scale T-test by Gender

	Your Gender		**N**	**X (AVG)**
1	My family shared information with me about how to acquire a profession.	MALE	133	3,27
		FEMALE	221	3,40
2	My family discussed career issues with me beforehand.	MALE	133	3,08
		FEMALE	221	3,25
3	My family told me how I can be successful in choosing a profession.	MALE	133	3,08
		FEMALE	221	3,36
4	My family told me what is important in choosing a profession.	MALE	133	3,41
		FEMALE	221	3,64
5	Seeing my family working gave me confidence in my career.	MALE	133	3,47
		FEMALE	221	3,59
6	My family guided me on which professions would be best for me.	MALE	133	3,32
		FEMALE	221	3,39
7	My family informed me about education/internship.	MALE	133	3,01
		FEMALE	221	3,07
8	My family supported me in asking career-related questions.	MALE	133	3,23
		FEMALE	221	3,51
9	My family expects me to choose a profession with a certain status.	MALE	133	3,80
		FEMALE	221	3,68
10	My family expects me to make career decisions that won't embarrass them.	MALE	133	3,89
		FEMALE	221	3,83
11	My family only supports me financially if I choose a profession that they approve.	MALE	133	2,59
		FEMALE	221	2,20
12	My family expects me to choose a profession that suits their wishes.	MALE	133	2,88
		FEMALE	221	2,61
13	My family expects people from our own culture to choose professions suitable for our culture.	MALE	133	3,02
		FEMALE	221	2,75
14	My family's career expectations for me are based on my gender.	MALE	133	2,53
		FEMALE	221	2,14
15	My family expects me to contribute financially to my career education and development.	MALE	133	3,46
		FEMALE	221	3,14
16	As my family supports me financially, I can focus on my career development.	MALE	133	3,50
		FEMALE	221	3,63
17	It is difficult for my family to financially	MALE	133	3,10

	support my professional decisions.	FEMALE	221	2,89
18	My family will support me financially if I want to get additional education after university/college.	MALE	133	3,50
		FEMALE	221	3,73
19	If I have a difficult situation in my professional life, my family supports me financially.	MALE	133	3,88
		FEMALE	221	3,90
20	My family expects me to consider my religious/spiritual values while making my professional decisions.	MALE	133	3,49
		FEMALE	221	3,32
21	My family expressed that my values and beliefs are important in my professional decisions.	MALE	133	3,59
		FEMALE	221	3,44
22	My family expects my profession to be in line with family values/beliefs.	MALE	133	3,45
		FEMALE	221	3,28
	AVERAGE			3,28

When looking at the answers given to the questions asked under the family influence scale, the results are shown in Table 9 with t-test analysis. A total of 22 questions were asked on the family influence scale. As a result of the analysis of the answers given to the questions with the t-test, it was seen that they scored with the lowest average of 2.20 and the highest 3.90. The p-value was above 0.05 and it was seen that gender difference was not effective. When the t-test results of each answer given to the questions measuring the effects of families on the career planning of their children are examined, it is seen that $p > 0.05$ in 18 questions and $p < 0.05$ in 4 questions. These questions were found to be questions 7, 8, 11, and 14. The t-test results of these questions are as follows;

Table 9. T-test results of questions below the level of 0.05 from the family scale by gender

Variables		**Groups**	**N**	**X-Point Avg.**	**sd**	**t test**		
						t	df	p
7	My family informed me about education/internship.	Male	133	3,01	1,32	0,46	352	0,026
		Female	221	3,07	1,20			
8	My family supported me in asking career-related questions	Male	133	3,23	1,28	-2,06	352	0,042
		Female	221	3,51	1,17			
11	My family only supports me financially if I choose a profession that they approve.	Male	133	2,59	1,34	2,74	352	0,036
		Female	221	2,20	1,25			
14	My family's career expectations for me are based on my gender.	Male	133	2,53	1,30	2,86	352	0,004
		Female	221	2,14	1,24			

In Table 9, 133 male participants scored an average of 3.01, and 221 female participants scored 3.07 in the 7th question $t(352) = 0.46$; It was calculated as $p = 0.026$ and $sd = 1.32$. In this question, which was determined to have a gender effect, it was observed that the question of the family informed about education was scored at the level of indecision.

In the 8th question, it was observed that 133 male participants scored an average of 3.3 and 221 female participants scored 3.51. It was calculated as; $t(352)=-2,06$; $p=0,042$ $sd=1,28$ (f), $sd=1,17$ (m)

In the 11th question, it was seen that 133 male participants scored 2.59 on average and 221 female participants scored 2.20. There was a significant difference in scores between males and females. It was calculated as t (352) = 2.74, p = 0.036, sd (m) = 1.34 sd (f) = 1.25.

In the 14th question, it was observed that 133 male participants scored an average of 2.53 and 221 female participants scored 2.14. There was a significant difference in scores between males and females. It was calculated as t (352) = 2.86, p = 0.04, sd (m) = 1.30 sd (f) = 1.24.

5. Effect of faculty type on career planning: Anova test results

Since the faculty/college varieties were more than two as the education department, which is our categorical variable in the study, one-way variance analysis, that is, one way-ANOVA test, was applied. With this test, the effect of the student's school type on career planning is measured with each other.

The hypothesis determination for this was made as follows.

$H_{0:}$ Faculty types do not have a difference-making effect on career planning.

H_1: Faculty types have a direct or indirect effect on career planning.

It'd be understood that the significance level of the H0 absence hypothesis, i.e. the significant value, (p) is rejected if it is greater than 0.05 and the alternative hypothesis is accepted.

In the study, the average of the career planning questions of the scales to be used in the Anova test was expressed with the (CAREER-AVG) variable. The average of the second scale, which includes the measurement of family influence questions, was calculated with the SPSS program as the (AORT) variable.

As a result of the variance homogeneity test between groups, the significance level was higher than 0.05. This situation shows that the homogeneous distribution is for both scales.

Table 10. One Way ANOVA Test Homogeneity

Test of Homogeneity of Variances				
	Levene Statistic	**df1**	**df2**	**Sig.**
CAREER AVG	,440	4	349	,780
AORT	,834	4	349	,504

As seen in Table 10, the significance level was found to be 0.78 for the Career scale and 0.504 for the Family scale. This situation shows that the distribution is not homogeneous.

Table 11. ANOVA Test Results

		Sum of Squares	***df***	***Mean Square***	***F***	***Sig.***
CAREER AVG	Intergroup	3,241	4	,810	2,578	,037
	With the Group	109,693	349	,314		
	Total	112,934	353			
AORT	Intergroup	6,759	4	1,690	4,847	,001
	With the Group	121,677	349	,349		
	Total	128,436	353			

Looking at the results of the Anova test in Table 11, it is seen that the significance level in the CAREER-AVG scale is 0.037 and in the AORT scale it is 0.001. Since the significant value is less than 0.05 for both scales, it is understood that the choices may vary according to the faculties.

It is seen that the H_0 absence hypothesis is rejected. In other words, our alternative (H_1) hypothesis has been confirmed that the type of faculty or college is important in career planning.

The accuracy of the hypothesis will be tested by considering this measurement separately for each faculty and measuring the effects of the type of faculty. Bonferroni analysis was applied for this.

In both analyzes, it is seen that there are significant differences between faculties in career planning scale. It was seen that the significance level of the career scale in other faculties of FEAS was higher than 0.05.

One Way ANOVA Test Application

It's necessary to make the ANOVA test both to analyze the career planning situation according to the faculties of education and because we have more than two groups. The test was applied after transferring the data to the system via SPSS 25.

Table 12. One Way ANOVA Test Bonferroni Analysis Results

Faculty		***Mean Difference (I-J)***	***Std. Error***	***Sig.***
Feas	Communication	.19541	.08519	.224
	Theology	.19923	.10659	.625
	Health sciences	-.05856	.07955	1.000
	Vocational school / college	.09127	.12698	1.000
Communication	Feas	-.19541	.08519	.224
	Theology	.00382	.12224	1.000
	Health sciences	-.25397	.09954	.112
	Vocational school / college	-.10413	.14038	1.000
Theology	Feas	-.19923	.10659	.625
	Communication	-.00382	.12224	1.000
	Health sciences	-.25779	.11838	.301
	Vocational school / college	-.10795	.15431	1.000
Faculty of health sciences	Feas	.05856	.07955	1.000
	Communication	.25397	.09954	.112
	Theology	.25779	.11838	.301

	Vocational school / college	.14984	.13703	1.000
Vocational school / college	Feas	-.09127	.12698	1.000
	Communication	.10413	.14038	1.000
	Theology	.10795	.15431	1.000
	Health sciences	-.14984	.13703	1.000

According to Table 12, FEAS's students separated from other faculties as the signifance level, such communication faculty with 0,224, faculty of theology with 0,336, and faculty of health sciences with 0,948

The analysis results of the departments according to the family scale are also similar. According to Table 12, when looking at whether there is a significant difference between faculties, it is understood that the p-value (significant) is greater than 0.05, therefore there is no significant difference. When we look at the relationship of FEAS with the faculty of communication, it is seen that the mean difference is 0.1954 and it is 0.1992 in its relation with the faculty of theology. The students of the two faculties are separated from the faculty of health sciences. The relationship in health sciences is also seen to be 0.0585 on average.

6. Analysis of scale questions according to their purpose

the scale questions were classified according to their purposes. This classification is given in Table 13. 16 questions were prepared according to 8 different purposes. The analysis of the questions according to their purposes is as follows.

Table 13. Classification of Scale Questions according to their Purpose

Order of Purpose	***Purposes***	***Order of Questions***
1	Entrepreneurship	1 and 6
2	Independence	2 and 9
3	Managerial	3 and 16
4	Technical / Functional	4 and 11
5	Safety/Stabilization	5 and 13
6	Private Life	7 and 15
7	Competitiveness	1 and 6
8	Prestige	2 and 9

The purposes of the questions used in career scale analysis were given in Table 13. Considering the answers given accordingly, it tried to be seen what kind of differences there are according to the faculties. In Table 14, the answers given to entrepreneurship choices were analyzed. According to this;

Table 14. Analysis of Entrepreneurship Questions

Question	***Entrepreneurial Career Questions***	***Gender***	***N***	***X***	***Sd***
1	The important thing is to take part in a creative project.	MALE	133	3,74	0,92
		FEMALE	221	3,69	0,795
6	It is important for me to use my creativity in new projects and programs.	MALE	133	4,09	0,857
		FEMALE	221	4,23	0,833

According to the answers given to career questions, in entrepreneurship questions (Questions 1 and 6), the average of the answers to the 1st question was 3.74 for men and 3.69 for women. Accordingly, a marking was

made between the answer "Neutral" and "Agree". The average of the answers to the 6th question was determined as 4.09 for men and 4.23 for women. For both, the answer "Agree" is mostly marked.

Table 15- Analysis of Independence Questions

Question	*Independence Career Question*	*Gender*	*N*	*X*	*Sd*
2	It is important to me to be the boss of my own business.	MALE	133	4,12	1,045
		FEMALE	221	3,89	0,962
9	My job should allow me to take initiative.	MALE	133	3,97	0,87
		FEMALE	221	3,82	0,926

In the answers given to the questions aimed at independence, for the second question, men chose the option "Agree" with an average of 4.12, while women were left between the options of "Neutral- Agree" with an average of 3.89. When the fractional part is rounded, it can be considered as the “Agree” option.

Table 16- Analysis of Managerial Questions

Question	*Managerial Career Questions*	*Gender*	*N*	*X*	*sd*
3	It's important for me to work in a manager position.	ERKEK	133	4,06	0,983
		KADIN	221	3,96	0,943
16	I care about doing successful tasks by managing people within the organization.	ERKEK	133	3,86	1,127
		KADIN	221	4,06	1,064

Similar answers were given to the 3rd question from men and to the 16th question from women to managerial questions. In both, "Agree" preference was made with an average of 4.06. For the third question, men with a score of 3.96, "Agree", which is far from the ‘‘Neutral’’ choice, was chosen. In question 16, the men chose the "Agree" preference with 3.86 from the ‘‘Neutral’’ preference. It is seen that men and women care about their managerial positions.

The analysis of the answers for questions 4 and 11, which are technical/functional questions, is as follows according to the t-test results.

Table 17- Analysis of Technical/Functional Questions

Question	*Technical/Functional Career Questions*	*Gender*	*N*	*X*	*sd*
4	If I'm not going to work in my branch, I prefer to change my job.	MALE	133	3,53	1,091
		FEMALE	221	3,42	1,048
11	I prefer to work on specialization-required tasks.	MALE	133	3,81	0,931
		FEMALE	221	3,85	0,89

In the 4th question, 133 male participants made a preference close to the choice of “Agree” from an average of 3.53 ‘‘Neutral’’ choices. On the other hand, females have the choice of ‘‘Neutral’’ with a score of 3.41. According to these answer averages, it can be said that females are either not selective or weak in doing the profession in which they are educated. Males seem to be more selective in this regard than females. In the 11th question, the average preference for males and females was "Agree".

Table 18. Analysis of the Questions for Safety/Stabilization Purpose

Question	*Safety/Stabilization Career Questions*	*Gender*	*N*	*X*	*sd*
5	It is important to me to work in a position that has a job guarantee.	MALE	133	4,17	0,875
		FEMALE	221	4,23	0,886
13	I prefer to work in an institution that is unlikely to be fired.	MALE	133	3,86	1,127
		FEMALE	221	4,06	1,064

It is seen that the answers are given to the 5th question of safety/stabilization questions by males with an average of 4.17, and females with an average of 4.23 seem to be closer to the “Strongly Agree” preference than the “Agree” preference. In the 13th question, while there is a situation close to the preference of ‘‘Neutral’’ to "Agree" with an average of 3.86 for males, it is observed that "Agree" preference is observed for females with an

average of 4.06. Thus, it is seen that the reliability of the job is important for men and women. However, there is a tendency for women to fear losing their jobs slightly more than men.

Table 19. Analysis of Private Life Questions

Question	*Private Life Career Questions*	*Gender*	*N*	*X*	*sd*
7	It's important that my job should allow me for socializing.	MALE	133	4,23	0,893
		FEMALE	221	4,28	0,809
15	I prefer jobs where I can use my knowledge and skills to advance in my job.	MALE	133	3,98	1,004
		FEMALE	221	4,17	0,907

In the 7th question on the private life scale, it is seen that men and women answered “Agree” with similar rates to each other. It is seen that women answered the 15th question with an average of 4.17 and men with an average of 3.98. It is seen that women give the answer “Agree” with a higher average than men.

Table 20. Analysis of Competitiveness Measurement Questions

QUESTION	**COMPETITIVENESS MEASUREMENT CAREER QUESTIONS**	**GENDER**	**N**	**X**	**SD**
8	Competition and success are the priorities of my career.	MALE	133	3,96	0,965
		FAMALE	221	4,00	0,939
14	I always evaluate the business opportunities that provide a competitive and winning environment.	MALE	133	3,98	1,048
		FAMALE	221	3,99	0,919

It was observed that the answers to the 8th and 14th questions asked for competitiveness measurement were “Agree” with the same average. The answers were 3.96 for males and 4.00 for females, and the answers to the 14th question with an average of 3.98 for males and 3.99 for females. It can be said that the view of competition is equally accepted by men and women.

Table 21. Analysis of Prestige Measurement Questions

Question	*Prestige Measurement Career Questions*	*Gender*	*N*	*X*	*sd*
10	I prefer working in a well-known institution to work in another institution.	MALE	133	3,35	1,169
		KADIN	221	3,41	1,077
12	It is important for me to work in an institution that is respected by society.	MALE	133	3,98	1,004
		KADIN	221	4,17	0,907

In the 10th question, asked for prestige measurement, the males answered with an average of 3,35, which is in the same direction as females answered with an average of 3,41. In other words, in the 10th question, it can be said that the reputation of the institution being worked on is ignored. In the question of the institution respected by the society, it is seen that men choose "Agree" with an average of 3.98 and women with an average of 4.17.

7. Conclusion and Evaluation

A two-scale survey was used in this study. Students' career plans and family influence were measured through the survey. Information such as gender discrimination, faculties of education, the population in the family, which were asked for demographic determination, were obtained through survey questions. From this information, firstly, as a categorical variable, the answers given by gender were analyzed. The t-test was used for this analysis According to the data obtained, it was seen that gender did not make a difference in the answers to the questions of the career planning scale. It was observed that the p-value was above 0.05 in all questions.

Looking at the influence of the family, it was seen that there were questions in which men felt the influence of the family less than women. Considering the average of the answers, it was seen that the sub-questions of the career planning scale more generally, in both scales, there was no difference-making effect of gender. In the light of the data obtained by the T-Test, the aim titles of the survey questions, which were prepared based on 8

objectives, were evaluated. In this evaluation, it was seen that men and women alike accepted the objectives and gave answers in this direction.

Considering the analysis of the questions according to the objectives, it was seen that the participants gave very close answers regardless of gender. In some objective questions, it was observed that the 3rd option with the ‘‘Neutral’’ option was in the majority in the averages. In these questions and purposes, the average for the 1st question controlling the entrepreneurial purpose (3,69,374), for the 4th question (3,42-3,52) from the questions controlling the Technical/Functional purpose (3,42-3,52), and for the 10th question controlling the prestige purpose (3. , 35-3.41) averages attracted attention. It was observed that both women and men gave similar answers on these topics. From other goals, the independence, managerial, stabilization, and private life goals received the strongest support. The average choices for each objective were observed as follows.

Table 22. Average Results of Career Questions by Purpose

Order of Purpose	***Purposes***	***Order of Questions***
1	Entrepreneurship	3,98- Agreed
2	Independence	3,95- Agreed
3	Managerial	3,99- Agreed
4	Technical / Functional	3,65- Agreed
5	Safety / Stabilization	4,08- Agreed
6	Private Life	4,16- Agreed
7	Competitiveness	3,98- Agreed
8	Prestige	3,72- Agreed

It was observed that the questions asked for safety and stabilization control and the questions asked for privacy life control were answered above the average of 4. In other questions, it was observed that gender discrimination did not change the answers.

Since the interaction between faculties performed with the ANOVA test is also $p > 0.05$, it is seen that there is no significant difference between the groups. For this reason, it is understood that there is no homogeneous distribution between post hoc variances.

For FEAS, it was observed that $N = 171$, $p > 0.05$ and its interaction was mostly with Communication and Theology.

For COMMUNICATION FACULTY, $N=58$ and $p>0.05$ were observed and the highest interaction was observed with FEAS with 0.19.

For FACULTY OF HEALTH SCIENCES, it was observed that $N=70$, $p>0.05$, and the interaction was mostly with Health Sciences.

In this study, which was carried out with a total of 354 participants, it has been observed that gender difference did not make a difference in career planning, and the family effect is the same in both groups. As mentioned above in terms of education, FEAS, FACULTY OF THEOLOGY, and FACULTY OF COMMUNICATION are faculties in social sciences. It has been observed that these faculties do not interact with health sciences. Besides, it has been observed that health sciences also do not interact with these departments of social sciences. Regardless of the department, it has been observed that families influence on their children's career choices and career planning. Family scale questions with a P-value below 0.05 have also been analyzed.

For the 7th question, it is calculated as; $t(352)=0,46$; $p=0,026$ ve $sd=1,32$

For the 8th question, it is calculated as; $t(352)=-2,06$; $p=0,042$ $sd=1,28$ (w), $sd=1,17$

For the 11th question, it is calculated as; $t(352)=2,74$, $p=0,036$, $sd(m)=1,34$ $sd(w)=1,25$

For the 14th question, it is calculated as; $t(352)=2,86$, $p=0,04$, $sd(m)=1,30$ $sd(w)=1,24$

In the 7, 8, 11 and 14 questions, it has been observed that the majority of the answers stating that the family guides women in education.

In this study, family in career determination, departments, and other factors were examined. The evaluation of the hypothesis has been resulted as follows;

1. Hypothesis,

H_0: "Sex discrimination has no effect on career planning",

H_1:''There are clear differences by gender when planning a career.''

In the examination of this hypothesis, it has been observed that there is no difference according to gender. In the T-Test application, it has been seen that p> 0.05 and the H0 hypothesis is accepted.

2. Hypothesis,

H_0: Faculty types do not have a difference-making effect on career planning.

H_1: Faculty types have a direct or indirect effect on career planning.

This hypothesis has been confirmed. Since the result of the One-Way Anova test application was p <0.05, it has been understood that the choices could change according to the faculties.

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The nexus between foreign direct investment, domestic investment and economic growth: Evidence from Ethiopia

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Abstract

This study is an effort to show the long-run effects of foreign direct investment and domestic investment on economic growth of Ethiopia and tested the hypotheses that whether foreign direct investment crowds-in or crowds-out domestic investment in Ethiopia. A macroeconomic annual basis data covering 1981 up to 2019 is used and an auto regressive distributive lag (ARDL) econometric regression technique is employed. The result from domestic investment equation shows that foreign direct investment crowd-in domestic investment in Ethiopia. The implication is that in order to increase more domestic investment activity in the country, the government and policy makers have to harmonize the countries investment policy by bringing more FDI inflow from the rest of the world. This might be done by securing peace and political stability in the country, reducing the existing problems of access in electricity, transportation and telecommunication services, reasonable devaluation of domestic currency and by decreasing import tariff on intermediate products. Besides, GDP growth rate of the country can increase the domestic investment activity of the country. But, FDI is found to be insignificant in affecting economic growth of the country rather its positive effect is witnessed only on domestic investment of the country. Domestic public investment and private investment are found to be significant in affecting real GDP growth rate of the country. This might induce the government to liberalization of the goods and factor markets for the private sector, public sector and tax reform and diversifying the economy in order to generate more revenue for investment and so as to achieve long run economic growth in the country.

1. Introduction

Many economic growth theories such as Solow (1956), Barro (1990) and Romer (1996) highly acknowledged about the positive effect of investment or capital accumulation on economic growth. To be more specific, the positive contribution of capital formation on economic growth is undeniable. Capital formation or investment has the wide and deep effect on economic growth under two channels. These channels are through aggregate demand and aggregate supply. Investment affects aggregate demand through government expenditure and aggregate supply through productivity and thereby it can increase economic growth (Nguyen and Trinh, 2018).

The relationship between foreign direct investment and domestic investment has been a hot debatable issue in macroeconomics for decades. Literatures such as Ndikumana and Verick (2008), Hooi and Wah (2010) and Lasbrey et,al. (2018), forwarded that an increase of FDI will bring positive impact to the domestic investment

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and there appears complementary effect from FDI to domestic investment. That is, inflow of foreign direct investment can encourage domestic investment through inflow of new technologies market spillover, new managerial skills, competition with domestic firms and reducing the burden of import. Hence, National policies should aim at harnessing complementarities between domestic investment and FDI rather than regarding them as substitutes. Contrary to this, according to literatures such as Wang (2010), Selmi (2016), Yahia et al. (2018); FDI has a negative effect and crowding-out effect on domestic investment and results in displacement effect by competing for resources, local companies forced to leave the market because of the competitive pressure and insufficient institutional support. On the other side, Saglam and Yalta (2011) and Ditimi and Matthew (2015) forwarded that there is no long-run relationship between foreign direct investment with domestic investment. This debate leads to the need for further analysis to prove the complementary and substitution effects between FDI and domestic investment specifically in Ethiopia.

Cognizant this fact, since it is very crucial for formulation of good and secured macroeconomic policy of nations; specially for developing countries; assessing the relationship between these important macroeconomic variables is very vital. Melak (2018) did a study on the contribution of foreign direct investment on economic growth of Ethiopia by using OLS regression method and found positive effect of FDI on Ethiopian economy. But this study used a methodology which is traditional and may lead to misleading result. Furthermore, no one is devoted to figure out the relationship between foreign direct investment with domestic investment in Ethiopia. Hence, this paper will contribute in filling the above research gap and will contribute to the existing literature on the nexus between foreign direct investment, domestic investment and economic growth of Ethiopia by using the latest and suitable ARDL approach of co-integration. The link between foreign and domestic investment constitutes the key point in evaluating the FDI-growth relations and to do fiscal and financial reforms. Remarkably, this consideration will enable us the necessary policy implications that can be utilized to maximize the gains from foreign direct investment at large. Hence, whether foreign direct investment crowds out or complements domestic investment should be very clear through empirical study. After all, it strongly affects government policy decisions in allocating national resources and achieving economic growth.

2. Empirical literature review

Melak (2018) has done an empirical study to examine the contribution of foreign direct investment (FDI) for economic growth of Ethiopia over the period of 1981- 2013 by using OLS method of time series analysis. The co- integration test shows that there is a long run relationship between the foreign direct investment and economic growth in Ethiopia. The regression result also shows that FDI has the expected positive significant effect on Ethiopian GDP. But emphasis should be given on the policy of FDI. This finding suggests that there should be better policy framework to attract and improve the volume of FDI through creating conducive environment for investment according to the context Ethiopian.

Karim and Abu (2016) have done a study on the relationships between foreign direct investment, domestic savings, domestic investment, and economic growth in 16 Sub-Saharan African countries from 1981 to 2011 and the results of VAR estimation and Granger causality tests demonstrate that there is a unidirectional causality from foreign direct investment to economic growth and domestic investment, and a bidirectional causality between economic growth and domestic investment. The results of the variance decomposition analysis reveal that foreign direct investment exerts more effect on economic growth. Based on the results of the impulse response analysis, there is a positive unidirectional causality from foreign direct investment to economic growth and domestic investment.

Jude (2019) examined a study to give an empirical answer for the question that whether foreign direct investment crowd-out or crowd-in domestic investment in transition countries. The researcher empirically investigated the relationship between foreign direct investment and domestic investment in a sample of ten central and eastern European countries over the period 1995–2015 by using Generalized Method of Moments estimation technique and found that foreign direct investment to lead to a creative destruction phenomenon, with a short-term crowding out effect on domestic investment, followed by a long-term crowding-in effect on domestic investment of those countries.

Omri and Kahouli (2013) have done a study to analyze the interrelationship between foreign direct investment, domestic capital formation and economic growth in 13 MENA countries by using a 'growth model' framework and simultaneous-equations models estimated by the Generalized Method of Moments (GMM) during the period 1990–2010. Their empirical results show that there is bi-directional causal relationship between foreign investment and economic growth, between domestic capital and economic growth, and there is uni directional causal relationship from foreign direct investment to domestic capital for the region as a whole. Furthermore, foreign direct investment is contributing to the growth of the domestic investment but growth in the domestic investment does not significantly contribute for the stock of foreign direct investment in MENA region.

Selmi (2016) also has done a study to measure the interactions likely to occur between Foreign Direct Investment and the local investment in the MENA region. The researcher adopted an empirical analysis based on a panel data using a sample of 7 countries and concluded that the most probable assumption for these countries is the crowding out effect of the domestic investment projects following the inflow of foreign direct investment in those countries. The study recommends that a selective policy in foreign direct investment might be beneficial.

Yahia et al. (2018) done a study to examine the impact of foreign direct investment (FDI) inflows on domestic investment of Sudan over the period 1976-2016 based on the Auto Regressive Distributive Lags (ARDL) estimation technique. The empirical result of this study shows a crowd out effect of FDI on Sudan's domestic investment in the long-run. Economic growth, exchange rate, macroeconomic stability and natural resource rent have shown short and long-run significant association with domestic investment, whereas, FDI appears as a long-term determinant. Moreover, the error correction model reveals that system corrects previous period disequilibrium at an annual rate of 35%.

Bouchoucha (2019) done an empirical study on the Impacts of Domestic and Foreign Direct Investments on Economic Growth in Tunisia during the period 1976 to 2017 by using Auto-Regressive Distributive Lags (ARDL) approach and according to the results of the analysis, domestic investment and foreign direct investment have a negative effect on Tunisian economic growth in the long run. However, in the short run, only domestic investment positively affects economic growth. The findings of this study are important for Tunisian economic policy makers to undertake the effective policies that can promote and lead domestic and foreign investments to boost economic growth.

3. Methodology of the study

3.1. Model specification and method of data analysis

A new Autoregressive Distributed Lag (ARDL) model is developed by Pasaran, Shin and Smith (2001) which have more advantages than the Johnson co-integration approach. *First*, the ARDL approach can be applied irrespective of whether the regressors are I(1) and I(0). *Second*, while the Johansen co-integration techniques require large data samples for validity, the ARDL procedure provides statistically significant result in small samples (Pesaran et al., 1998; Narayan, 2005). *Third*, the ARDL procedure provides unbiased and valid estimates of the long run model even when some of the regressors are endogenous (Harris and Sollis 2003 and Pesaran *et al*., 1998). Moreover, the ARDL procedure employs only a single reduced form equation, while the other co-integration procedures estimate the long-run relationships within a context of system equations. Therefore, in order to achieve the targeted objectives of the study, the models will be estimated by using ARDL model of econometric technique.

The simple generalized ARDL (p,q) model can be shown as follows (Green, 2003):

$$Y_{t=} C + \gamma T + \alpha_1 Y_{t-1} + \cdots + \alpha_p Y_{t-p} + \beta_0 X_t + \beta_1 X_{t-1} + \cdots + \beta_q X_{t-q} + \theta D + U_t \ldots. (1)$$

Then one can include a constant, a trend and dummy variables to the above model to obtain the final short run or error correction representation of ARDL (p, q) model. Therefore, the following ARDL approach is specified in order to determine or test the long-run co-integration relationships between variables which first proposed by Pesaran and Shin (1999) and Pesaran, Shin, and Smith (2001). Hence, to figure out whether foreign direct investment crowds in or crowds out domestic investment, the following ARDL equation is the final equation to check for the long-run co-integration relationships between the variables of interest.

Equation One: According to Yahia (2018) and Ibrahim and Hassen (2013); economic growth rate (GDPgr), foreign direct investment (FDI), macroeconomic stability indexed by Inflation (INF) are taken as explanatory variables in affecting domestic investment. Furthermore, according to Mudy and Murshid (2005) cited by Selmi (2016), vector of other capital inflows other than FDI and the real interest rate (R) are modeled in explaining domestic capital formation.

DI= f (GDPgr, FDI, INF, R, OFI) ……..……. (2)

Where, DI = Domestic investment as a share of GDP, FDI = Foreign direct investment as a share of GDP, GDPgr = Economic growth rate at time t, INF = Macroeconomic stability indexed by inflation, R = real interest rate, OFI = other capital inflows proxied by the summation of external borrowing, foreign aid and remittance.

By taking the logarithmic form of each variable for statistical reason, the ARDL form the above equation which is going to be estimate can be expressed as:

$$\Delta lnDI_t = \beta_0 + \theta_1 GDPgr_{t-1} + \theta_2 lnFDI_{t-1} + \theta_3 INF_{t-1} + \theta_4 R_{t-1} + \theta_5 lnOFI_{t-1} + \sum_{j=1}^{n} \beta_{1j} \Delta GDPgr_{t-j} + \sum_{j=1}^{n} \beta_{2j} \Delta lnFDI_{t-j} + \sum_{j=1}^{n} \beta_{3j} \Delta INF_{t-j} + \sum_{j=1}^{n} \beta_{4j} \Delta R_{t-j} + \sum_{j=1}^{n} \beta_{5j} \Delta lnOFI_{t-j} + \beta_7 T + U_t$$

……. (3)

Where: DI= domestic investment as share of GDP at time t, GDPgr= Economic growth rate of the country at time t, INF= Inflation calculated by consumer price index at time t, R= real interest rate at time t, OFI= other foreign inflows which is a summation of official foreign aid, external borrowing and personal remittance as a share of GDP at time t, T= time trend and Ui= the usual error term.

Equation two: The theoretical foundation of this model is based on the augmented Solow model and endogenous growth model for economic growth equation. According to the Solow (1956), Romer (1996) and endogenous theories economic growth can be expressed as:

$$Y = f(K, HK, LF, A) \quad \text{…… (4)}$$

Where Y= is a proxy for economic growth, K= Capital stock, HK= Human Capital, $LF =$Labor force and A= technology.

Foreign direct investment brings technology and creates employment. It helps to adopt new methods of production and enhances productivity by bringing competition in the economy. (Aurangzeb and Haq, 2012). Moreover, Khan and Reinhart (1990) stated that investment in an economy should be composed of public sector, private sector and the foreign sector. Hence, foreign direct investment should be included as one independent variable in explaining economic growth of countries.

Therefore, the final equation of the economic growth of Ethiopia can be expressed as:

$$Y = f(DPUB, DPRI, FDI, HK, LF) \quad \text{…… (5)}$$

By taking the logarithmic form of each variable for statistical reason, the ARDL form the above equation which is going to be estimate can be expressed as:

$$\Delta GDPgr = \beta_0 + \theta_1 lnDPUB_{t-1} + \theta_2 lnDPRI_{t-1} + \theta_3 lnFDI_{t-1} + \theta_4 lnLF_{t-1} + \theta_5 lnHK_{t-1} + \sum_{j=1}^{n} \beta_{1j} \Delta lnDPUB_{t-j} + \sum_{j=1}^{n} \beta_{2j} \Delta lnDPRI_{t-j} + \sum_{j=1}^{n} \beta_{3j} \Delta lnFDI_{t-j} + \sum_{j=1}^{n} \beta_{4j} \Delta lnLF_{t-j} + \sum_{j=1}^{n} \beta_{5j} \Delta lnHK_{t-j} + U_t$$

…….. (6)

Where, GDPgr= Economic growth of the country at time t, lnDPUB= Natual logarithm of domestic public investment as a share of GDP at time t, lnDPRI= Natural logarithm of domestic private investment as a share of GDP at time t, lnFDI= Natural logarithm of foreign direct investment as a share of GDP at time t, lnLF= Natural logarithm of labor force a as a share of total population at time t, lnHK= Natural logarithm of secondary school, vocational and tertiary school enrollment as a share of total population at time t and Ui= The usual error term.

n, denotes lag length of the auto regressive process,

Δ, Denotes the first difference operator,

$\theta_1, \theta_2, \theta_3, \theta_4, \theta_5$, are coefficients that measure long run relationships,

$\beta_{1j}, \beta_{2j}, \beta_{3j}, \beta_{4j}, \beta_{5j}$, are coefficients that measure short run relationships.

Now to test whether there is a long run equilibrium relationship between the variables, the bounds test approach for co-integration is carried out as proposed by Pesaran and Shin (1998) and Pesaran, Shin, and Smith (2001). The hypotheses of the test are shown as follows:

H_0: $\theta_1 = \theta_2 = \theta_3 = \theta_4 = \theta_5 = 0$, means there is no long run relationship among the variables.

H_1: $\theta_1 \neq \theta_2 \neq \theta_3 \neq \theta_4 \neq \theta_5 \neq 0$, means there is a long run relationship among the variables.

To test the above hypothesis the non-standard F-statistics can be used for which the critical values of the F-statistics are available in Pesaran, Shin, and Smith (2001).

3.2. Diagnostic tests

Another critical test in ARDL estimation technique is diagnostic tests to which is important to get valid, unbiased and leading findings. These tests are functional form test, normality test, serial correlation test and heteroscedasticity test.

4. Results and Discussion

4.1 Domestic investment equation of Ethiopia

Before presenting the estimation results for both equations, pre-estimation tests are employed and finally the results are discussed.

4.1.1 Unit Root Testing

Testing for existence of unit root problem is of major interest in the study of time series models and co-integration. In the ARDL model, the presence of I(2) variables are no more valid because they are based on the assumption that the variables are I(0) or I(1). Therefore, the implementation of unit root test in the ARDL procedure is necessary in order to ensure that none of the variables are integrated of order two or beyond. As it is presented on the following table, the standard Augmented Dicky-Fuller (ADF) and Philips-Perron unit root (PP) tests are conducted to check the order of integration of the variables.

Table 1. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test results

Variables	ADF test	PP test
lnDI	I(1)	I(0)
GDPgr	I(0)	I(0)
lnFDI	I(1)	I(1)
R	I(0)	I(0)
INF	I(0)	I(0)
lnOFI	I(1)	I(1)

Source: Computed by the researcher using E-views 9

Note: The level of significance used are 1% and 5% level of significance.

The results from the ADF and PP unit root test show that some variables are stationary at their level and some of them are stationary at their first difference. This implies that the variables are a mixture of I(0) and I(1) and there is no variable that is stationary in second difference and such result is one justification for using the ARDL approach (bounds test approach of co-integration) developed by Pesaran, Shin, and Smith (2001).

4.1.2 Bound testing approach of co-integration for domestic investment equation

To apply the bounds test approach of co-integration, first estimating the ARDL model specified is needed. Then the value of F-statistics is found through the Wald-test by restricting the long run equation coefficients to be equal to zero. Then, as it is presented below the computed F-statistic value is compared with the lower bound and upper bound critical values tabulated in tables of Pesaran, Shin, and Smith (2001).

Table 2. ARDL bound testing result for equation-1

ARDL Bounds Test		
Null Hypothesis: No long-run relationships exist		
Test Statistic	**Value**	**K**
F-statistic	4.315417	5
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10 percent	2.26	3.35
5 percent	2.62	3.79
2.5 percent	2.96	4.18
1 percent	3.41	4.68

Source: Eviews 9 ARDL (0, 1, 2, 0, 0, 2) result.

As Table 2 indicates, the calculated F-statistics is 4.32 and this value is higher than the upper bound critical values at 5% level of significance. The result indicates that there is evidence of long-run relationship or co-integration between the dependent variable (DI) and independent variables. This represents a co-integrated domestic investment equation in Ethiopia. Thus, the null hypothesis of no co-integration between domestic investment and its fundamentals is rejected.

4.1.3 Diagnostic testing for domestic investment equation of Ethiopia

To check the reliability and verifiability of the estimated models, the following diagnostic tests are undertaken.

Table 3: Diagnostic tests for the selected full ARDL model

Test statistics	LM version	F version
Serial Correlation	CHSQ (1) = .030745[.861] **	F (1, 24) = .020514[.887] **
Functional Form	CHSQ (1) = 1.2973[.255] **	F (1, 24) = .89718[.353] **
Normality	CHSQ (2) = 1.5027[.472] **	Not applicable
Heteroscedasticity	CHSQ (1) = 1.1242[.289] **	F (1, 34) = 1.0960[.303] **

A: Lagrange multiplier test of residual serial correlation

B: Ramsey's RESET test using the square of the fitted values

C: Based on a test of skewness and kurtosis of residuals

D: Based on the regression of squared residuals on squared fitted values

** indicates the significance each test at 5% level of significance.

Source: Microfit 4.1 ARDL (0, 1, 2, 0, 0, 2) result.

The results indicate that both the LM version and the F version of the statistics are unable to reject the null hypothesis specified for each test. Hence, there is no serial correlation problem and the Ramsey functional form test confirms that the model is specified well. Likewise, the errors are normally distributed and the model doesn't suffer from heteroskedasticity problem.

4.1.4 Long run ARDL estimates of domestic investment equation of Ethiopia

Once we confirmed the long run relationship for the domestic investment equation in Ethiopia; the next step is estimating the long-run coefficients of domestic investment on its regressors. The results are reported in Table 4 below:

Table 4. The long run coefficients for equation-1

Long Run Coefficients				
Dependent Variable: LnDI				
Variables	Coefficients	Std. Errors	t-Statistics	Prob.
GDPgr	0.036115	0.0087927	4.1074	[0.000***]
lnFDI	0.059446	0.019883	2.9898	[0.006***]
R	-0.0089044	0.0076138	-1.1695	[0.253]
INF	-0.0086571	0.0061315	-1.4119	[0.170]
lnOFI	-0.10281	0.083680	-1.2286	[0.231]
C	3.5206	0.37730	9.3311	[0.000***]

*** and ** indicate the significance level at 1% and 5% respectively.

Source: Microfit 4.1 ARDL (0, 1, 2, 0, 0, 2) result.

The long-run estimation result presented on table-4 confirms that real GDP growth rate is found to be strongly significant in increasing domestic investment of Ethiopia. The coefficient implies that, holding other things remain constant a 1 % increase on real GDP growth rate of Ethiopia leads a 0.036 % increase on domestic investment of the country. This is because of an increase on production is likely to increase demand for capital and thus lead to greater investment activity in the economy. on other words, an increase in production will increase aggregate demand and consumption. This change in aggregate demand and consumption induces the government and firms to increase their investment in the economy. The result is consistent with the findings of Omri and Kahouli (2013) and Karim and Abu (2016).

On the other hand, there is no evidence to support the theory of a long-run crowding-out effect of foreign direct investment on domestic investment in Ethiopia. Contrary to this, there is crowd-in or complementarity between foreign direct investment and domestic investment in Ethiopia. The result reveals that, FDI strongly significant in increasing domestic investment of Ethiopia and at citrus paribus, a 1% increase on FDI leads to a 0.06 % increase on domestic investment of the country. This might be because of an inflow of foreign direct investment can encourage domestic investment through inflow of new technologies, market spillover, new managerial skills, competition with domestic firms and reducing the burden of import. Hence, it suggests FDI attracting led policy so as to boost domestic investment and economic growth of the country. This result is consistent with Karim and Abu (2016) and Jude (2019). But it is inconsistent with the finding of Selmi (2016) and Yahia et al. (2018)

Macroeconomic stability of the country indexed by Inflation rate, real interest rate at time and other foreign inflows which is a summation of official foreign aid, external borrowing and personal remittance are found to be insignificant in affecting the domestic investment activity of the country. This may be a bit surprising and will induce future researchers to be more interested on this topic.

4.2. Economic growth equation of Ethiopia

Like that of domestic investment equation, the necessary pre-estimation tests are employed before presenting the estimated output.

4.2.1 Unit root testing

For the economic growth equation of Ethiopia also, the stationarity of each variable is checked and the result is presented on the table below.

Table 5. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test results

Variables	ADF test	PP test
GDPgr	I(0)	I(0)
lnDPUB	I(1)	I(1)
lnDPRI	I(1)	I(1)
lnFDI	I(1)	I(1)
lnLF	I(1)	I(1)
lnHK	I(1)	I(1)

Source: Computed by the researcher using E-views 9

Note: The level of significance used are 1% and 5% level of significance.

The results from the ADF and PP unit root test show that one variable is stationary at it's level and the remaining variables are stationary at their first difference and such result is also justification for using the ARDL approach of co-integration so as to get valid and unbiased results.

4.3 Bound testing approach of co-integration for economic growth equation of Ethiopia

The bounds test approach of co-integration presented the computed F-statistic value with the lower bound and upper bound critical values and the result indicates that there is long run relationship between the GDP growth rate of Ethiopian and the dependent variables.

Table 6. ARDL bound testing result for equation-2

ARDL Bounds Test		
Null Hypothesis: No long-run relationships exist		
Test Statistic	**Value**	**K**
F-statistic	8.064073	5
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10 percent	2.26	3.35
5 percent	2.62	3.79
2.5 percent	2.96	4.18
1 percent	3.41	4.68

Source: Eviews 9 ARDL (2, 2, 2, 1, 1, 1) result.

As Table 6 indicates, the calculated F-statistics is 8.02 and this value is higher than the upper bound critical values at 1% level of significance. The result indicates that there is strong evidence of long-run relationship or co-integration between Economic growth and independent variables. This represents a co-integrated economic growth (GDPgr) equation in Ethiopia.

4.4 Diagnostic testing for economic growth equation of Ethiopia

For the economic growth equation of Ethiopia, the following basic diagnostic tests are presented on table below.

Table 7. Diagnostic tests for the selected full ARDL model of economic growth

Test statistics	LM version	F version
Serial Correlation	CHSQ (1) = .79548[.372] **	F (1, 20) = .45192[.509] **
Functional Form	CHSQ (1) = .092922[.760] **	F (1, 20) = .051757[.822] **
Normality	CHSQ (2) = 3.2190[.200] **	Not applicable
Heteroscedasticity	CHSQ (1) = 3.3558[.067] **	F (1, 34) = 3.4952[.070] **

A: Lagrange multiplier test of residual serial correlation

B: Ramsey's RESET test using the square of the fitted values

C: Based on a test of skewness and kurtosis of residuals

D: Based on the regression of squared residuals on squared fitted values

** indicates the significance each test at 5% level of significance.

Source: Microfit 4.1 ARDL (2, 2, 2, 1, 1, 1,) result.

The result presented on table 7 shows that both the LM version and the F version of the statistics are unable to reject the null hypothesis specified for each test. Hence, there is no serial correlation problem and the Ramsey functional form test confirms that the model is specified well. Likewise, the errors are normally distributed and the model doesn't suffer from heteroskedasticity problem.

4.5 Results for long run ARDL estimates of economic growth equation in Ethiopia

After the basic pre-estimation tests undertaken above, the long-run coefficients of economic growth equation of Ethiopia on its regressors result is reported in table 8 below:

Table 8. The long run coefficients for equation-2

Long Run Coefficients				
Dependent Variable: GDPgr				
Variables	Coefficients	Std. Errors	t-Statistics	Prob.
lnDPUB	9.0648	3.9522	2.2936	[0.032**]
lnDPRI	8.5132	3.7722	2.2568	[0.035**]
lnFDI	-1.4172	0.77628	-1.8256	[0.082]
lnLF	-41.7228	22.5389	-1.8511	[0.078]
lnHK	3.2067	2.4551	1.3062	[0.206]
C	117.0256	78.6855	1.4873	[0.152]

*** and ** indicate the significance level at 1% and 5% respectively.

Source: Microfit 4.1 ARDL (2, 2, 2, 1, 1, 1) result.

The long-run estimation result presented on table-8 shows a more detail analysis on the relationship between capital formation and economic growth of Ethiopia which might be important in harmonization of investment policy of the country. The result confirms that domestic public investment and private investment are found to be significant in affecting real GDP growth rate of the country. As it is acknowledged by many economic growth models, this is due to investment can increase productivity and aggregate demand in the economy which in turn can increase GDP growth rate of the country. But, foreign capital formation (FDI) is insignificant in affecting real GDP growth rate of the country which implies that foreign sector investment has no direct effect on economic growth of the country. This may be due to low level of FDI inflow in the last three decades in the country. The result is inconsistent with the existing findings of studies done in Ethiopia such as Gizaw (2015) and Melak (2018). Moreover, labor force and human capital proxied by secondary school, vocational and tertiary school enrollment are found to be insignificant in affecting real GDP growth rate of the country.

Domestic public investment contributed for real GDP growth rate of the country because of most likely public capital formation in transportation such as roads and railways, education, agriculture, health, housing and industry can expand the overall resource availability and perhaps more importantly it can increase output as it is forwarded by popular growth models. The result is consistent with the existing literatures such as Milbourne, Otto and Voss (2003), Aurangzeb and Haq (2012) but it is which is inconsistent with Phetsavong and Ichihashi (2012).

So far, our results tell as an increase in private capital formation can increase real GDP growth rate of the country. This is because of private sector investment can allocate resources efficiently and can be an engine for employment in the economy. Chhibber et al. (1992) also stated that it can provide infrastructure and social services to the economy and thee by it can contribute essentially for the production capacity and long-term economic growth of the country. The implication for this result is that the country requires stable macroeconomic policies with liberalization of the goods and factor markets for the private sector. The finding of this study is consistent with the existing litratures such as Phetsavong and Ichihashi (2012), Abdaljawwad and Sarmidi (2018), Aurangzeb and Haq (2012). Hence, policies be designed to encourage private investment. But it should not be at the expense of public investment rather it should be by allocating the existing national resource for both private and the public sector.

5. Conclusion and Implications

The long run estimate of domestic investment equation shows that crowd-in or complementarity between foreign direct investment and domestic investment in Ethiopia. That is, foreign direct investment is strongly significant in encouraging domestic investment activity of the country through inflow of new technologies, market spillover, new managerial skills, competition with domestic firms and reducing the burden of import. The implication is that the government and policy makers have to harmonize the countries investment policy focus on facilitating FDI attracting tools and bringing more capital inflow from the rest of the world. This might be done by securing peace and political stability in the country, the government should reduce the existing problems of access in electricity, transportation and telecommunication services, reasonable devaluation of domestic currency and by decreasing import tariff on intermediate products. Then, the country can achieve a win-win investment policy.

The estimation result from economic growth equation confirms that foreign capital formation (FDI) is insignificant in affecting real GDP growth rate of the country. But domestic public investment and private investment are found to be significant in affecting real GDP growth rate of the country. This is because investment provides employment opportunities, infrastructure and social services to the economy and can increase the output level. Hence, the government have to increase the public investment activity by public sector and tax reform and diversifying the economy so as to generate more revenue for the public investment and to achieve long run economic growth in the country. The government and policy makers have to also give attention to increase private sector investment by liberalization of the market and subsidizing the private sector.

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