IMPACT OF LABOUR MARKET VOLATILITY ON JOB FINDING AND SEPARATION RATES - AN EVIDENCE FROM DEVELOPING COUNTRY

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ABSTRACT

Uncertainty in significant macroeconomic variables enhances unemployment. For the past five years in Pakistan, the stagnant growth of the labour market is very well documented. Volatility in inflation, interest rates, GDP and other macroeconomic variables are not showing any optimistic signs, specifically from the late '80s till 2008. Employing Pakistan's labour force data from 2005-06 till 2017-18, we endeavour to gauge the impact of labour market volatility on unemployment in Pakistan by estimating the job finding and separation rates. Both JSR and JFR are computed by employing an appropriate non-parametric methodology. So far, there is no literature available in Pakistan that has examined the impact of labour market factors on employment. Hence, the motivation of the study is to investigate and evaluate the long-term implications of labour market factors and their consequences on the supply and demand of labour. Results of the study show that there is a significant and positive realation of education level on both JFR and JSR. A higher job separation rate in a country will lead to a higher unemployment rate. This inference suggests that the job separation rate must be reduced or controlled to reduce the unemployment rate.

Keywords: *Labour market Volatility, Job Finding Rate, Job Separation Rate JEL Classification: J08, J64, M54*

1. INTRODUCTION

Providing job opportunities for the citizen of any state is one of the government's key responsibilities that generates output for the country in terms of increase in GDP, lower inflation, and better labour market conditions. For the past five years in Pakistan, it has been well documented that the growth in the labour market has been stagnant. Volatility in the labour market, inflation, interest rates, low GDP and other macroeconomic variables are not showing any optimistic signs.

It has been evident from the data and from the unemployment situation of the country that people who are joining the labour market as unskilled labour, or those who have completed their education and want to work are almost clueless from where to start working, as the continuous growth in the population of the country is already disquieting and the other factor which is frightening, is that the significant chunk of the population of Pakistan consists of youth, it is evident that the authorities have to emphasize on creating the new prospect for its upcoming generation.

Considering the rapidly growing population of Pakistan, it is a prerequisite for better economic growth to create 0.9 million additional jobs every year on average. It is expected that the plethora of people attaining working age will probably increase from existing four million to around five million by 2035. A report published by United Nations Development Programme's (UNDP) National Human Development Report (NHDR) quoted a dire need for growth in employment creation to fulfil the rising demand of young people entering the labour market every year. The report further indicated that about 3.5 million working-age individuals are currently unemployed. Moreover, an army of further 1.4 million individuals will join this unemployed labour force every year for the coming five years. With all these statistics, Pakistan needs to create 4.5 million jobs (0.9 million annually) to fill this gap[2]

While discussing the problem of finding a job for an individual, it cannot be ignored that the problem of job finding is rising with every minute passing by. People with working-age either are finding a job or have recently separated from their job. The rising number of job separations is a question for policy-makers. Literature has presented many factors that has highlighted the problem of job finding and job separation, such as studies like (Krueger, et al.2011) (Hall, RE, & Schulhofer-Wohl, S 2018) (Jarosch, G, & Pilossoph, L 2019) (Denzer et al. 2020) (Hobijn, B., & Şahin, A. 2009) (Polsky, D. 1999). The problem of job market volatility and its connection to the monetary policy covering the issue of unemployment with Keynesian perspective was presented (Blanchard, O., & Galí, J. 2010). These studies demonstrated different aspects of job finding and job separation rate, including the social, societal and mental problems related to finding or leaving paid work while still in need of it. We have seen from the experience of our neighbouring country China that with planning, the growing population can be utilized to become the strength and not the weakness for the long-term economic growth of the country.

In Pakistan, every year the new arrivals in the labour market are rapidly increasing, it was stated in the economic survey of Pakistan that about 65.5 million of total labour force was recorded in Labour Force Survey 2017-18. According to it, the unemployment rate is 5.8%; however, the highest unemployment rate (11.56%) persists within the age group 20-24, indicating the fact of youth unemployment hence they are in a state of job finding[3]. Although the government has started many programs for creating new opportunities, that Ehsas program is on top of the list as this program is not only providing loans to youth for starting small businesses but also facilitating the students to get them fully-funded scholarships as well, but the question is, are these measures sufficient for Pakistan growing population?

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[2] *https://tribune.com.pk/story/1716529/pakistan-needs-generate-1-3m-jobs-every-year-undp-report*

[3] *https://www.finance.gov.pk/survey/chapter_20/12_Population_Labour_Force_and_Employment.pdf*

The job finding and job separation rate is the most elusive act in Pakistan as informal employment is more significant than formal employment. The separation rate is believed to be negatively correlated with future changes in job finding rate and hence with future employment fluctuations. (Fujita, S., & Ramey, G. 2009). Therefore, it is imperative to assess Pakistan's job finding and separation situation and the key factors that trigger it.

So far, there is no literature available in the context of Pakistan that has examined the labour market volatility and the problem of job finding and job separation rates; the studies related to labour economics has not considered the long-term fluctuation in the labour market and opportunity cost associated to it. The effects of labour market volatility damage both the supply and demand side of the labour market. For that reason, the motivation of the study is to examine and evaluate the impact of labour market factors and its consequences on the supply and demand of labour. The study examines the job finding rate, separation rate, and labour market factors in Pakistan by assessing the Labour force survey of various years.

The rest of the study is subdivided in the following manner. The next section presents a literature review of some of the already performed valuable studies. Section 3 of the study describes the data sources, details of variable construction and their definitions. The same section describes the methodology used in the research and discusses the study's econometric models. Fouth section describe the data and relationships between variables. Next section reveals the results of the study along with the detailed discussion on empirical findings and in final section, the study will conclude its findings with viable policy options.

2. Literature Review:

The literature review segment is bifurcated into two parts. The first part presents the literature related to the labour market volatility, and the second part highlights the research related to job finding and separation rate. The purpose of this section is to highlight both perspectives as this study has integrated the two issues in one study.

Labour market volatility

Scarce economic literature exists on the issue of labour market volatility. However, some of the valuable studies are reviewed and are summarized below.

Iqbal, Z., & Zahid, G. M. (1998) stated about the descending trend of the economic growth in Pakistan and highlighted the issues as a major concern for economists and highlighted the importance of primary education as it helps to enhance the chances of economic growth while promoting primary education the study also shed light on increasing the physical capital to contribute in the economy. Further, the study proves empirically that the openness of Pakistan’s economy also helps the economic boost. On the other hand, external debt is linked negatively with growth, showing that depending on domestic resources will surely be the best alternative for financial growth.

Cappellari, L, & Jenkins, SP (2014) highlighted the issue of labour market volatility of Britain and earnings for the period of 1992-2008 for both men and women and compared it globally, although the study shows the decline in earning but the changes

were not proving statistically significant. The study uses the variance decomposition to show the fall of the labour market volatility for both genders, but chances were a little higher for men by including the individuals with zero earning and statistically significant downfall.

Ayllón, S, & Ramos, X (2019) offer the latest trends affecting the youth earnings and labour market volatility by including the within and out of employment across Europe during the Great Recession. The data of EU-SLIC for 2004-13 was taken, which shows significant disparities in volatility levels and its trends all across European countries. The study uses variance decomposition, highlighting greater worker turnover exposure for southern Europe.

Krogh, TS (2016) evaluated the absolute wage rigidity and presented the proof that it is not sufficient to resolve it in an open economy. The study states that standard search models of the labour market feature a volatility puzzle that revives only in an open economy because trade movement between the consumer and producer moves little, which impacts fewer productivity shocks. The study then shows that with the help of quantitative exercise, this mechanism's effect can be significant in size.

Serres, A De, & Murtin, F (2013) inspect the previous labour market reforms that are willing to reduce the unemployment rate have consequently increased the long-run volatility by utilizing the non-linear panel data models employed on 24 OECD countries from 1985 to 2007. The study also applies Monte-Carlo techniques and found no evidence of such policy trade-off; on the contrary, the study found that reduced unemployment benefit duration, more competition-including product market regulation and looser employment safety legislation are linked with weedier persistence of unemployment over the period. The study further elaborates the findings that even after the reforms, which helps short-term sensitivity of unemployment to business cycles, the weaker persistence effect dominates the higher cyclical volatility, implying a net reduction in long-term volatility.

Uren, L (2008) gives the reference to the 1980's era and quote that, "in that time, there was a cross-sectional wage inequality while at the same time a decrease in the time series volatility of aggregate output was witnessed. While according to the author, they claim, the increased efficiency of the labour market can help explain both features of the data. The study also stated that aggregate volatility of output declines as labour market efficiency increases as reduced frictions protect the economy from shudders that affect employment. The study then gives the reference of 1985 time that in a standardized model, the improvement in labour market efficiency explains around 20% of the decline in output volatility and approx—40% on the increase in wage inequality.

Job finding and separation rate literature

In the literature, job finding rate and job separation rate are considered two important indicators for determining the unemployment situation in any country. Recently, few studies have been performed on assessing these two critical indicators.

For instance, Hairault, et al. (2015) explain the job finding and separation rate of business cycle dynamics by employing the CPS gross flow data and enumerating their

contribution to overall unemployment variability. The study concludes the cyclical changes in the separation rate are negatively correlated with the changes in productivity. On the other hand, the job finding rate is positively correlated with tends to lag productivity. It was concluded that the co-occurrence of fluctuation in the separation rate explain between 40% to 50% fluctuations in unemployment, depending how the data is detrended.

Svarer, M (2007) worked on the impact of sanctions of unemployment insurance benefits on the exit rate from unemployment for a sample of Danish unemployed and found that even the rate to exit increases for both genders (male and female) up to 50% even if applied miner moderate sanctions. It was also highlighted that the more brutal sanctions have a more considerable impact, but it wears out after 3 months. It was further elaborated that some specific groups of unemployed are more reactive to the sanctions as compared to others. Lastly, the study found men are more reactive and leave the job market more swiftly as they face higher sanction risk.

Boone, et.al (2012) used the data to test the hypothesis that by limiting the duration of unemployment benefits, a hike in the job finding rate occurs shortly before unemployment benefits expire. This was explained a theoretical model where it was argued that the end of benefit spikes in job finding rates and are correlated to the optimizing behaviour of unemployed workers who wisely assume that employers will accept delays in starting a new job, mainly if the job is not is permanent. Due to this, some workers do not immediately give the joining instead they wait to the expiry of their benefit. The study concludes that undeployed exploit unemployment insurance.

3. Data Description and Techanical Model

The data employed in this study is taken from the labour force survey for the period starting from 2006 till 2018 to evaluate the volatility of the labour market for both job finding and job separation rate over the years. For that purpose, other factors that can influence job finding rate are also included. Given the data constraints at the micro-level (individuals), we constructed some critical labour market indicators, for instance, migration status of labour force, education level, informal sector, training and employment status. The definition of each variable is given in table 1.

S. No.	Variables	Definition
1.	JFR	"1" if a person was absent from job for more than one month and recently get employed. "0" otherwise.
2.	JSR	"1" if a person is currently unemployed and is seeking work from last 12 months.
3.	Migration	"1" if the worker is living in the same district since birth or "0" otherwise.
4.	Education Level	Years of education of labour force.
5.	Informal sector	"1" if person is an employer, own account worker, owner cultivator, contributing family worker, individual ownership or working in an enterprise with less than 10 labors.
6.	Training	"1" if a worker receives on-job or off-job training or "0" otherwise.
7.	Employment	"1" if a person in the labour force is employed and "0" if not.

Job finding rate:
The traditional definition of job finding rate JFR is a chance of seekers finding work in a certain amount of time (Hall & Schulhofer-Wohl, 2018). this study uses the variable of job finding rate as 1 if a person is not in paid job for last one month and 0 otherwise.
Job separation rate:

Workers who leave their jobs and are looking for one are considered as separated from their paid work (Hobijn, B., & Şahin, A.2009). For this study, the variable of job separation is considered 1 if an individual is jobless for the past 12 months or more and is looking for it.

Migration:
The migration process is primarily considered a residence replacement from any specific time and for any cause (Hossain, 2001).The core of migration, be it within the country or out of the country, is mostly taken for a prosperous life, and it has a great connection with earning opportunities. The information available in LFS under the heading of migration covers mainly the migration taken place within the country. It has been suggested that most of the migration took place for better employment opportunities, this study has used the variable migration to assess its impact specifically in case of job finding and job separation, i,e. whether migrating from one place (either from rural to urban or from one province to another) has any impact on it or not. The study considers that an individual is not migrated if he/she is living in a district since birth and 0 otherwise.

Education level:
Education has a positive association with a decent job; the higher the qualification, the brighter will be the chances to get a better white collar job. This study has employed education level of every individual to assess its association with job finding and job separation. The variable education level shows the number of years an individual spent for getting education, i,e. the highest degree he/she has gained while at the job search. The study considers the total years of education of an individual. The variable education level in LFS is distributed into different levels of education from no formal education as the first level to PhD as the highest level.

Informal sector:
The informal sector is serious issue for developing economies like Pakistan due to many factors, such as lower wages, higher uncertainty of job loss, vulnerable job conditions, lack of fringe-benefits for workers and many more. Though it accommodates a huge labour force (mostly uneducated and/or unskilled), it still has a strong relation regarding job finding and separation rate. To find the impact of the informal sector on job finding and job separation rate, the study has considered the variable as 1 for an individual who is part of the informal sector (if the individual is an employer, has own account work, owner, cultivator, helping in family work, individual worker or working in an organization with less than ten workers), 0 otherwise.

Training:
The professional training enhances an X-factor in an individual's profile when the organization is considering an individual for a future expected employee. Now a days both skill and education are considered equally important as both go hand in hand in the job market, specifically when organizations see the qualification in an individual's

curriculum vitae. The variable training has a robust association with employment. Considering the reason, this study has included training variable. The variable has considered the value 1 for individuals who have received professional training before or after the job and 0 otherwise.

Employment status:
An individual's employment status defines how many individuals are actively employed, unemployed or not part of the labour force. According to LFS 2018-19, 65.5 million people declared themselves as an active part of the labour force. This is one of the essential variables for the analysis as it represents individuals' employment status. In LFS, this variable has shown three different stages of an individual i.e. employed means has a paid job, unemployed means the individual has no paid job and not in labour force means the individual has not declear himself/herself as part of labour force as he/she is not actively looking for paid work. For this study the variable employment status is considered as 1 if the individual is doing any paid job and 0 otherwise.

4. Econometric Model:
In this study, Labour Force Survey is employed from 2004-05 to 2018-19. We construct pseudo panel data for nine years by defining the suitable cohort considering the data limitations. About 729,849 observations were collapsed by provinces, rural and urban regions, time periods, gender and four age groups of the working-age population. In this way, 576 observations were included in the panel data estimation. We employed Fixed Effect Model for gauging the impact of various labour market indicators on job finding and job separation rate in Pakistan. The balanced fixed effect panel data regression function is of the following form:

For job finding rate equation 1 is modeled as:

$$JFR_{it} = \beta_0 + \beta_1 \text{ migration}_{it} + \beta_2 \text{ Education}_{it} + \beta_3 \text{ Informal}_{it} + \beta_4 \text{ Training}_{it} + \beta_4 \text{ Employment}_{it} + \beta_5 \text{ Region} + \beta_{5+i} \sum^{3}_{i=1} \text{Province}_i + \beta_{8+t} \sum^{8}_{t=1} \text{year}_t + \varepsilon_{it} \quad (1)$$

For job separation rate, equation 2 is modelled as:

$$JSR_{it} = \beta_0 + \beta_1 \text{ migration}_{it} + \beta_2 \text{ Education}_{it} + \beta_3 \text{ Informal}_{it} + \beta_4 \text{ Training}_{it} + \beta_4 \text{ Employment}_{it} + \beta_5 \text{ Region} + \beta_{5+i} \sum^{3}_{i=1} \text{Province}_i + \beta_{8+t} \sum^{8}_{t=1} \text{year}_t + \varepsilon_{it} \quad (2)$$

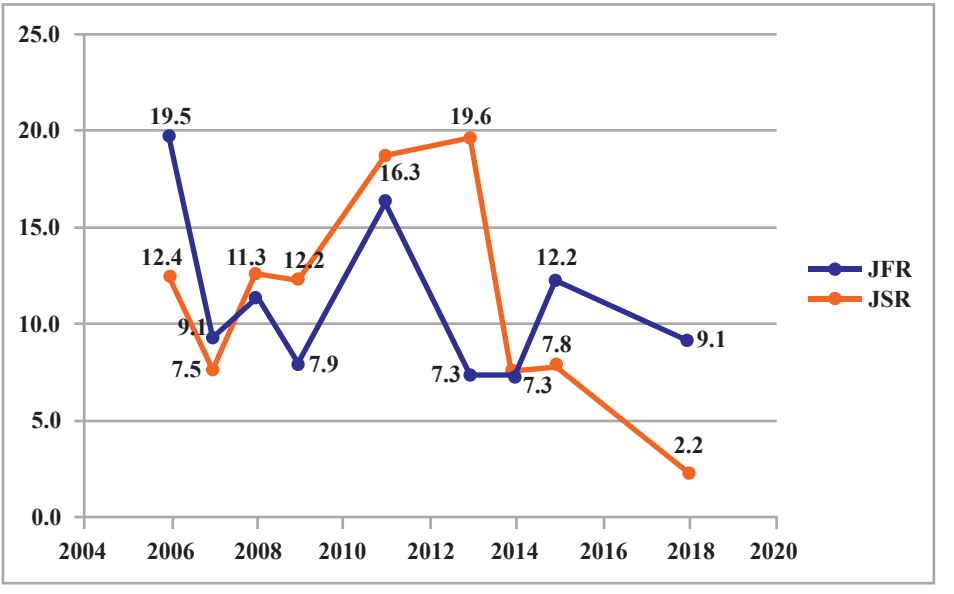
The above fixed effect models are indexed by "i" for cross sectional dimension which is a combination of product category "j" and cities "k", whereas, the time dimension is indexed by "t".

5. Descriptive Analysis:
The descriptive part of the analysis has provided some significant insights. The comparison of Job finding rate and Job separation rate over the years is presented in figure 1. The trends present the timeline from 2005 till 2018, covering about 13 years. Both JFR and JSR show constant ups and downs over the years. Initially, JSR was at 12.4 percent in 2005 and dropped to 7.5 percent in 2007, but then it started souring up and reached an all-time high at 19.6 percent in the year 2013. Throughout the selected years, JSR stays above JFR (from 2008 till 2014), showing a higher job separation rate

among individuals. However, JSR dropped down from 19.6 percent in 2013 to 7.3 percent in 2014, showing a sharp decline in the Job separation rate. However, the Job finding rate starts from 19.5 percent in the year 2005, which is the highest point in our selected data, but it sees a sharp decline in 2006 and drops to 9.1 percent, an almost 10 percentage points drop showing people were coming out of JFR situation. in the year 2011 JFR touches a peak at 16.3 percentage points, and again it drops to the lowest of 7.3 percent in 2013.

Nevertheless, JFR maintained these positions for two consecutive years and then started rising again and stand on 12.2 percent in the year 2015; however, the last reading was 9.1 percent in 2018. The year 2018 represents a difference of almost 7 percentage points between JFR and JSR. A higher job finding rate in comparison to little lower lesser job separation rate. Depicting a little better situation as the JFR rate is higher than JSR means fewer people are looking for a paid job.

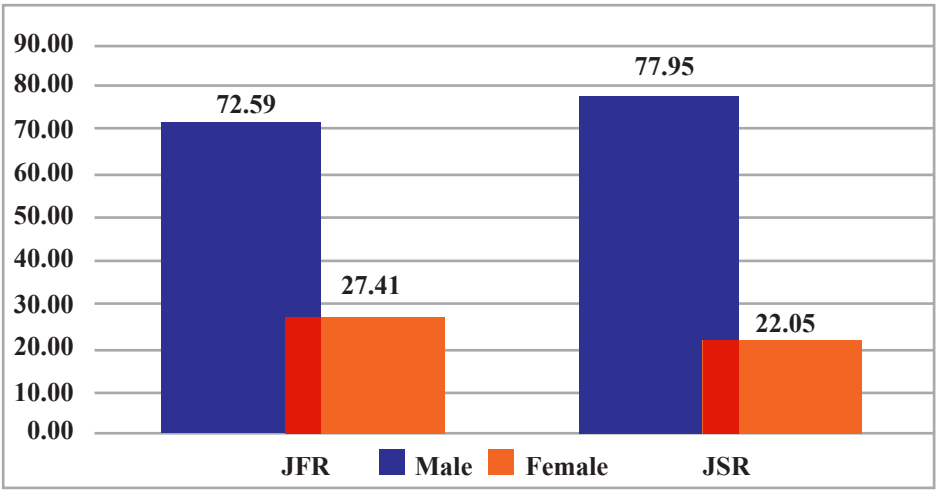
Figure 1: Job finding Rate and Job Separation Rate by Year



Source: *Author's estimations from LFS*

JFR and JSR comparison with gender shows expected results. Females have had lesser JFR and JSR over the years in both cases.

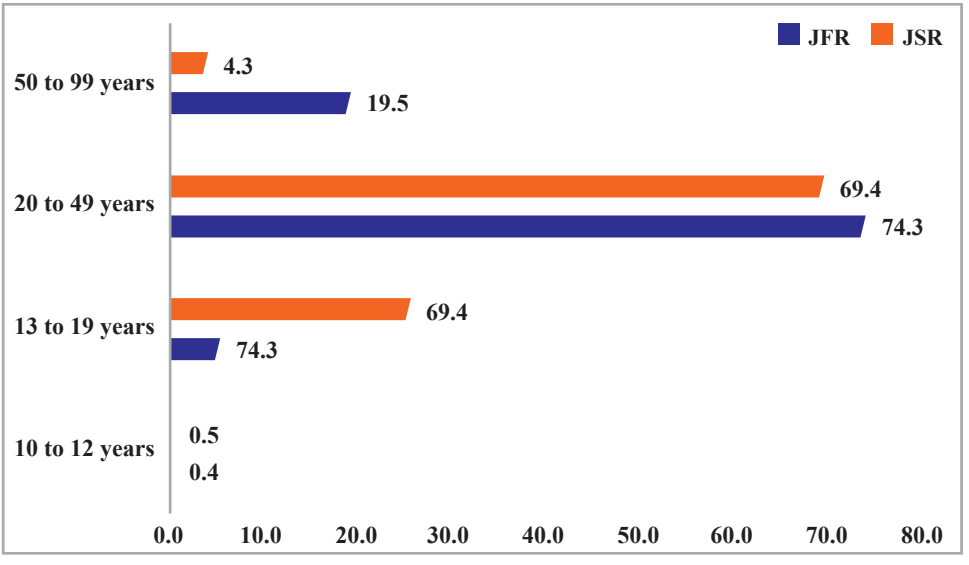
Figure 2: Job Finding Rate and Job Separation Rate by Gender



Source: *Author's estimations from LFS*

Figure 3 represents the analysis of JFR and JSR segregated into age groups. The analysis shows the highest ratio of both job finding and separation rate in the age group 20 to 49 years. For age groups 10 to 12, both JFR and JSR are almost equal. However, JSR is higher in 13 to 19 age group and higher JFR in 50 to 99 age group.

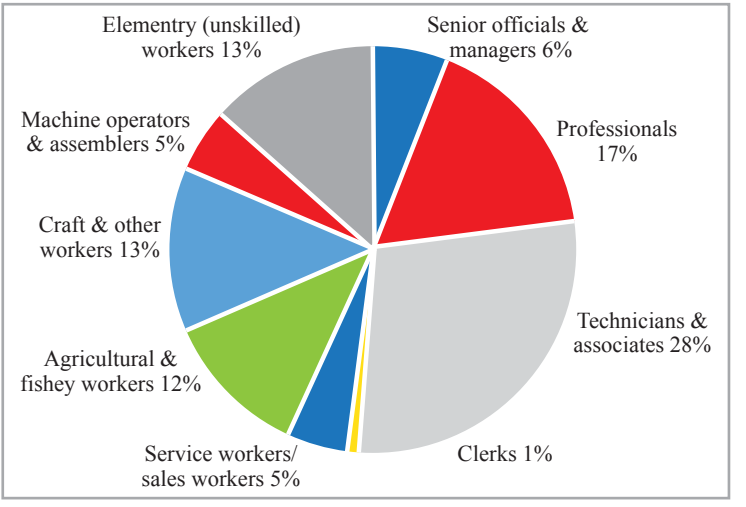
Figure 3: Job Finding rate and Job Separation rate by age groups



Source: *Author's estimations from LFS*

By occupation, the segregation of JFR is presented in figure 4. It is depicted that the highest JFR is in the technician and associate's category. The category of professionals consists second-highest position with 17 percentage points; however, the category of agricultural and fishery works stands in the third position with 12 percent points.

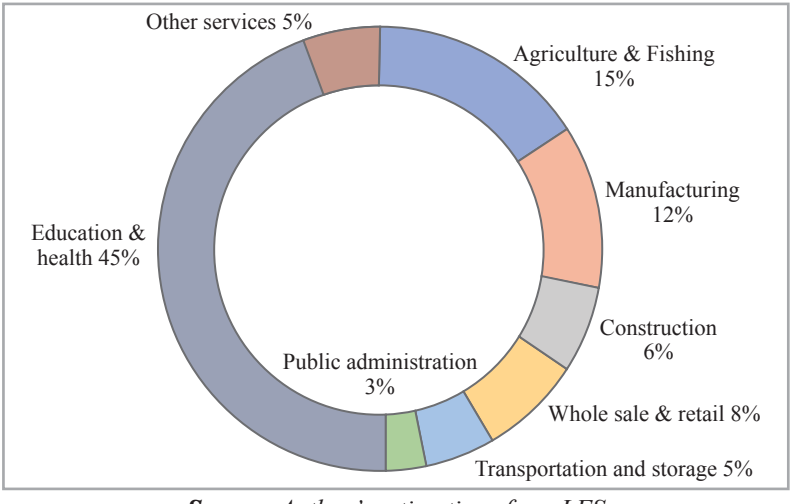
Figure 4: Job Finding rate by Occupation



Source: *Author's estimations from LFS*

The distribution of data by industry for job finding rate is shown in figure 5. A massive chunk of the total i.e., 45 percent JFR was found in the education and health industry. However, the lowest is witnessed in the public administration sector with 3 percent only.

Figure 5: Job Finding Rate by Industry



Source: *Author's estimations from LFS*

6. Results and Discussion:

In this section, we present and analyze the impact of various macroeconomic factors that affect the job finding rate (JFR) and job separation rate (JSR) in Pakistan over about past two decades. Regarding foremost macroeconomic factors, data on available indicators are extracted from the Labour Force Survey (LFS) on various years, from 2004-05 to 2018-19. More than 75000 labour force data is employed for each nine years in the study. Hence, a total of about 729,849 observations were included, which were then collapsed by four provinces, two regions, nine-time periods, two gender and four age groups of working-age population. In this way, total of 576 observations were included in the panel data estimation. An empirical caveat in this study is that factors affecting job finding and job separation rate should ideally be assessed at an individual level; however, not all indicators are available at the micro level. Owing to the data limitations, observations are aggregated through the aforementioned cohorts.

In table 1, the panel fixed effect model is employed to find the impact of macroeconomic variables on job finding rate in Pakistan. As already discussed, job finding rate is the proportion of the unemployed workforce who recently got a job. Hence, job finding rate is negatively related to the unemployment rate.

Empirical evidences reported in table 1 endorse a positive, significant but trivial impact of migration status on job finding rate. Most of the other factors, however, enter with anticipated signs. Education level, for example, displays a significant and positive sign corroborating the intuitive argument that the increase in the years of education improves the job finding rate in the country. It is being argued that an increase in the years of education or literacy rate in the country provides a broader set of opportunities to an individual and positively impacts by reducing the mismatch among opportunities.

The informal sector is a variable of most interest as it is believed that the informal sector plays an essential role in job searching. According to LFS 2017-18, the informal sector provides around 71.7 percent of employment in all sectors, excluding agriculture. Currently, Pakistan has the 10th largest workforce globally, two-thirds of which are engaged in the informal sector (Dawn, May 2019). However, results shown in table 1 reveal a highly significant but negative impact of the informal sector on job finding rate. This is probably because finding a job in the informal sector is difficult without any suitable reference, as most informal work is led by small enterprises, domestic workers, and street vendors. Jobs vacancies in informal sectors are usually unpublished and are relatively difficult to search.

As expected, training has a significant and positive impact on job finding rate. These results show that vocational training improves the probability of finding a job in Pakistan. It has been suggested that effective and state-of-the-art vocational training programs could help cope with youth unemployment issues as it plays an important role in skill improvement and would thus help in increasing youth employability.

Table 1: Job Finding Rate

VARIABLES	JFR
Migration	0.00900*** (0.00280)
Education level	0.000917*** (0.000217)
Informal sector	-0.00517*** (0.00113)
Training	0.00591* (0.00337)
Employment status	-3.15e-07** (1.26e-07)
Punjab	-0.00228*** (0.000622)
Sindh	-0.000478 (0.000616)
Baluchistan	-0.00219*** (0.000711)
Urban Region	-0.00116** (0.000465)
2007. year	-0.00253*** (0.000891)
2008. year	-0.00256*** (0.000898)
2009. year	-1.25e-05 (0.00109)
2011. year	0.00238** (0.00101)
2013. year	-0.00104 (0.00102)
2014. year	-0.00143 (0.00109)
2015. year	-0.000789 (0.00109)
2018. year	-0.00384*** (0.000978)
Constant	0.00464*** (0.00102)
Observations	570
R-squared	0.247
F (17, 552)	10.67
Prob > F	0.0000
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1	

Source: *Author's estimations from LFS*

Table 2 shows the results of the panel fixed effect model on job separation rate (JSR). As we have already explained, that job separation rate is the proportion of employed workers who recently mislay their jobs; hence, it is positively related to the unemployment rate. A higher job separation rate in a country will lead to a higher unemployment rate. This inference suggests that the job separation rate must be reduced or controlled to reduce the unemployment rate.

In contrast to table 1, migration reveals a negative and statistically insignificant effect on job separation rate in Pakistan. In contrast, the education level reveals some exciting and thought-provoking findings. Results show a highly significant, positive and sizeable impact of education level on job separation rate. Literature has also pointed towards the dilemma of the positive relationship between higher education and Pakistan's unemployment rate (For instance, Fatima & Sharif, 2019). It has been observed that the country is a low absorber of the educated workforce (Ghayur, 1989). This evidence validates the findings of this research as relatively higher supply compared to lower demand of educated work force leads to high job separation rate, thus creating high unemployment rate among educated individuals. One distressing and overwhelming reason is the job and education mismatch in the country (Nunez & Livanos, 2010). This leads to job dissatisfaction and eventual separation.

Comparing the results of tables 1 and 2, we can conclude that education level positively and significantly impacts both JFR and JSR. However, the magnitude of the

results differs considerably. On average, we can see a substantial impact of education level on JSR compared to JFR. It shows that there are significant probabilities of getting employed with one more year of education; however, separation from a job with a higher level of education is even more pronounced.

According to Economic Survey 2020-21, the recent spread of Covid-19 had further worsened the unemployment situation through massive job separation of workers as short, and temporary employment accounts for most separations. The informal sector usually offers low income with lack of job security coupled with insecure and unhealthy working conditions that lead to a shorter duration of employability. Table 2 substantiates the positive relationship between informal sector and job separation rate. Pakistan's economy is categorized by extensive informality in the labour market. The informal working agreements lack job safety, security, other benefits and financial assistance for workers. These conditions disappoint labours working in the informal sector; thus, switching towards more rewarding jobs is witnessed in earlier than in the formal sector.

Table 2: Job Separation Rate

VARIABLES	JSR
Migration	-7.578 (7.659)
Education level	2.557*** (0.517)
Informal sector	0.00653*** (0.000519)
Training	4.351 (7.036)
Unemployment	0.00602** (0.00298)
Punjab	0.672 (1.316)
Sindh	3.677*** (1.322)
Baluchistan	-3.562** (1.560)
Urban	-0.845 (0.916)
4.age	2.217 (1.366)
5.age	4.154** (1.827)
6.age	-1.157 (1.503)

VARIABLES	JSR
2007. year	3.570** (1.766)
2008. year	-1.240 (1.804)
2009. year	-0.974 (1.808)
2011. year	3.444* (1.906)
2013. year	3.118* (1.871)
2014. year	-6.697*** (1.932)
2015. year	-7.103*** (2.015)
2018. year	-6.865*** (1.945)
Constant	-4.290** (2.092)
Observations	576
R-squared	0.555
F (20, 555)	34.64
Prob > F	0.0000
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1	

Source: *Author's estimations from LFS*

Conclusion and policy recommendations

This study has examined the labour market factors and their effects on job finding and job separation rate. The study's findings reveal that many factors are involved in job finding and job separation rate. The results conclude that both years of education and training have an inarguable impact on job finding rate, indicating that higher the years of education, the better will be chance to get a job, with the addition of training the probability increases further. However, the informal sector shows an inverse sign, this may be owing to the fact that most jobs in the informal sector belongs to small enterprises with no official job opening; hence hard to estimate the job hired in the informal sector. Other than this, the variable migration has eloquent but very miner impact on job finding rate

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The variable of informal sectors depicts a positive and significant impact on job separation rate endorsing the fact that within informal sectors due to multiple factors such as low pay, higher risk of job insecurity, unfavourable conditions at workplace are a few to count increases the chances to leave a job is higher than a formal one. While for job separation rate, migration has an insignificant and negative impact on job separation rate. However, education has an affirmative impact, highlighting that Pakistan has a highly qualified labour force with lower demand pushing them out of the labour force as highly qualified individuals prefer to stay unemployed compared to being associated with less paid and low-profile jobs. The same finding was concluded in an unpublished thesis (Unemployment duration among females a survival analysis by GulRukh 2020). The significance of education level with job separation rate shows a higher need to create jobs for qualified individuals otherwise, this gap will create the issue of brain drain in the country.

Every year, hundreds of individuals enter into job market expecting to get hired by organizations, but the fact is, there is a enormous gap between available jobs and the people willing to do it. To minimize the job separation rate, it is imperative to create new jobs for the upcoming new arrivals in the labour force. Considering this situation, for the qualified and skilled labour force, the government needs to plan the needs of coming years; for that purpose, it is high time to work on the classical demand and supply models of economics. Higher supply of labour force eventually reduces its demand; to sort this problem, a higher level of collaboration is needed to work on the supply of educated labour force in the job market sources, i.e. to work with the private sector and instruct the educational institutions to give admission to the students for specific discipline according to the market needs. So that whoever got passed out and joined the labour force can instantly get hired. For individuals semi-skilled or unskilled part of the labour force, the time is right to let them give vocational training. Education and skills are the only keys to get success in the 21st century. There is no other alternative for education. In recent years, the rise in home-based or freelance work has opened new avenues for the less educated people who have skills to work in different markets such as computer-based skills or E-commerce related jobs; with fundamental training, these individuals can earn a decent income for themselves. Government has to make sure to supply the free and easy-to-access education for every individual in the country. The country cannot expect to compete without educating its citizens.

REFERENCES

Ayllón, S, & Ramos, X (2019). Youth Earning and Labour Market Volatility in Europe. Int'l Lab. Rev., HeinOnline.

Blanchard, O., & Galí, J. (2010). Labor markets and monetary policy: A New Keynesian model with unemployment. American economic journal: macroeconomics, 2(2), 1-30.

Boone, J, & Ours, JC van (2012). Why is there a spike in the job finding rate at benefit exhaustion?. De Economist, Springer

Cappellari, L, & Jenkins, SP (2014). Earnings and labour market volatility in Britain, with a transatlantic comparison. Labour Economics, Elsevier

Denzer, M, Schank, T, & Upward, R (2020). Does the internet increase the job finding rate? Evidence from a period of expansion in internet use. Information Economics and Policy, Elsevier

Fujita, S., & Ramey, G. (2009). The cyclicality of separation and job finding rates. International Economic Review, 50(2), 415-430.

Hairault, JO, Barbanchon, T Le, & Sopraseuth, T (2015). The cyclicality of the separation and job finding rates in France. European Economic Review, Elsevier

Hall, RE, & Schulhofer-Wohl, S (2018). Measuring job-finding rates and matching efficiency with heterogeneous job-seekers. American Economic Journal…, aeaweb.org

Hobijn, B., & Şahin, A. (2009). Job-finding and separation rates in the OECD. Economics Letters, 104(3), 107-111.

How can we protect contract and informal workers in Pakistan? - Prism - DAWN.COM, Hina ShaikhUpdated 24 May, 2019 01:04pm

Iqbal, Z., & Zahid, G. M. (1998). Macroeconomic determinants of economic growth in Pakistan. The Pakistan Development Review, 125-148.

Jarosch, G, & Pilossoph, L (2019). Statistical discrimination and duration dependence in the job finding rate. The Review of Economic Studies, academic.oup.com

Khawaja, I., & Iqbal, N. (2019). Determinants of Expansion of Micro and Small Firms and State of Entrepreneurship in Pakistan (No. 2019: 160). Pakistan Institute of Development Economics.

Koray, F., & Lastrapes, W. D. (1989). Real exchange rate volatility and US bilateral trade: a VAR approach. The Review of Economics and Statistics, 708-712.

Krogh, TS (2016). Real wage rigidity and the unemployment volatility puzzle in small open economies. Oxford Economic Papers, academic.oup.com

Krueger, AB, Mueller, A, Davis, SJ, & Şahin, A (2011). Job search, emotional well-being, and job finding in a period of mass unemployment: Evidence from high requency longitudinal data [with comments and discussion]. Brookings Papers on Economic …, JSTOR

Polsky, D. (1999). Changing consequences of job separation in the United States. ILR Review, 52(4), 565-580.

Serres, A De, & Murtin, F (2013). Do policies that reduce unemployment raise its volatility?., oecd-ilibrary.org

Svarer, M (2007). The effect of sanctions on the job finding rate: evidence from Denmark., papers.ssrn.com

Uren, L (2008). Inequality, volatility and labour market efficiency. The BE Journal of Macroeconomics, degruyter.com

Declaration Section

- **Availability of data and material**

The data used in this study for analysis is taken from the Pakistan Bureau of Statistics: Home under the section of Labour Force Survey LFS, freely available for all.

- **Competing interests**
  The study has no competing interests

- **Funding**
  This study did not required any funding

- **Authors' contributions**
  I GulRukh Zahid did the central part of the study, including collecting and organizing data and writing the research papaer, hence with the concent of my other co-authors, declare myself as the first author of the study. Likewise, the 2nd co-author, Dr. Fauzia Sohail did the analysis part and extracted the study's results, while Dr. Ambreen Fatima evaluated the study on the grounds of theoretical basis and hence stayed on 3rd position.

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