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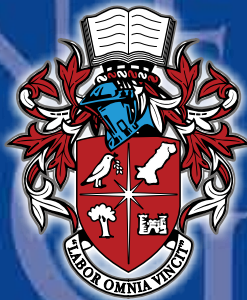
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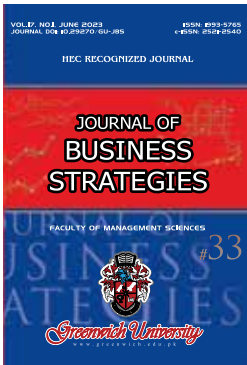
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## EDITORIAL NOTE

### **Dear Readers,**

In today's dynamic economic landscape, businesses face many challenges and opportunities amidst inflationary pressures and evolving monetary policy frameworks. As the global economy emerges from the aftermath of unprecedented disruptions, it is imperative for businesses to critically assess the impact of inflation on their operations and strategize effectively to mitigate risks and capitalize on opportunities. Inflation poses significant challenges for companies across industries. Inflationary pressures can erode profit margins and undermine business sustainability from increased production costs to reduced consumer purchasing power. Moreover, uncertainty surrounding inflation rates complicates long-term planning and investment decisions, further exacerbating business challenges.

Amidst these challenges, however, lies a realm of opportunities for astute businesses to thrive. Effective management strategies that embrace innovation, efficiency, and agility can enable businesses to adapt to changing market dynamics and mitigate the adverse effects of inflation. Furthermore, companies can leverage inflation as a catalyst for innovation, driving product differentiation and exploring new markets to maintain competitiveness.

A nuanced understanding of monetary policy and its business implications is central to navigating inflationary pressures. Central banks influence inflation through interest rate adjustments and monetary stimulus measures. As such, businesses must closely monitor central bank policies and anticipate their impact on borrowing costs, consumer demand, and investment sentiment. Furthermore, businesses must adopt a proactive approach to managing inflation risks through robust financial planning, supply chain optimization, and pricing strategies. By diversifying suppliers, hedging against currency fluctuations, and renegotiating contracts, businesses can enhance resilience to inflationary shocks and safeguard their bottom line. Collaboration between policymakers, business leaders, and academic scholars is essential to navigate the complexities of inflationary pressures and monetary policy. Research-driven insights and best practices can inform policy formulation and empower businesses to make informed decisions in an increasingly uncertain environment.



In this issue of our management journal, we present a collection of articles and research findings that delve into the multifaceted challenges and opportunities for businesses in the areas of marketing, supply chain and human resources. From empirical analyses to practical case studies, our contributors offer valuable insights to guide businesses in their quest for sustainable growth amidst economic volatility. As we embark on this journey of exploration and discovery, I invite our readers to engage with the rich perspectives presented in this issue and leverage them to chart a course toward resilience and prosperity in the face of inflationary pressures.

Sincerely,

**Prof. Dr. Shafiq Ur Rehman**

Editor

Journal of Business Strategies

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# **AN ASSESSMENT OF ALTERNATIVE ROUTES FOR CHINA PAKISTAN ECONOMIC CORRIDOR AND BENEFITS TO PAKISTAN**

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## **ABSTRACT**

*China Pakistan Economic Corridor (CPEC) is viewed as a big push to economic development of Pakistan. CPEC is a long route passing probably from various backward areas of relatively less developed provinces of our country. Road connectivity, establishment of industries and concentration of economic activities in the concern regions will boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. The expected routes for China Pakistan Economic Corridor (CPEC) are in discussion both in print and visual media since long. There are three alternative routes available, the eastern, central and the western one. This research aims to evaluate the effectiveness and feasibility of alternative routes and attempt to determine which route is more beneficial and feasible for Pakistan. For this analysis a comparison has made using available research and data from Pakistan Social and Living Standards Measurement (PSLM) survey. Given the link between human development and infrastructure this research evaluates the three routes in terms of economic, social and health indicators. The discussion, fact and figures presented in this research are mostly in favor of the western route.*

## **1.1. INTRODUCTION:**

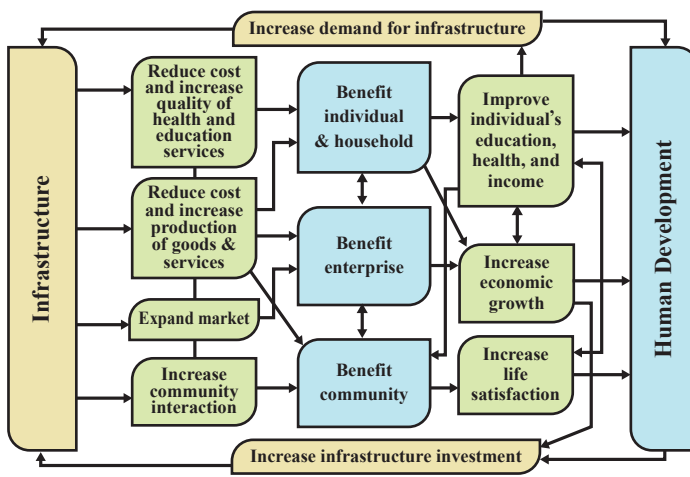
The primary role of transportation system is to provide linkages between spatially separated locations, for the industry and household sectors. These offer connections between industries and their input sources and their markets. For the households, it provides people way in to workplaces, education facilities and medical, social and recreational facilities (World Bank 1994). Thus improved transport technology and transport networks, through the effects on transport costs, accessibility and connectivity, have been major factors underpinning economic growth and opening up formerly isolated areas to people and economic activity. For economic development network is of great importance (Ministry of transport New Zealand, 2014; Owen,

1987). In this sense, the complete absence of a well-developed transport system acts as a serious constraint on growth.

Investment in human capital, through education and physical capital enhance productivities and output of nations. Transport can be seen to have noticeable role here, both explicitly through investment in transport infrastructure, vehicles, and logistics systems, increasing physical capital that increases accessibility to various regions and market for buyers and sellers. Improved infrastructure is associated with more production, trade, and spillover effects and eventually more productivity. Implicitly transportation system provides linkages between spatially separated locations that boost economic activities and pace of urbanization in these regions. There is firm consensus that the increased access to infrastructure services benefit individuals and communities. It benefits individuals and households through reducing cost and increasing quality of health and education services that further helps to improve education and health of an individual, which ultimately enhance the level of human development at local and national level. Consequently it generates changes in the socio-economic structure of these regions.

The link between infrastructure development and human development is presented in Figure-1. The direction of the flow of impact is shown from the arrow of lines; the lines with arrows at both ends indicate bi-directional effect. Infrastructure development in rural areas increase the individual welfare through improving farm and non-farm productivity that in turn raises the level of income and consumption, reduce the private cost and save time (UNICEF, 2008; Ezcurra et al. 2005; Ali and Pernia, 2004). Such effects clearly escort greater human development. Access to infrastructure not only provides direct benefits through reducing prices of manufacturing goods (Khandker et al, 2009) but also generates new opportunities indirectly; such as employment generation (Jacobs & Greaves, 2003), market expansion and integration (Bhattacharya, 2009; World Bank, 2004). A significant positive impact of infrastructure on health and education is also firmly established in the literature (Khandker et al. 2009; Levy 1996).

**Figure 1:** Access to infrastructure and human development



Source: Sapkota (2014)

China Pakistan Economic Corridor (CPEC) is viewed as a big push to economic development of Pakistan. CPEC is a long route passing probably from various backward areas of relatively less developed provinces of our country. Road connectivity, establishment of industries and concentration of economic activities in the concern regions will boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. The benefits are not just confined in economic terms but in social terms as well. As a repercussion of CPEC, economic activity will start to grow across the regions on the belt. This urbanization process will change the socio-economic structure of these regions. The living standard in these regions is expected to improve accordingly and more urban regions will be transformed from the rural ground.

The expected routes for China Pakistan Economic Corridor (CPEC) are in discussion both in print and visual media since long. There are three alternative routes available, the eastern, central and the western one. The importance of the route is immense. This research aims to evaluate the effectiveness and feasibility of alternative routes and attempt to determine which route is more beneficial and feasible for Pakistan. For this analysis a comparison has made using available research and data from Pakistan Social and Living Standards Measurement (PSLM) survey. Given the link between human development and infrastructure this research evaluates the three routes in terms of economic, social and health indicators.

Precisely, this research is designed to analyse all of the three possible CPEC routes in term of their costs and benefits taking advantage of the existing research and available secondary data. Apart from presenting the existing published outcomes but also adds to the existing literature in two ways.

- o First, to compare the alternative routes this study evaluates the socio-economic indicators of the regions associated with these routes.
- o Second, for the regions along the preferred route, expected growth in these indicators were calculated using the growth of the same indicators in other urban areas of Punjab, the province experiencing relatively more infrastructure development in Pakistan.

The rest of this paper covers the beneficiaries of CPEC followed by the comparison of the three possible routes, conclusion and references at the end.

### **1.2. Beneficiaries of CPEC**

China Pakistan Economic Corridor (CPEC) is critically important for both countries, China and Pakistan. Pakistan needs it to overcome its economic, development, social and energy problems. China needs it to expand its periphery of influence, consolidate its global presence and securing future supply routes of energy and trade goods, Ramay (2016).

The strategic location of CPEC is cortical, as it is located at the meeting point of Road Belt and Maritime Belt (Shah, 2015). It will provide opportunity to China to establish and strengthen its position in Indian Ocean. It will also help secure the energy route from Middle East and Africa, which is critical for China's future development.

Route of energy will also be shortened considerably (Bhattacharjee, 2015). It would also be easy and cost effective for China to reach the Middle East and North African Markets, among others.

About 22% of the total CPEC investment (46 billions) is dedicated to connect Kahgar city of Xinjiang (Province of China) to Gwadar, Pakistan through a road network of about 2000 km in length. This road route is of crucial importance and is one of the two necessary conditions of the corridor. The other is development of port at Gwadar. This surface transport connectivity will benefit China enormously by enhancing the usability of the Silk Route for trade and energy sourcing from Persian Gulf (BMA Capital, 2015). This also enables China to accelerate development and improve growth in Xinjiang province where a separatist movement is being faced. For China, CPEC would be a game changer as well to some extent as it would accelerate her trade and make China more cost effective by saving time as well as distance along the risk attached to them. The benefits in terms of distance and time are tabulated below.

**Table 1:** Expected Benefits to China in terms of Time and Distance

<b>CPEC &amp; Expected Benefits to China</b>		
<b>From Kashgar (4376 km away from Beijing) to the Persian Gulf</b>	<b>Distance (Km)</b>	<b>Time (Days)</b>
Using CPEC Route	2500	10
Using Current Route	13000	45
Savings (Benefits)	10500	35

*Source: BMA Capital (2015)*

On being more cost effective, Chinese products and services will be available at lower prices which mean more demand for them and as CPEC will open access to many regions through Indian Ocean, more trade as well. Other benefits to China, as mentioned by BMA Capital report include attractive financial returns, as all these projects are being offered on investment mode. Further, beneficiaries to CPEC would also include Chinese firms and labour as the machinery used in the infrastructure projects would be procured from China along with employing a larger number of Chinese labour on projects as well.

There is a Chesnee saying that if you want to be rich, you must first build roads, Hali et al (2015). One belt one road concept was developed by China, as part of its policy “Go Global 2001”. Pakistan is one of the beneficiaries of Chinese dream. The corridor is advantageous to both countries as it significantly shortens the length of the trade route from South West China to Middle East, Africa and Europe. A larger chunk of this investment is planned to be heavily concentrated in the energy (54%) followed by coal mining (20%) and road networks (13%). This would help Pakistan to combat with its energy crisis. As estimated by BMA Capital (2015) percentage increase in energy generation would be 90%.

**Table 2:** Expected Impact on Energy Generation

<b>Impact on Electricity Generation</b>	
Total Capacity Additions under Chinese Investment (MW)	16,845
Current Capacity (MW)	22,812
% Increase	74%
Incremental Generation at 70% Utilization (GWh)	103,294
Current Generation (GWh)	96,122
Less: Generation on Inefficient plants (GWh)	16,737
Potential generation after completion of projects (GWh)	182,678
% increase	90%

*Source: BMA Capital (2015)*

Apart from energy generation, CPEC would bring prosperity in Pakistan for many reasons. Pakistan even after almost 70 years of independence could not establish sound connectivity across the country except in Punjab where the infrastructure is relatively much better. Balochistan is relatively the most backward province of Pakistan. The road connectivity between provinces is weak especially from Punjab and Sindh to Khyber Pakhtunkhwa (KPK) and Balochistan. In other words half of our country is somewhat disconnected from the other half. Concentration of economic activity in Balochistan and KPK is relative much lower and thus a wave of deprivation has emerged there that might be possible for insurgency especially in Balochistan along with other possible reasons. The CPEC route is determined to pass through Balochistan ending with the establishment of Gwadar port. Road connectivity, establishment of industries and concentration of economic activities in the concern regions will boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. The benefits are not just confined in economic terms but in social terms as well. So as a repercussion of CPEC, economic activity will start to grow along the regions on the belt. This urbanization process will change the socio-economic structure of these regions. The living standard in these regions is expected to improve accordingly and more urban regions will be transformed from the rural ground. And if the alignment connects through KPK as well, both of these relatively deprived provinces would become a part of the overall economic activity and national growth. A major benefit of CPEC is establishment of an alternative sea port. Further our bond with China will become stronger facilitating us against our rival countries. Other beneficiaries of CPEC would be the countries who will be benefited by cheaper imports and trade benefits.

### **1.3. Comparison of Alternative Routes**

The possible routes between any two points /places that are meant to be connected through a road can be compared from its construction point of view and from its socio-economic and political dimensions. Bengali (2015)'s work is the best available research on the alternative routes comparison. Bengali (2015) pointed out distance, cost and political economy as to be some of the very basic precepts before going into construction of a new road.

A road is worth constructing if it connects the desired two regions with the shortest possible distance, a transit passageway, or more preferably with the shortest feasible distance, an economic passageway. As CPEC is an economic corridor with an intention to boost economic activities along the route, it is an economic passageway rather than just a transit passage.

The cost of road construction varies with a number of things such as **Opportunity cost of land** which will be higher if the land required for road construction is being used for production and also cost loss in production as well, **Displacement cost** both social and monetary as in the above case it will be higher because productive land will relatively be more populated and both households and businesses there are to be compensated, Nature of terrain that is a higher cost will be required if extensive land levelling and construction of numerous tunnels, bridges etc. are required for road construction.

Pre-existence of part of the road will definitely save the construction cost for that part of the road but subject to the quality, width and other requirements of the existing road to match the one required for the new road, **Environmental and military consideration** may also influence the construction cost in case a diversion is required in the road alignment faced with the presence of a protected environment or a military area, **Security conditions** along the road alignment push the construction cost up by including an additional security provision cost during construction and afterwards for safe traffic flow if the area from where the road has to pass suffers from lawlessness and criminal or insurgent attacks.

Finally the political economy is also influential in deciding the road alignment because road increases connectivity among regions thus opens markets for trade (in case of CPEC both national and international) and increases access to health, education and socialization opportunities. Road bring benefits, which in case of CPEC are even larger expectedly, to those living in the area from where it pass through. This actually places the base for alternative route emergence as the benefits of this route fades away for or excludes the regions at a farther point from the route.

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<sup>1</sup> *A transit passageway is one that qualifies for the shortest possible distance faced with the physical features on the way such as mountain or a water body etc without considering the economies of the areas in between the desired regions.*

<sup>2</sup> *An economic passageway is one that considers the economies of the areas in between the end points of the road as it aims to boost economic activity all along the route rather than just the end points.*

On comparison it was found that among the three possible routes western route is one with the shortest distance between Kashgar (China) and Gwadar (Pakistan) relatively. CPEC is meant to open economic opportunities for the region on the belt and preferably it is more beneficial if these opportunities are being introduced majorly in the rural areas. Unlike the alignment along the central and western route, more than half of the regions along the eastern route are already relatively developed. Also in terms of productivity and population density the eastern route is not preferred as it involves a higher land acquisition and dislocation cost in comparison with the other two routes. The terrain along the western and central route is hilly and arid requiring high land levelling costs in addition to a major bridge on river Indus between



Peshawar and Hasanabdal. While at the eastern route the area goes across a number of irrigation canals and thus requires construction of a number of bridges other than the one major bridge required on River Indus between Multan and Dera Ghazi Khan. There are pre-existing roads except for Gwadar to Ratodero (on central and eastern routes) and Gwadar to Khuzdar (on the western route) but the quality of the existing road is not of the quality to cater the expected heavy traffic and thus need to be re-laid. The alignment along the central and western route does not require a diversion on account of environmental or military grounds though the eastern route does as it passes through Margalla Hills (a national park) and thus a tunnel underneath is being considered. The security costs on the eastern route is however is relatively lower than the other two. As far as the political economy of the routes is concerned the central route alignment is such to pass through all the provinces and is more likely to be backed by broad political support. In contrast, the western one passes through two provinces of Pakistan while the eastern route completely by passes Khyber Pakhtunkhwa and may emerge as a new inter-provincial discord source.

Apart from comparing the three routes in terms of geographical location, Bengali (2015) also quantifies this comparison on the basis of average population density, area under cultivation and production of four major crops (wheat, rice sugar-cane and cotton). The results of this comparison are presented below.

**Table 3:** Economics of alternative routes

<b>Economies of Alternative Routes</b>			
<b>Indicator</b>	<b>Central Route</b>	<b>Eastern Route</b>	<b>Western Route</b>
Average population density	156	264	98
Total area under cultivation (000 ha)	5,829	10,322	2,933
Production of 4 major crops (000 tonnes)	13,754	30,928	7,430

*Source: Bengali (2015)*

Higher population density reflects higher compensation for dislocation. Higher land acquisition and opportunity costs are associated to alignment with greater area under cultivation and higher production of major crops. The statistics presented above does not favour the eastern route and are clearly inclined towards the western route which has the lowest indicators.

Following the same three routes as defined by Bengali (2015) and using PSLM data, this research further compares the three routes using indicators for social development across the routes. The route relatively worse off as per social development indicators is considered more in need of development.

**Figure 2:** Alternative CPEC Road Routes



*Source:* Bengali (2015). 1= Central, 2= Eastern and 3= Western route.

<sup>3</sup> **Western Route:** Gwadar - Turbat - Panjgur - Khuzdar - Kalat - Quetta - Zhob - Dera Ismail Khan -Bannu-Kohat - Peshawar - Hasanabdal and onwards to Khunjerab. **Central Route:** Gwadar - Turbat - Panjgur - Khuzdar - Ratodero - Kashmore - Rajanpur - Dera Ghazi Khan - Dera Ismail Khan - Bannu - Kohat - Peshawar - Hasanabdal and onwards. **Eastern Route:** Gwadar - Turbat - Panjgur - Khuzdar - Ratodero - Kashmore - Rajanpur - Dera Ghazi Khan - Multan - Faisalabad - Pindi Bhatian - Rawalpindi - Hasanabdal and onwards.

Six indicators of social development are used for this comparison namely population, literacy ratio, enrolment ratio, immunization ratio, proportion of sick or injured and years of schooling.

**Table 4:** Comparing Population on alternative routes

Population				
Count				
S. No.	Route	2004-05	2010-11	Average
1	Western	608386	689319	648852
2	Central	877664	926558	902111
3	Eastern	1631613	1741774	1686694

*Source:* Author's calculations using PSLM

Concentration of population itself signals the existence of an on going economic activity. Usually greater population concentration is associated relatively developed regions. It would be more beneficial if the investment is made to boost economic activity in relatively less developed region. Population along the western route is lowest among other as per both the average and the year specific figures. Central route stood in the middle while population along the eastern rout is highest.

**Table 5:** Comparing Adult Literacy Ratio on alternative routes

<b>Adult Literacy Ratio</b>				
<b>15 years and above</b>				
<b>S. No.</b>	<b>Route</b>	<b>2004-05</b>	<b>2010-11</b>	<b>Average</b>
1	Western	0.40	0.45	0.43
2	Central	0.39	0.43	0.41
3	Eastern	0.43	0.48	0.46

*Source:* Author's calculations using PSLM

The next indicator is adult literacy ratio selected as a reflective of education along the routes. This variable was estimated using its standard definition that is the proportion of individuals aged 15 and above who can read and write with understanding. On comparing the three routes it was found that the central route is the one with the least proportion of adult literates followed by the western and eastern route respectively.

Given the narrow definition of literacy two more indicators were analyzed before jumping to any conclusion on the basis of education conditions along the routes. Hence proportion of individuals aged 4 and above who were enrolled and average years of schooling were estimated for the region on the route belts.

**Table 6:** Comparing Enrolment Ratio on alternative routes

<b>Enrolment Ratio</b>				
<b>4 years and above</b>				
<b>S. No.</b>	<b>Route</b>	<b>2004-05</b>	<b>2010-11</b>	<b>Average</b>
1	Western	0.23	0.28	0.26
2	Central	0.24	0.30	0.27
3	Eastern	0.25	0.31	0.28

*Source:* Author's calculations using PSLM

Proportion of enrolment was found to be highest on the eastern route and least on the western one. As far as average years of schooling is concerned the outcome was actually indifferent to prefer either of the three routes as per year specific results though on average the results are only indifferent between western and central route.

**Table 7:** Comparing Average Years of Schooling on alternative routes

<b>Average Years of Schooling</b>				
<b>S. No.</b>	<b>Route</b>	<b>2004-05</b>	<b>2010-11</b>	<b>Average</b>
1	Western	5	6	5
2	Central	5	6	5
3	Eastern	5	6	6

*Source:* Author's calculations using PSLM

Deteriorated health conditions are indicative of low social development. The next two indicators meant to analyze the health conditions along the possible routes. The two health indicators are proportion of children under five years of age being immunized and the proportion of individuals who got sick or injured. The next two tables present the results of these two variable for the three routes.

On average child immunization ratio was highest on the eastern route and lowest on the western route though in 2010-11 it was highest on the central one but for the western route it remained the least for both year specific and average figures.

**Table 8:** Comparing Child Immunization Ratio on alternative routes

<b>Child Immunization Ratio</b>				
<b>Children under 5 years</b>				
<b>S. No.</b>	<b>Route</b>	<b>2004-05</b>	<b>2010-11</b>	<b>Average</b>
1	Western	0.73	0.93	0.84
2	Central	0.75	0.94	0.85
3	Eastern	0.80	0.93	0.86

*Source:* Author's calculations using PSLM

Greater proportion of sick /injured persons resembles poor provision of health facilities such as clean drinkable water, waste and sanitation management. The results for this indicator suggest that the central route suffers relatively more in this regard. But on a deeper look, it was observed that the decline in the value of this indicator from 2004-05 to 2010-11 was much lower on the western route indicating that the improvements in health on the western route was much slower than the alternative ones.

**Table 9:** Comparing Proportion of Sick and Injured on alternative routes

<b>Proportion of Sick and Injured</b>				
<b>S. No.</b>	<b>Route</b>	<b>2004-05</b>	<b>2010-11</b>	<b>Average</b>
1	Western	0.076	0.073	0.075
2	Central	0.086	0.074	0.080
3	Eastern	0.078	0.067	0.072

*Source:* Author's calculations using PSLM

The discussion so far was found to be inclined relatively more towards preferring the western alignment for the China Pakistan Economic Corridor. Out of the six indicators used by this research, four were in favor of the western route, one being indifferent that was average years of schooling and the last one (literacy ratio) was favoring the central route. Most of the indicators analyzed were in favor of the western route as per both the analysis conducted on social grounds by this research and the geographical and quantitative analysis performed by Bengali (2015).

### Expected Improvement in Social Indicators along the Western Route

Infrastructure development and improvement in social indicators are directly proportional to one another. With improved connectivity access to and provision of socio-economic opportunities are expected to rise as well. Concentration of economic activities begins to prosper gradually where the roads are constructed. Road connectivity leads to establishment of industries in the concern regions which in turn boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. Thus roads lead the region on urbanization path. Usually region along the roads emerge initially as small town or urban areas and gradually gets more developed and urbanized with time. In Pakistan, investment in infrastructure is relatively much higher in Punjab. Hence the repercussions of improved infrastructure are also visible there as well. Punjab is the most developed province of Pakistan with relatively better education, health and connectivity. Hence the impact of infrastructure development on improving social indicators can be traced through growth in these indicators in Punjab.

For estimating expected improvements on account of infrastructure development along the western route on social indicators used in this research, the average growth in the same indicators was calculated for the urban areas of Punjab other than the major cities there. Major cities and other urban areas in Punjab were identified using PSLM survey data. Finally this growth was then applied on the social development indicators analyzed earlier on the western route. The results of these estimations were tabulated below in table 10.

**Table 10:** Expected Improvement in Indicators on the Western Route

<b>Economies of Alternative Routes</b>						
<b>Indicators</b>	<b>Population</b>	<b>Adult Literacy Ratio</b>	<b>Enrolment Ratio</b>	<b>Child Immunization Ratio</b>	<b>Proportion of Sick and Injured</b>	<b>Average Years of Schooling</b>
2010-11 Values	689319	0.45	0.276	0.933	0.073	6
Growth Rate in Other Urban Areas of Punjab (2004-05 to 2010-11)	16.91	19.46	3.48	6.14	-4.34	16.67
Indicator Increased by	116568	0.09	0.010	0.057	-0.003	-0.003
<b>Expected Growth in 2019-20</b>	<b>805887</b>	<b>0.54</b>	<b>0.286</b>	<b>0.990</b>	<b>0.070</b>	<b>7</b>

*Source:* Author's calculations using PSLM

The outcome of the results presented in the above table revealed that all the indicators considered by this research reflecting social development for the regions along the western route are expected to improve by 2019-20. Urbanization along the western route is expected to grow by 17% reaching a population of 805887 in 1019-20. Around 54% of population on the western belt would become literate by 2019-20. 2010-11 value of enrolment ratio, on average, along the western belt would rise by 0.010 units. Years of schooling in the regions on the western route would reach an average of 7 years. Immunization will be improved as well. The proportion of sick and injured would decline by 4.34% reflecting expected better health facilities along the belt.

## **Conclusion and Recommendation**

Road connectivity is crucial for economic activity and trade to prosper. Road boost concentration of economic activities in the concern region, establish connectivity, benefit trade and increases accessibility to health, education and other economic opportunities. CPEC not only open up regional road connectivity but also sea connectivity though Gawadar port for both China and Pakistan. Road connectivity increases accessibility to various regions and market for buyers and sellers. Improved infrastructure is associated with greater level of production, trade, and spill-over effects and eventually greater productivity. However, the route it would adopt was somewhat controversial.

The discussion, fact and figures presented in this research are mostly in favor of the western route. The eastern route clearly losses its preference because of many reasons. Such as it is relatively longer, relatively more loss of productive land on account of greater area under cultivation along eastern alignment, more bridges are to be constructed etc. In fact eastern alignment is least preferred on environmental, geographic, economic and social grounds. Further the eastern route already contains three districts holding a major city as defined by PSLM namely Rawalpindi, Faisalabad and Multan. Thus, it is already more developed among the possible routes. However, the western route is more likely to be preferred on the same grounds as most of the indicators were in favor of this route.

In Pakistan, the road connectivity between provinces is weak especially from Punjab and Sindh to Khyber Pakhtunkhwa (KPK) and Balochistan. In other words half of our country is somewhat disconnected from the other half. Concentration of economic activity in Balochistan and KPK is relative much lower and thus a wave of deprivation has emerged there that might be possible for insurgency especially in Balochistan along with other possible reasons. The CPEC route is determined to pass through Balochistan ending with the establishment of Gwadar port. The benefits of CPEC are not just confined in economic terms but in social terms as well. So as a repercussion of CPEC, economic activity will start to grow along the regions on the belt. This urbanization process will change the socio-economic structure of these regions. The living standard in these regions is expected to improve accordingly and more urban regions will be transformed from the rural ground. In addition, if the alignment connects through KPK as well, both of these relatively deprived provinces would become a part of the overall economic activity and national growth. A major benefit of CPEC is establishment of an alternative sea port. Further our bond with China will become stronger and it would facilitate us against our rival countries.

Pakistan should remain focused on development of the country and make sure that provincialism should not be given the chance to hijack the development agenda by any stakeholder, including the federal government. To fully exploit the gains from CPEC, Pakistan should act rationally and selection on the route alignment should be made keeping cost effectiveness and far reaching benefits in view. CPEC provide a chance for Pakistan to re-uniting the provinces and for this Pakistan should also invest to establish connectivity to CPEC route from other provinces. Bengali (2015) suggested two such road connection one between Dera Ismail Khan-Sarghoda-Lahore to connect with the Lahore-Karachi Motorway as an attempt to establish connectivity

from KPK to Punjab and Sindh. Likewise, the other was between Khuzdar-Ratodero-Sukkur to connect with the Lahore-Karachi Motorway as an attempt to establish connectivity from Balochistan to Sindh and Punjab. As a result all provinces will get connected with one another.

Further Pakistan should pay due attention towards its strategic and geographic importance and act accordingly to reap the fruits of CPEC both in short run and in long run. Transparencies should be ensured at each level. Institutions like Council for Common Interest should be taken on board for resolving controversies attached to CPEC and its projects and most importantly, understanding Chinese needs as a investor of the project should be given due priority.

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# THE ROLE OF DIGITAL MARKETING IN PROMOTING PAKISTANI TOURISM: INSIGHTS FOR DESTINATION MARKETING

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## ABSTRACT

*This research explores digital marketing's role in boosting Pakistani tourism through social media and destination marketing. By showcasing Pakistan's natural beauty and cultural heritage via compelling content, the study suggests social media can significantly promote tourism. Utilizing a sample of 325 internet users, it examines factors like e-word of mouth and influencer marketing's impact on tourism, finding mostly positive effects. The study, valuable for marketing professionals and researchers, highlights the potential for further exploration in digital tourism promotion strategies.*

**Keywords:** Tourism Promotion, Marketing, Digital Marketing, e-WOM Marketing, Influencer/Affiliate Marketing, Viral Marketing, Social Media Marketing, Internet Credibility.

## INTRODUCTION

The introduction provides an in-depth overview of the pivotal role of marketing in achieving business objectives, particularly within the tourism industry, which stands to gain significantly from targeted marketing strategies. It outlines the necessity of understanding market needs, trends, and effective promotional tools in destination marketing, highlighting the transformative impact of digital platforms in sharing travel experiences and engaging audiences. The evolution of networking and information technology is emphasized as a revolution in the tourism sector, enabling travelers to independently plan and manage their trips, thereby shifting control away from traditional tour promoters.

The overview of Pakistan's tourism industry acknowledges its vast potential, underscored by significant contributions to the country's GDP and employment. Despite challenges such as political unrest, efforts are being made to revitalize interest in Pakistan as a prime tourist destination, supported by international recognition of its natural beauty and hospitality.

The scope of the study aims to explore the effectiveness of digital marketing in elevating Pakistan's tourism industry on both national and international levels.

It seeks to investigate the most impactful digital marketing platforms and strategies to educate and inspire potential travelers, thereby enhancing Pakistan's brand image and reputation within the tourism sector.

The research underscores the tourism sector's role in generating indirect income, fostering economic growth, and contributing to local development through a variety of tourist destinations and activities available in Pakistan. It aims to highlight the transformative and growth-inducing potential of digital marketing in global tourism, with a particular focus on its application in promoting Pakistani tourism destinations.

Addressing the gap in research regarding digital marketing practices for tourism promotion in Pakistan, the study aims to offer valuable insights into effective tactics that can bolster the tourism industry. It integrates existing literature on tourism destination marketing to provide a comprehensive understanding of marketing methods and their impact on tourism promotion, paving the way for future research in this crucial area.

### **Statement of Problem**

The main objective of this study is to explore and evaluate how digital marketing impacts the expansion of tourism in Pakistan. It aims to analyze different digital marketing approaches and platforms that could efficiently highlight Pakistan's tourism offerings. Additionally, the research seeks to pinpoint and suggest the most suitable and impactful strategies for promoting tourism within the country. Despite Pakistan's rich variety of landscapes, cultural heritage, and historical sites, which offer significant potential for economic growth and development, the tourism industry faces challenges in effectively marketing these attractions to both local and international tourists

### **Objectives of Research**

The following are the study's primary goals:

1. Look at the role of electronic word of mouth in tourism promotion.
2. Determine the function of influencer/affiliate marketing in the promotion of tourism.
3. To evaluate the advantages of viral marketing in promoting tourism.
4. To assess the potential of social media platforms for promoting/demonstrating tourism.
5. To assess the trustworthiness of tourism-related information on social media sites.
6. To identify the limitations of digital tourism promotion.

### **Research Questions**

The following research questions are addressed by this project:

1. What is the impact of e-word of mouth in influencing tourists' travel decisions and destination choices in the context of Pakistani tourism?

2. How do influencer/affiliate marketing strategies contribute to the visibility and popularity of Pakistani tourism destinations among potential travellers?
3. What are the key benefits and drawbacks of viral marketing campaigns in promoting Pakistani tourism, and how do they influence tourists' perceptions and behaviors?
4. To what extent do social media platforms play a significant role in positively or negatively affecting the image and perception of Pakistani tourism destinations among domestic and international tourists?
5. How credible and reliable is the information shared on social media platforms regarding Pakistani tourism, and how does it impact tourists' decision-making processes?
6. What are the main challenges and limitations faced by destination marketers in Pakistan when utilizing digital marketing methods to promote tourism, and how can these constraints be addressed effectively?

### **Hypothesis**

The purpose of this study is to test the following theories:

- H<sup>1</sup>:** E-word of mouth marketing significantly influences tourists' decisions and positively impacts the promotion of tourism in Pakistan, as travelers rely on recommendations and reviews from friends, family, and online communities to make travel-related choices.
- H<sup>2</sup>:** Influencer/affiliate marketing is important for boosting tourism in Pakistan because prominent individuals and affiliate relationships can successfully reach and engage a large audience, sparking interest in the country's tourist hotspots.
- H<sup>3</sup>:** Viral marketing efforts play an important role in growing tourism in Pakistan since engaging and shareable content has the ability to spread quickly across digital channels, drawing the attention of potential tourists.
- H<sup>4</sup>:** The role of social media marketing It plays an important role in boosting Pakistani tourism since it provides an excellent platform for destination marketing, exhibiting the country's unique attractions, and communicating with guests in real time.
- H<sup>5</sup>:** In the course of digital media marketing Although digital platforms are beneficial in promoting tourism, there may be credibility difficulties regarding the authenticity and reliability of information posted on them, potentially impacting tourists' decision-making process.
- H<sup>6</sup>:** The limitations and Limited internet connection, digital literacy constraints, and technological infrastructural limitations may have an impact on the expansion of tourism promotion in Pakistan, resulting in slower progress in reaching potential tourists.

## **Definitions of the key terms**

### **Tourism Promotion**

The practice of spreading information and updates about destinations to attract visitors. It involves strategic efforts to encourage people to visit and discover various locations. (Hasan, 2015).

### **Marketing**

A comprehensive approach involving processes and strategies aimed at creating, communicating, delivering, and exchanging valuable offerings to customers, stakeholders, and the broader community (Twin, 2020).

### **Digital Marketing**

The use of electronic channels and digital platforms, including social media, websites, emails, and apps, for advertising and promotion activities. (Alexander, 2020).

### **e-WOM Marketing (Electronic Word of Mouth Marketing)**

Electronic Word of Mouth Marketing involves individuals sharing their opinions and experiences about services or destinations online, influencing potential visitors. (Kremers, 2012).

### **Influencer/Affiliate Marketing**

Utilizes individuals with significant online followings (influencers) or affiliates (who earn commissions for driving traffic or sales) to promote tourism experiences (Steffens, 2017).

### **Viral Marketing**

A strategy aimed at creating content that is engaging and shareable, facilitating rapid information spread akin to a viral process, to increase brand awareness (Kagan, 2019).

### **Social Media Marketing**

The use of social media platforms to market, engage with the audience, increase web traffic, improve brand visibility, and enhance revenue for tourism entities (Kenton, 2018).

### **Credibility of Information on the Internet**

Assessing the reliability and trustworthiness of online information through platform, site, and content evaluation (Rieh & Danielson, 2008).

### **Delimitations of Research**

The research faces limitations in data accessibility and the feasibility of conducting extensive fieldwork, leading to reliance on a smaller data sample size. To maintain research validity, it will focus on specific age groups, excluding children and the elderly, and largely employ online platforms for data collection. This method might bias the results towards internet-savvy individuals, potentially missing insights from those with limited online engagement. The study will primarily target youth and adults, potentially omitting valuable perspectives from teenagers and seniors.

Due to budgetary and time constraints, the research will predominantly utilize quantitative methods, analyzing numerical data, which may overlook nuanced qualitative insights. The broad scope of digital marketing's impact on Pakistani

tourism necessitates a selective examination of variables, possibly not encompassing all relevant factors and leaving gaps for future research.

The novelty of exploring digital marketing in the context of Pakistani tourism might encounter a limited availability of literature, constraining the study to a smaller range of sources. Despite these limitations, the research aims to shed light on digital marketing's role in enhancing Pakistani tourism, contributing to knowledge while recognizing areas for further in-depth exploration.

## **LITERATURE REVIEW**

### **Tourism Promotion:**

Tourism, as an activity of spending time away from home for leisure, relaxation, exploration, and enjoyment by utilizing commercial facilities, plays a significant role in the global economy (Walton, 2018). It has become a crucial revenue generator for developed and developing countries alike. However, despite its potential, the literature on tourism, especially in the context of Pakistan, remains limited and scarce (Niazi, Qazi, & Basit, 2019).

Tourism can be seen as a trade of imports and exports, where imports refer to the expenses incurred by residents of a country when traveling abroad, while exports denote the expenditures made by foreign tourists within the host country (Lew, 2011). In the modern world, the tourism industry is dynamic and promising, contributing not only to foreign currency earnings but also showcasing the nation's culture and diversity. To capitalize on its tourism potential, Pakistan needs to adopt a conscious approach, focusing on developing various offerings and refining marketing strategies (Tuhin & Majumder, 2011).

Research on the interaction between financial development and the growth of the tourism industry in Turkey revealed a strong correlation between the two. Turkey emerged as a desirable tourism destination with a well-designed financial system, and the study identified a significant and long-term relationship between tourism and financial growth (Katircioglu, Katircioglu, & Altinay, 2018). Similar research conducted in Pakistan explored the relationship between oil prices, inflation, exchange rates, and tourism demand, and identified a long-term asymmetric relationship. The study suggested that institutional quality plays a crucial role in shaping the tourism market in the long run (Meo, Chowdhury, Shaikh, Ali, & Sheikh, 2018).

Pakistan's abundant natural scenic beauty offers diverse tourism opportunities, and it has been recognized as a magical tourist destination (Hyun-ju, 2017). However, the full potential of the tourism sector remains untapped due to the lack of effective strategies, mismanagement, and other challenges hindering its contribution to Pakistan's economic growth (Ahmed, Ilyas, Tariq, & Zafar, 2017). The unregulated influx of tourism traffic and the absence of carrying capacity calculations for major tourist destinations necessitate the development of a comprehensive tourism plan to achieve sustainable growth in these areas (Ahmed & Mahmood, 2018).

Promotion, as an essential element of the marketing mix, plays a crucial role in the tourism industry, aiming to educate, inspire, motivate, and inform customers about brands or offerings (Chiguvi, Madondo, & Tadu, 2019). Cultural festivals and local traditions can be effective tourism marketing strategies, benefiting both locals and companies in the host country.

### **Digital Marketing**

Digital marketing has evolved into an integral component of modern businesses, leveraging internet technology to reach and engage people all over the world. Traditional methods of organization growth were vital prior to the emergence of digital marketing. However, with the advent of the Internet, new marketing tactics evolved, opening up a plethora of opportunities to engage target audiences (Kaur, 2017).

Consumers can compare services from many companies all over the world with the touch of a button (Kaur, 2017). This shift in the travel industry has created new opportunities for destination marketing, allowing tourism groups to communicate directly with potential visitors via digital channels.

Wireless technology have paved the way for the broad adoption of social media sites and e-word of mouth (e-WOM) practices, which are critical components of digital marketing. These digital tools have become an integral part of our daily lives, enabling global connectivity and serving as a modern mode of communication for individuals worldwide (Alghizzawi et al., 2018).

The impact of high global competitiveness brought on by digital technologies has been felt across numerous industries, including marketing. These variables have significantly influenced consumer behavior and the mindset of travelers, altering traditional paradigms of selling and advertising (Mahmoud, 2019). With digital marketing at the forefront, destination marketing has become more dynamic and interactive, requiring businesses to adapt and implement innovative strategies to stand out in the highly competitive digital landscape.

### **e-Word of Mouth Marketing**

Electronic word-of-mouth (e-WOM) refers to the process of sharing information electronically among users. Its impact on customer satisfaction plays a vital role in determining the overall value of a company. Positive e-WOM can slowly build consumer trust and influence their decision-making process (Wu & Wang, 2011).

Online user feedback has become a valuable source of knowledge for potential customers before making a purchase. Elements such as the valence of analysis and type of argumentation contribute to the credibility of e-WOM messages (Willemsen, Neijens, Bronner, & Ridder, 2011).

The persuasiveness of e-WOM messages is influenced by the individual's level of involvement and the reputation of the message source. Different types of e-WOM appeal can have varying effects on consumers (Wu & Wang, 2011).

In the realm of tourism, word-of-mouth from friends, family, and other travelers is a prominent source of information for decision-making (Bieger & Laesser, 2004). Travelers tend to rely on e-WOM, especially for unfamiliar destinations, where experiences of others become crucial in forming perceptions (Murphy, Mascardo, & Benckendorff, 2007). Positive word-of-mouth has proven to be an effective promotional tool widely utilized by the tourism industry to enhance destination reputation and attract more visitors (Lai, Hitchcock, Lu, & Liu, 2018).

The digital age, characterized by technological advancements, has transformed communication from face-to-face interactions to cyberspace. E-WOM, as one dimension of cyberspace, plays a significant role in shaping consumer perceptions and decision-making processes (Jeong & Jang, 2011) (Senecal & Nantel, 2004).

E-WOM has become widespread due to the extensive use of the internet and social media. Potential travelers now seek information online, including reviews, blogs, vlogs, and other forms of e-WOM, to gather insights about their destination (Thurau, Gwinner, Walsh, & Gremler, 2004).

E-WOM can be categorized into personal and industrial forms, further divided into one-to-one, one-to-many, and many-to-many communications. One-to-one communication occurs between individuals sharing their experiences with familiar acquaintances. One-to-many communication involves sharing information through online reviews, personal blogs, and social media platforms, while many-to-many communication takes place on websites and video streaming platforms, shaping opinions and influencing travel choices (Litvin, Goldsmith, & Pan, 2008) (Chen, Dwyer, & Firth, 2018) (Chen, Larry, & Firth, 2014) (Park & Allen, 2013).

Online user-generated reviews, particularly on platforms like TripAdvisor, have emerged as crucial factors in tourists' decision-making process (Chen & Xie, 2008). Websites like TripAdvisor play a significant role in assisting consumers in selecting their destinations, providing valuable insights through user-generated reviews (Yan, Zhou, & Wu, 2018).

### **Influencer/Affiliate Marketing**

Influencer marketing, when effectively executed, creates a two-way communication opportunity and serves as a secondary social network tactic aligning authentic communication with marketing messages (Vodák, Novysedlák, Čakanová, & Pekár, 2019).

Endorser-destination correlation and endorser-consumer congruence play a crucial role in influencer marketing. Brands must carefully select influencers who align with their destination appeal. However, there is a potential risk when endorsers have negative publicity or controversies, impacting the destination's reputation. Marketers must have backup strategies if the alignment becomes impossible (Pratt & Rinka, 2018).

Influencer/affiliate marketing has emerged as a significant modern approach in marketing, leveraging the influence of individuals, products, or events

(Brown & Hayes, 2008). With consumers actively sharing their opinions online and influencing others, businesses recognize the power of influencers in shaping opinions (Pang & Lee, 2008).

The psychology of influencing rests on six principles: consistency, liking, reciprocity, authority, social proof, and scarcity. These principles tap into individuals' automatic behaviors and understanding to influence their decision-making process (Cialdini, 2009).

In today's digital landscape, companies are increasingly turning to influencers to reach their target audiences effectively, bypassing ad blockers, and establishing trust through the influence of relatable individuals. The personal connection influencers build with their followers enhances the credibility of the brand (Hall, 2016).

Social media influencers have become key marketing tools, shaping consumer beliefs and driving future behavior. The impact of influencers is evident in media and consumer perception (Booth & Matic, 2011).

Influencer marketing capitalizes on the large followings of influencers, effectively turning their followers into brand ambassadors. Consumers trust influencers' recommendations, finding their messages credible and persuasive (Talaverna, 2015).

The use of influencers has proven to be highly beneficial for companies, with influencer marketing yielding 11 times higher returns on investment compared to conventional ads (Kirkpatrick, 2016).

Top reasons for using influencer marketing include enhancing brand support, increasing brand awareness, reaching new target markets, growing the brand's share of voice, and driving revenue growth (Nanji, 2017).

Influencer marketing has become an indispensable component of digital marketing for many brands. In 2016, 60% of brands used social influencers to reach new or challenging consumer segments in promotional campaigns (Krasniak, 2016).

The growth potential of influencer marketing is substantial, with projections estimating a total spending between US\$10 billion and US\$15 billion in the coming years (Morin, 2017). Over a third of marketers now allocate more than \$500,000 annually to influencer marketing (Izea, 2017).

In tourism marketing, influencer endorsements have proven beneficial. Celebrity endorsements capture public attention, enhance credibility, increase ad recall, boost brand recognition, and establish synergies between the product brand and the personal brand. Influencer endorsements significantly impact destination reputation and awareness in tourism advertising (Glover, 2009). Numerous studies have demonstrated the positive effects of typical celebrity endorsements on destination reputation (McCartney & Pinto, 2014; Veen & Song, 2014; Yen & Teng, 2015).



## **Viral Marketing**

Viral marketing in the tourism and hospitality sector has the potential to create a positive chain reaction among happy and satisfied tourists, leading to increased future tourist engagement. Utilizing strategies such as pass-along, user-controlled databases, incognito mood, and incentivized viral databases, businesses can effectively leverage social networks for viral marketing (Daif & Elsayed, 2019).

The distribution of tourist information in Jordan is significantly facilitated by viral online tourism promotion. For successful information dissemination, content should be easily accessible, quickly understood, presented informatively, concise, and creatively engaging. Viral marketing campaigns not only encourage creativity but also provide valuable insights into current tourism offerings (Alkharabsheh, ALSarayreh, Rumman, & Farajat, 2011).

Viral marketing, as termed by Steve Jurvertson and Tim Draper, involves spreading ad emails from existing users to other users using platforms like Hotmail, rapidly infecting readers with the advertised content (Czepiec, Bryant, Roxas, & Whitson, 2012). Viral marketing harnesses social networks, allowing people to share experiences of products or services, significantly impacting brand referrals (Litvin, Goldsmith, & Pan, 2008).

Viral marketing, as a branch of internet marketing, rapidly spreads messages, generating awareness, curiosity, interest, and influencing tourists' decisions (Claudia, Alexandra, & Ionut, 2011). It not only enhances brand promotion and awareness but also drives sales (Kirby & Mardsen, 2005). Unlike spam emails, viral marketing content encourages users to share experiences with friends, generating positive word of mouth for the product or service (Rathore, Joshi, & Ilavarasan, 2017).

Various types of viral marketing strategies have been identified, including pass-along, incentivized viral, incognito mood, and user-controlled databases. These strategies allow messages to be easily spread, leading to viral campaigns (Phelps, Lewis, Mobilio, Perry, & Raman, 2005; Mohsen & Zahra, 2013; Yadav, Agarwal, & Singh, 2014).

While viral promotion can have a positive impact on tourist organizations, potential detrimental consequences must be considered (Getz, 2008). To create an effective viral marketing campaign, businesses should offer free goods or services, ensure easy transferability of content, scale campaigns from small to large, leverage human motivations, utilize existing contact networks, and benefit from other tools and platforms (Coulter & Roggeveen, 2012; Mejía-Trejo, Sanchez-Gutierrez, & Vazquez-Avila, 2012).

## **Social Media**

Social media refers to interactive platforms, forums, and networks that connect people and allow them to exchange content, ideas, and experiences. Platforms like Facebook, Twitter, Instagram, and WhatsApp have become significant for personal and business use. In the tourism industry, social media has a profound impact, with users relying on these platforms to plan their trips, share personal experiences, seek travel information, and access customer support (Mir, 2017).

Social media facilitates the creation and sharing of content among virtual communities, enabling travelers to find updates about their future tours and share their experiences through comments, ratings, and photographs (Aftab, Khan, & Iqbal, 2019). Participation, collaboration, culture, transparency, and networking are key aspects of social media networks (Sihombing, 2017).

Social media platforms play a crucial role in brand co-creation, challenging advertisers to adapt to a new landscape where products gain recognition through social network discussions rather than just official marketing messages (Fournier & Avery, 2011). Social media democratizes media output, allowing consumers to create and distribute content without relying solely on advertisers (Peters, Chen, Kaplan, Ognibeni, & Pauwels, 2013; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Consequently, social media's impact on businesses is revolutionary and sociological (Pitt, Berthon, Plangger, & Shapiro, 2012).

Social media serves as a communication tool among social actors, enabling storytelling, versatility, and performance as a means of influencing others (Foucault, 1977; Peters, Chen, Kaplan, Ognibeni, & Pauwels, 2013). It has evolved from a medium of social interaction into a powerful marketing tool for corporations, promoting a social transformation beyond mere technological development (Verissimo & Tiago, 2014). The rise of mobile devices like tablets and smartphones has further interconnected the offline and online worlds (Adams, 2011).

Unlike traditional marketing models, social media interactions occur outside the direct control of organizations, allowing customers to reshape brand perceptions based on their personal views (Mangold & Faulds, 2009; Kohli, Suri, & Kapoor, 2014). Tourism and travel discussions have become popular topics on social media platforms, providing a convenient outlet for sharing vacation experiences (Millie, 2014).

Through online travel and tourism services available on platforms like Facebook, Instagram, and Twitter, hotels and airlines can predict customer buying behavior and consider demographic profiles (Rekom, Teunissen, & Frank, 1999; Bedard, 2000; Zafiroopoulos, Vasiliki, & Antoniadis, 2015). Electronic social media shopping apps enable shoppers to save time by accessing travel and tourism services directly online (Marcussen, 2001; Christou & Avdimiotis, 2004; Chatzigeorgiou, 2017).

### **Credibility of Information on Social Media for Tourists**

Credibility in the context of social media involves several essential aspects, including expertise, honesty, accuracy, trustworthiness, reputation, group association, and equity, which are critical for establishing and enhancing credibility (Chiguvu, Madondo, & Tadu, 2019).

Customers tend to trust and accept the opinions, behaviors, and actions of promoters who share similar interests, morals, and attributes (Schouten, Janssen, & Verspaget, 2020). In Pakistan, social media has not only revolutionized social interaction but also facilitated business activities (Zulqarnain & Hassan, 2016).

In the digital information age, credibility is a blend of medium and source credibility.

The credibility of a medium is assessed based on factors like factualness, motivations, respect for privacy, concern for the community, and trustworthiness (Kiousis, 2001). For digital information available through online sources, credibility markers include trustworthiness, bias, believability, accuracy, and completeness (Flanagin & Metzger, 2000).

A study evaluating Chinese Millennials' perception of credibility regarding traditional and social media found that print media appeared more reliable for national and local news, but social media usage was significantly higher (Cook, 2013).

The credibility of influencers is crucial in encouraging people to engage in leisure tourism and select their next destination. The influencer's credibility is evaluated based on identity verification, social media presence, and perceived similarity (Hoffner & Buchanan, 2005; Gräve, 2017). Identification with influencers can be driven by wishful identification, where individuals desire to be like the influencer (Kamins, Brand, Hoeke, & Moe, 1989).

Endorser credibility, characterized by trustworthiness and competence, plays a vital role in advertising effectiveness (Sternthal, Phillips, & Dholakia, 1978; Ohanian, 1991). Customers tend to positively judge brands endorsed by trustworthy individuals with relevant knowledge or abilities (Erdogan, 1999; Bergkvist & Zhou, 2016).

### **Hindrances of Marketing Pakistani Tourism**

The promotion and growth of Pakistani tourism face several hindrances, stemming from both internal and external factors. The lack of trust in the private sector by the Ministry and inadequate policy enforcement have hindered the sector's substantial growth (Ahmad, 2016). To attract foreign tourists, Pakistani embassies should appoint qualified personnel for travel activities and organize events like photography shows, documentary screenings, seminars, and cultural activities in various countries to showcase Pakistan's environment, history, and cultural heritage (Ahmad, 2016).

Tourism plays a crucial role in developing a modern economy, generating national revenue, employment, and foreign exchange earnings (Lyons, Young, Hanley, & Stolk, 2016; Meo, Chowdhury, Shaikh, Ali, & Sheikh, 2018). However, despite its potential, the tourism sector in Pakistan has been neglected (Ahmed, Nawaz, & Qazi, 2011). Baloch and Rehman (2015) highlighted the need for improvements in visa policies, infrastructure, and religious and historical site relocation strategies to attract tourists from foreign countries. The deficiency of resources and community knowledge is a significant barrier to tourism development in many countries (Andereck, Valentine, Knopf, & Vogt, 2005; Aref, Redzuan, Emby, & Gill, 2009).

In Pakistan, terrorism and violence have adversely impacted tourism (Henderson, Foo, Lim, & Yip, 2010; Sofield, 2006). Safety and security are crucial for promoting tourism as tourists avoid destinations with a history of insurgency (Chen & Noriega, 2004; Seddighi, Nuttall, & Theocharous, 2001). While the situation has improved, it remains a fundamental hindrance for tourism promotion in Pakistan (Raza & Jawaid, 2013).

Other hindrances for promoting tourism in Pakistan include the absence of an active federal tourism body, low priority given to tourism on the government's agenda, difficulties in obtaining visas, lack of interdepartmental liaison, limited investment from the private sector, and absence of credible tourism boards (Baloch & Rehman, 2015). The negative overall image due to historical unrest and insurgency, poor health facilities, lack of unbiased regulatory bodies, and underdeveloped tourism infrastructure are also major barriers to tourism growth (World Tourism Organization, 2021).

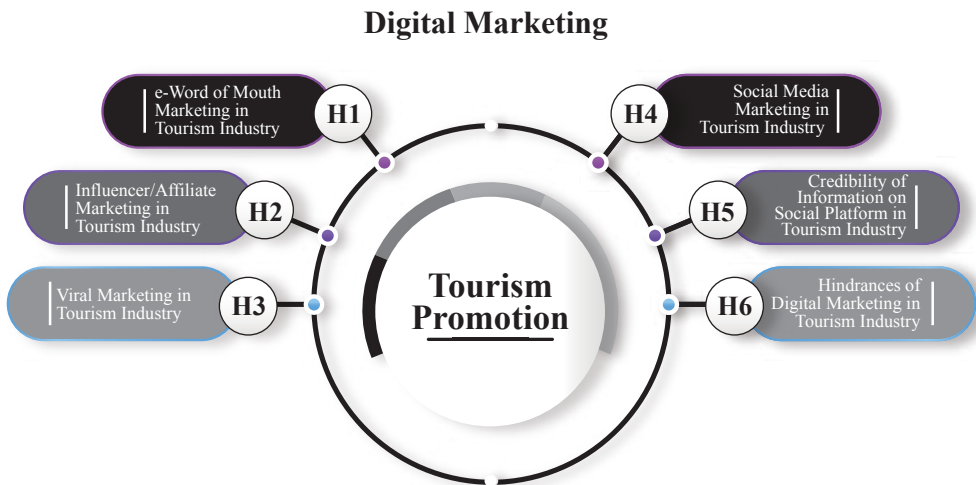
## RESEARCH METHODOLOGY

This study investigates digital marketing's impact on promoting tourism in Pakistan, encompassing a diverse sample from major cities and international tourists to ensure comprehensive insights. Utilizing a sample of 325 participants, chosen through non-probability sampling due to constraints, it spans various demographics, including age, gender, occupation, and income, focusing on those engaged with travel, whether as professionals or tourists. The research employs an explanatory design and a quantitative approach, starting from literature review to hypothesis testing using questionnaires and statistical analyses like Pearson Correlation, Linear Regression, and Cronbach's Alpha. Targeting individuals related to tourism, the study excludes the very young and old, prioritizing internet-savvy respondents to understand digital marketing's role in tourism. The methodology, rooted in positivism, aims to provide actionable insights to enhance Pakistan's tourism through digital platforms, substantiated by structured questionnaires and analyzed using SPSS to validate the findings.

## CONCEPTUAL FRAMEWORK

Independent variables - (IV)

Dependent variable - (DV)



## DATA ANALYSIS

This chapter presents the data analysis and results of the study on "The Role of Digital Marketing in Promoting Pakistani Tourism: Insights for Destination Marketing." The data was collected from 325 individuals of different ages, genders, occupations, and qualification levels who frequently travel and support domestic tourism in Pakistan. Convenience and snowball sampling techniques were used to collect the data through domestic travel agencies and tourists. The reliability of the data collection instrument was tested using Cronbach's Alpha, and Pearson's correlation and regression analyses were conducted to investigate the relationship between the independent and dependent variables.

### Reliability Testing

The Cronbach's Alpha test was conducted to assess the reliability of the data collection instrument. All variables showed satisfactory results, with values greater than 0.5, indicating high reliability.

**Table 1:** Reliability of Collected Data

Variables	Items	Cronbach Alpha Values
e-Word of Mouth Marketing	3	0.785
Influencer/Affiliate Digital Marketing	3	0.803
Viral Digital Marketing	3	0.639
Social Media in Digital Marketing	4	0.744
Credibility of Information on Digital Marketing	3	0.565
Hindrances of Digital Marketing	3	0.559
Tourism Promotion	3	0.849
<b>All Variables</b>	<b>22</b>	<b>0.706</b>

Pearson's correlation analysis was conducted to examine the relationships between the variables. Strong positive correlations were found between most of the independent variables and tourism promotion.

**Demographics of Respondents Table 2:** Demographics - Gender

Gender					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Female	140	43.1	43.1	43.1
	Male	185	56.9	56.9	100.0
	Total	325	100.0	100.0	

According to the data gathered from 325 consumers, 185 of them are men and 140 are women.

**Table 3:** Demographics - Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-25	50	15.4	15.4	15.4
	25-35	145	44.6	44.6	60.0
	35-45	120	36.9	36.9	96.9
	45-55	10	3.1	3.1	100.0
	Total	325	100.0	100.0	

The research data was gathered from 325 persons, of which 50 were in the 15–25 age group, 145 in the 25–35 age group, 120 in the 35–45 age group, and 10 in the 45–55 age group.

**Table 4:** Demographics – Education

Qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	20	6.2	6.2	100
	Graduate	140	43.1	43.1	43.1
	Masters and above	165	50.8	50.8	93.8
	Total	325	100.0	100.0	

The highest number of data sample indicates the qualification level to be masters and above, which is at the frequency of 165 with a percentage of 50.8.

**Table 5:** Demographics – Income

Monthly Income (Approx.)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25,000	35	10.8	10.8	100
	25,000-50,000	25	7.7	7.7	68.0
	50,000-75,000	23	7.1	7.1	75.1
	75,000-100000	46	14.2	14.2	89.2
	100000-above	196	60.3	60.3	60.3
	Total	325	100.0	100.0	

This indicates that majority of the sample population earns above 100,000/= on monthly basis which can be considered as a good spending power for the activities like tourism.

**Correlation Analysis**

**Table 6:** Correlation Matrix

Correlations								
		e-Word of Mouth Marketing	Influencer/Affiliate Digital Marketing	Viral Digital Marketing	Social Media in Digital Marketing	Credibility of Information on Digital Marketing	Hindrances of Digital Marketing	Tourism Promotion
e-Word of Mouth Marketing	Pearson Correlation	1	.562**	.594**	.532**	.625**	.563**	.643**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Influencer/Affiliate Digital Marketing	Pearson Correlation	.562**	1	.460**	.530**	.437**	.437**	.620**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Viral Digital Marketing	Pearson Correlation	.594**	.460**	1	.532**	.652**	.440**	.785**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Social Media in Digital Marketing	Pearson Correlation	.532**	.530**	.532**	1	.608**	.521**	.630**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Credibility of Information on Digital Marketing	Pearson Correlation	.625**	.437**	.652**	.608**	1	.421**	.583**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Hindrances of Digital Marketing	Pearson Correlation	.563**	.473**	.440**	.521**	.421**	1	.686**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325
Tourism Promotion	Pearson Correlation	.643**	.620**	.785**	.630**	.583**	.686**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	325	325	325	325	325	325	325

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Pearson's correlation analysis was conducted to examine the relationships between the variables. Strong positive correlations were found between most of the independent variables and tourism promotion.

**Regression Analysis**

The model discusses the ANOVA and analysis of coefficients based on factors, as well as the model summary.

**Table 7:** Regression Model Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804	.796	.487	1.40058
a. Predictions: (Constant), Hindrances of digital Marketing, Credibility of Information on Digital Media, Influencer/Affiliate Digital Marketing, Viral Marketing Digitally, Social Media in Digital Marketing, e-Word of Mouth Marketing				

Multiple regression analysis was conducted to investigate the impact of independent variables on tourism promotion. The model summary showed a strong relationship between the model and the dependent variable (tourism promotion), with an R-Square value of 0.796, indicating that 79% of the variation in tourism promotion is affected by the predictor variables associated with digital marketing.

**Table 8:** Regression Model Results – ANOVA

ANOVA						
	Model	Sum of Square	df	Mean Square	F	Sig.
1	Regression	614.321	6	102.387	52.195	.000
	Residual	623.793	318	1.962		
	Total	1238.114	324			
a. Dependent Variable: Tourism						
b. Predictions: (Constant), Hindrances of digital Marketing, Credibility of Information on Digital Media, Influencer/Affiliate Digital Marketing, Viral Marketing Digitally, Social Media in Digital Marketing, e-Word of Mouth Marketing						

In the above table the sig value appears to be lower than 0.05 which suggests that the model is proved to be significant for the study.

**Table 9:** Regression Model Results – Co-efficient

Coefficients						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.B
		B	Std. Error	Beta		
1	(Constant)	4.275	.486		8.806	.000
	e-Word of Mouth Marketing	.589	.061	.583	9.671	.000
	Influencer/Affiliate Digital Marketing	.256	.047	.283	5.473	.000
	Viral Digital Marketing	.084	.068	.070	4.233	.003
	Social Media in Digital Marketing	.087	.040	.123	5.188	.002
	Credibility of Information on Digital Marketing	.129	.062	.126	2.086	.138
	Hindrances of Digital Marketing	.210	.053	.205	4.979	.000
a. Dependent Variable: Tourism						

The regression analysis of coefficients is done through SPSS. It helps determining the nature of relationship between the dependent and each of the independent variable which means it helps finding out the negative or the positive relationship between dependent and the independent variables.

The sig value lesser than 0.05. has a significant and higher than 0.05. has a high and low impact respectively.



**Hypothesis Testing**

**Table 10:** Hypothesis Testing

S No	Hypothesis	T-Value	Sig Value	Empirical Conclusion
H1	e-Word of Mouth Marketing plays a vital role in promoting tourism	9.671	0.00	Rejected
H2	Influencer/Affiliate Digital Marketing plays a vital role in promoting tourism	5.473	0.00	Rejected
H3	Viral Marketing Digitally is important to boost tourism	4.233	0.003	Accepted
H4	Social Media in Digital Marketing plays a key role in promoting tourism	5.188	0.002	Accepted
H5	Digital Media Marketing has credibility issues in promoting tourism	2.086	0.138	Rejected
H6	The constraints in digital promotion has an impact in slow growth of tourism	3.979	0.00	Accepted

The results derived from SPSS states that only 5 of the stated Hypothesis from this study are accepted. However, one on them is rejected based upon the T value which is lesser than 4.0 and Sig Value which is greater than 0.05.

**CONCLUSION**

The main focus of this study was on the relationships between the dependent and independent variables. Tourism Promotion is the study's dependent variable, and it depends on the independent variable, which is digital marketing. This study gives detailed information on how the utilization of various digital marketing platforms and strategies affects tourism promotion. In this study, the correlations between the dependent and independent variables are carefully examined and described.

Every independent variable in this study is examined individually to determine its impact on the dependent variable. The findings indicated that five out of six independent variables were accepted. However, one of them was turned down, demonstrating that the element had no appreciable influence on DV. The other 5 independent variables' additional results demonstrated that they have a strong, complete positive link with the DV and that they have a variety of effects on it.

**SUMMARY OF FINDINGS**

This study investigates digital marketing's effect on enhancing Pakistani tourism, examining six digital marketing aspects and their impact on tourism promotion. Through a survey of 500 individuals, receiving 325 responses, it finds that all but digital media credibility positively influence tourism. The research highlights digital marketing's efficiency and growing importance over traditional methods, with strong reliance on e-word of mouth, influencer marketing, and the effectiveness of viral marketing and social media in attracting tourists. Pearson's Correlation Analysis showed positive correlations among most digital marketing variables and tourism promotion, underscoring the shift towards digital strategies in tourism marketing.

## **RECOMMENDATIONS**

Based on the findings, the following recommendations are proposed:

1. **Encourage e-word of mouth marketing:** Recognize the impact of electronic word-of-mouth marketing on consumer decisions and leverage it to promote tourism effectively. Future research can further explore this variable's effectiveness in tourism promotion.
2. **Utilize influencer/affiliate marketing:** Tap into the potential of influencer and affiliate marketing to attract more consumers to tourism destinations. This strategy can work wonders, especially considering the inherent appeal of the tourism industry.
3. **Harness the power of viral marketing:** Employ viral marketing strategies to rapidly boost tourism in Pakistan. Case studies and examples show the potential of viral campaigns to drive significant growth.
4. **Leverage social media for success:** Recognize social media's dominance in digital marketing and utilize it to reach potential travelers effectively. Social platforms play a critical role in travelers' research and decision-making process.
5. **Credibility of information:** While credibility of information on digital media is not a primary factor impacting tourism promotion, efforts should be made to ensure accurate and reliable information is available to potential tourists.
6. **Overcome hindrances in digital marketing:** Overcome digital marketing obstacles by embracing the digital revolution in tourism promotion to boost competition and reach a worldwide audience. Collaboration and partnerships are crucial for maximizing digital tourist projects.

## **IMPLICATIONS OF THE STUDY**

The research offers numerous players in the tourism industry insightful information. Understanding consumer purchasing intentions can be useful for marketing academics, specialists, and practitioners. The results can be used by academic researchers for more study. Based on the study's findings, consumers and clients can make knowledgeable selections. The research can also be used to make commercial decisions for electrical brands and other companies. Given the growing significance of customer purchase intents and electronic word-of-mouth in the tourism business, the study also creates prospects for further investigation in this area.

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## **“COVID-19 PANDEMIC AND FOOD INSECURITY: A CASE STUDY OF PAKISTAN”**

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### **ABSTRACT**

*Food insecurity is becoming one of the most challenging phenomena of recent times. It is considered a global challenge, especially in developing countries. However, after the COVID-19 pandemic, the food insecurity issue raised rapidly. Although the government and other institutes worked exceptionally hard to overcome this problem, the pandemic created a negative impact on it. Food security is directly and positively related to the well-being of individuals. Therefore, the purpose of this study is to emphasize the impact of the COVID-19 pandemic on the food insecurity of Pakistan. To fulfill the objective of this research, the Special Survey for Evaluating Socio-Economic Impact of COVID-19 on Well-being of People is used - conducted by the Pakistan Bureau of Statistics in 2020. The study employs the Ordinary Least Square (OLS) technique for evaluating the objective of this research. The study also constructed a food insecurity index through Principal Component Index. The finding of the study shows a positive and significant impact of wages before COVID-19 on food security whereas; wages during COVID-19 have a negative impact. Employment before and during COVID-19 are statistically significant. Cash assistance during COVID-19 is positive and significant with food insecurity. Based on the finding the study suggested that, although the government of Pakistan Ehsaas Programme working well during the pandemic period it's high time to address current food insecurities issues. The government needs to go beyond merely observing food insecurities to cope with the increasing vulnerability and confront food insecurities..*

**Keywords:** COVID-19 Pandemic, Food Insecurity, Ehsaas Program, Principal Component Index

## 1. INTRODUCTION

Food security means that everyone in the household always has enough food to live an active and healthy life. Food security refers to food that is socially acceptable, appropriate, and safe (Abdullah, et al., 2019; Khan & Shah, 2011). The root causes of food insecurity are sophisticated and multifaceted. They are closely linked to factors such as poverty, lack of access to basic social services, and inadequacy of some public policies (Kansiime, et al., 2021; Abdullah, et al., 2019; Sriram & Tarasuk, 2016). Therefore, food insecurity has recently emerged as a major global concern (Aziz, et al., 2021). Though the latest information on this debate, about 9.9% of the world's population is insecure, and the worst victims of food insecurity and infectious diseases, COVID-19 has made it extremely challenging (FAO, IFAD, UNICEF, WFP, & WHO, 2021). Furthermore, COVID-19's extremely negative economic and social impact turns out to be an exceptionally addressable phenomenon for less developed and developing countries (Pereira & Oliveira, 2020; Mishra & Rampal, 2020). Therefore, these circumstances demonstrate the COVID-19 pandemic's negative impact on global food insecurity, including in Pakistan. (Gillani, et al., 2021).

In Pakistan, one-fourth of the population suffers from food insecurity and is unable to meet their basic daily needs (Shahzad, et al., 2021; Nawaz & Shaheen, 2017; Tanweer, et al., 2015). Quarantine policies in COVID-19 have had a negative and unprecedented impact on Pakistan's already struggling food system, including food access. COVID-19, on the other hand, has a direct impact on individuals' health; however, in addition to adopting COVID-19 policies, responses such as stay-at-home, social restriction, travel, and trade restriction have resulted in a decrease in economic impacts (Shahzad, et al., 2021; Swinnen & McDermott, 2020). Furthermore, food-insecure residents are negatively impacted by the COVID-19 pandemic (Shahzad et al., 2021; FAO, 2020; Nieti, 2020). The closure of economic activities directly harms the ability to purchase food as a result of strict lockdown and stay-at-home policies. Moving further interruptions in the food system resulted in price increases; decreases in wages-income resulted in a loss of purchasing power and exaggerated food insecurity (Shahzad et al., 2021; FAO, 2020; Nieti, 2020; Cardwell & Ghazalian, 2020; Gerard et al., 2020).

As previously stated, the pandemic has a harmful impact on food insecurity, declining purchasing power, price increases, decreased employment status, and wage-income decline. As a result, the goal of this research is to highlight the impact of the COVID-19 pandemic on food insecurity in Pakistan. For this purpose, the study developed Food Insecurity Index through Principal Component Analysis. The study used Special Survey for Evaluating Socio-Economic Impact of COVID-19 on Well-being of People - conducted by the Pakistan Bureau of Statistics (PBS) in 2020 (cross-section analysis) to evaluate the impact of the COVID-19 pandemic on food insecurity in Pakistan. The study employs the Ordinary Least Square (OLS) technique for estimating the model. Besides that, the study evaluates the impact of other social-economic variables: such as Employment Status, Wages, Education (pre-and post-COVID-19), and Adults. The study also incorporates Cash Assistance in the model to evaluate the effect of different cash assistance programs that are successfully working during the time of the COVID-19 pandemic.



There is literature on food security and its determinants in Pakistan (Sultana & Kiani, 2011; Khan et al., 2012; Bashir et al., 2013a; Ali & Khan, 2013; Bashir et al., 2013b), but none of these studies examined the impact of COVID-19 on food insecurity. A couple of studies on the impact of COVID-19 on food insecurity are available. Shahzad et al., (2021) examine the impact of the COVID-19 pandemic on food insecurity and examines the determination of food security, as well as provide strategies in Pakistan's Panjab province. Gillani et al. (2021) examine the impact of the COVID-19 pandemic on food and health insecurity in Punjab's urban informal sector. Ali et al. (2020) investigates the socio-economic impact of the COVID-19 pandemic on Pakistan's rural mountain community. Therefore, this study is thus unique in that it developed a Food Insecurity Index to evaluate the impact of COVID-19 on food insecurity and estimates the overall impact on Pakistan, rather than a specific region or province.

The organization of the remaining paper is as follows: section two provides an overview of previous literature, section three discusses the methodology and data, section four discusses the results of the study, and the last section concluded the paper and through a few policy recommendations for policymakers.

## **2. Review of literature**

There has been little research into the impact of COVID-19 on food insecurity. Previous research has concentrated on policy responses to transportation, trade, logistics, and other challenges. (Faria-e-Castro, 2021; Bhavani & Gopinath, 2020; Shafi & Ren, 2020; Bayer, et al., 2020; Kaplan, et al., 2020). A few studies examined health and economic policies (Eichenbaum, et al., 2021; Alvarez, et al., 2020). Similarly, few studies address the economic consequences of COVID-19 (Baker, et al., 2020; Correia, et al., 2020). Therefore, this section of the study attempts to provide a precise overview of the available literature on the impact of COVID-19 on food insecurity.

(Ahn & Norwood, 2021) proclaims that in the spring of 2020, the COVID-19 pandemic in the United States resulted in massive unemployment, rising food prices, and declining business sales. This led to a decline in household finances and an increase in food insecurity. The study also shows how food insecurity is on the rise as the US government is unable to measure it by December 2020. The study included the Opt-in Panels Internet Survey, which has been rapidly developed in previous research and can estimate government data. In May 2020, the study will look at food insecurity. The results show no significant increase in food insecurity, which was about 3% higher than in 2016 and 2017. (Gundersen, et al., 2021) discuss Feed Americas maps the Meal Gap (MMG) and assesses food insecurity in the United States. The study states that MMG has been in operation for over a decade and provides a sub-state level assessment of food insecurity for both the general population and children. Furthermore, due to the widespread use of food banks, MMGs are often used by state and local governments to assist communities facing food insecurity. As a result, this study explains the MMG Foundation, how it works, and how it ignores the US approach to food providers, as well as how food insecurity in 2020 How to predict features. As a result of the 2018 COVID-19 pandemic. Therefore, by 2020, 17 million more Americans will be facing food insecurity.

(Mishra & Rampal, 2020) deliberately examines the pandemic and proclaims it to be a human challenge as well as a possible cause of food insecurity. First, the study looks at hunger and food insecurity in low- and middle-income nations around the world, as well as in India. India's ranking in the Global Hunger Index (GHI) 2019, India's lockdown condition in COVID-19, and India's present economic situation are also discussed in the study. The study also offers light on the factors that contribute to hunger among Indian mothers and children. Following that, the study explored the impact of COVID-19 on people's lifestyles and appetites, which leads to food insecurity, as well as nutritional status, productivity, education, and pay earnings. More crucially, the researchers addressed a variety of complementary approaches to avoid COVID-19-related deaths, as well as immediate, medium, and long-term measures to prevent deaths from hunger and food insecurity. Finally, the study emphasizes the need for the Indian government's timely participation in combined efforts by governmental and non-governmental groups to alleviate hunger and food insecurity, as well as lower COVID-19-related rates. (Pereira & Oliveira, 2020) established the relationship between poverty, food insecurity, and the COVID-19 pandemic. In the fight against the pandemic in more low-income nations, this study presents reliable techniques and social protection tactics. Poverty and food insecurity were examined in the study. According to the study, COVID-19 has been linked to poverty and food insecurity and this is a developing trend. This could be due to a lack of or ineffective political, economic, and social initiatives, job loss and compromise with food production and distribution chains, and a lack of vision for healthy eating in various countries throughout the world. In particular, poor countries are already experiencing social and economic imbalances, and pandemics are putting them in greater danger. Therefore, the study recommends that governmental policies ensuring human rights be devised and implemented for the people to ensure food security in the battle against poverty.

(Wolfson & Leung, 2020) argue that the COVID-19 outbreak has exacerbated food insecurity in the United States. The early effects of pandemics on low-income American adults were ignored in this study due to the use of the social distance metric. A national (web-based) survey was conducted from March 19 to 24, 2020. With a total sample size of 1478 responses, the overall adult response rate was 53%, with a median income of 250 %of the federal poverty level in the United States. This is based on the current state of home food safety as well as the COVID-19 issues. Overall, 36% of food-secure adults in the United States had low incomes, 20% had marginal food security, and 44% were food insecure. Furthermore, 18.8 %of adults with low food safety reported being able to follow public health recommendations for buying food for two weeks at a time. Furthermore, COVID-19's short-term losses were caused by low-income households and food insecurity, which already plagued food insecurity and poverty. To address food insecurity as the pandemic progressed, an immediate and comprehensive policy response was required. Another study by (Niles, et al., 2020) claims that COVID-19 has disrupted food supply and increased food insecurity, resulting in a slew of negative personal and public health consequences. The extensive image capture of COVID-19 influenced the study, which used the facility model to survey population levels across the state. The study chose the first period of statewide home stay orders in Vermont, which runs from March 29 to April 2020. The study assessed food insecurity before and after COVID-19 using a six-item certified

food safety module from the United States Department of Agriculture. The study investigates the prevalence of food insecurity and identifies food access challenges, strategies to address them, and useful interventions, as well as food safety, permanently food insecure individuals (COVID). (Before and after COVID-19) and new insecure households (after COVID-19). According to the study, there has been a 32.3 %increase in household food insecurity among 3219 respondents since COVID-19. The new rate of food insecurity in households was 35%. Respondents who lost their jobs were more likely to experience food insecurity. Furthermore, the study discovered several physical and economic barriers, as well as concerns about food access during COVID-19. Respondents who experienced food insecurity were more likely to have access to and employ counterproductive policies. It also emphasizes that two-thirds of COVID-19 households eat less to meet their daily needs. The study also discovered a significant difference in food insecurity policies among respondents with permanently insecure households. The findings reveal the possible impact of future health-care costs on people's health, including mental health and nutrition. Finally, during COVID-19, the study proposed proactive policies to address food insecurity.

(Schotte, et al., 2021) examines strict COVID-19 lockdown policies affect short- and medium-term employment outcomes. Ghana was selected as the case study for the study. The study takes advantage of Ghana's specific policies, where home stay orders were strictly enforced and there were two locally limited areas. It blocks Ghana's larger metropolitan areas, while the rest of the country adheres to less stringent regulations. Studies of various designs have shown that the three-week lockdown in the treated districts had a significant and immediate negative impact, especially on informal self-employed workers. Another finding suggests that the employment disparity between treated and controlled districts reduced the lockdown after four months. Income and employment have been steadily declining across the country. Lockdowns, particularly severe ones, have harmed the livelihoods of small business owners who primarily operate in the informal economy. Moreover, (Folayan, et al., 2021) examine significant differences in the behavior of people living with and without HIV in Nigeria who use COVID-19 prevention and are food insecure. The researchers used cross-sectional datasets from 4,471 people, 20.5 % of whom were HIV-positive adults. The researchers used binary logistic regression analysis to examine the relationship between descriptive variables, HIV positive and non-positive status, outcome variables - behavior change, physical distance, isolation/quarantine, working from a distance, and food insecurity - hungry but not eaten, cut/skip meals, COVID-19 status, and respondent's medical status. Very few people living with HIV (PLWH) reported significantly positive for COVID-19 and experienced low exercise with COVID-19 risky behavior. Respondent behavior reflects high food insecurity in people who live without HIV, or PLWH, and are hungrier and do not eat, reducing their diet. The relationship between HIV status and COVID-19 prevention and food insecurity is complex and needs to be studied in the future.

(Kansiime, et al., 2021) focuses on COVID-19 infectious diseases' impact on household income and food security To that end, the study chose two East African countries, Kenya and Uganda, to evaluate the study's findings based on data from an

online survey of 442 respondents. According to the findings, the COVID-19 pandemic affects more than two-thirds of respondents, and they are experiencing income shock. Food security and food quality deteriorate when the scale of food insecurity and the frequency of nutritious food intake are compared. As a result, Kenya and Uganda were responsible for 38% and 44% of food insecurity, respectively. When compared to before COVID-19, both countries show a 30% decrease in food consumption during pandemics. In addition, as a result of probate regression, households whose income depends on the income of the poor and laborers are examined. Gets poorer than other types of respondents. Competitive strategies should be based on food. People who have an alternative source of livelihood and rely on savings are more likely than not. Food should be the foundation of competitive strategies. People who have a secondary source of income and rely on savings are more likely to succeed. Farmers were less likely to be food insecure than other respondents who relied on the food market. Participation in national security schemes during COVID-19 results in lower revenue shocks in both countries. Respondents who were members of savings and loan groups reported lower income shocks and lower food consumption. According to the study's findings, the government's current and future policies should focus on structural changes to provide greater social protection, such as developing response packages to reduce poverty in such pandemics. I'm a helper. Furthermore, developing strong financial institutions that will support the business in the medium term, as well as improve and secure the food supply chain, particularly for those facing a nutritious diet.

There is little literature available on COVID-19 impact on food insecurity in the context of Pakistan One study by (Shahzad, et al., 2021) examines COVID-19 and investigates the effects of infectious diseases and food security commitment on food insecurity and offers strategies for the Pakistani province of Punjab. Data was collected online from 370 respondents. Impacts are calculated using the Household Food Security Access Scale (HFIAS) model, and assessors are evaluated using the Logitech Regression model. COVID-19, according to research, increased food insecurity during pandemics and was exacerbated by social and demographic factors. While financial assistance is beneficial to food security. Another study by (Gillani, et al., 2021) examines the effects of food and health insecurity in the urban informal labor market in Punjab Province are assessed. Five administrative divisions of Punjab were chosen at random for this study. Data were gathered from 500 workers in the urban informal sector. The logistic regression model was used to compute the outcomes. According to the findings, infectious diseases harm food and health insecurity. (Ali, et al., 2020) investigates the socioeconomic effects of COVID-19 pandemics in Gilgit-rural Baltistan's hill communities. Snowball sampling techniques were used to collect data for the study. This online survey had 367 respondents. The main issues during the COVID-19 pandemic were low income, financial uncertainty, job loss fear, and food insecurity.

### **3. Methodology and data discussion**

This section of the study discusses the dataset and methodology that is used to estimate the objectives of this research. The study used the Special Survey for Evaluating Socio-Economic Impact of COVID-19 on Well-being of People - conducted by the Pakistan Bureau of Statistics in 2020 (cross-section analysis) for

evaluating the impact of a COVID-19 pandemic on food insecurity in Pakistan. The construction of the study variables is as follows.

- Food insecurity index developed through Principal Component Analysis. The food insecurity index comprises 0, 1, and 2 values, whereas 0 represents those observations that refuse to answer the question or don't know about it. However, 1 is equal to those who faced food insecurity, and food security is assigned 2 for analysis. Section D of the COVID-19 survey questionnaire is based on food insecurity questions. All questions are recoded according to this study and then later on, through Principal Component Analysis, the food insecurity index is developed.
- Employment status before and after COVID-19 is generated to understand the difference between employment status impact on the food insecurity index. Also, these variables are helpful to estimate the separate effect on employment status before and after COVID-19 on food insecurity in Pakistan.
- Wages before and after the COVID-19 pandemic is also generated to find out the separate effect on the food insecurity index.
- Financial assistance is considered as one of the most important components during and after the COVID-19 pandemic. In this survey, Zakat, Benazir Income Support Program (BISP), EOBI, Ehsaas program, NGOs, Other assistance, and private person assistance (friends and family) are included. To combine all of the above-mentioned cash assistance categories into a single variable called Cash Assistance.
- Education is the maximum education attained (formal education) by the individuals.

Moving toward the estimation technique and study model through which research objectives are tested. The study employs the Ordinary Least Square (OLS) technique for estimating the effect of a COVID-19 pandemic on food insecurity in Pakistan. The study model is,

$$FD = \beta_0 + \beta_1 ESB + \beta_2 ESA + \beta_3 WB + \beta_4 WA + \beta_5 Edu + \beta_6 \text{Log}(CA) + \beta_7 Ad + \epsilon$$

Whereas FD is the food insecurity index generated through the Principal Component Analysis, ESB is employment status before COVID-19, ESA employment status after COVID-19, WB wages before COVID-19, WA wages after COVID-19, Edu is the education, CA is the Cash Assistance in a log form, Ad is the Adult, and  $\epsilon$  is the error term.

### Result Discussion

This section of the study is divided into parts, the first part presents the descriptive analysis that is extracted from the study data and the second part discusses the Ordinary Least Square regression analysis that is shown in table 4. Moving toward the first part of this study is descriptive analysis Tables 1, 2, and 3 present the descriptive analysis of province, region, and province and region wise variation analysis on food

insecurity index. There is a mixed trend observed from province wise variation, like KPK and Punjab shows the positive effect on the food insecurity index. Whereas Sindh and Balochistan show a negative impact on the food insecurity index. The highest food insecurity is measured in Sindh province. Whereas the regional-wise variation is concerned both rural and urban regions are showing a negative impact on the food insecurity index. Rural areas of the country show higher food insecurity as compared to urban areas. Province and region wise variation analysis show that KPK and Punjab are having a positive impact on the food insecurity index in both regions. Whereas Sindh and Balochistan show a negative impact on the food insecurity index in rural and urban regions. In rural areas of the country food insecurity is higher than in the urban areas of the country.

The probability of F-statistics shows that the model is highly significant, this indicates that all variables are having an impact on the Food Insecurity index. Furthermore, 970 observations are included in this study.

Employment status before COVID-19 is highly significant, on an average, a one-point increase in employment status before COVID-19 leads to an increase in food security by 0.083 points. Food insecurity index developed with 0, 1, and 2 that is refused to answer the question or don't know equal 0, faced food insecurity equal 1, and food security is 2. During the COVID-19 pandemic in Pakistan, individuals and families suffered because of the shortage of money and food at home. Before the COVID-19 pandemic, the food security situation is much better as compared to the after COVID-19.

The employment status after COVID-19 showed a negative effect on the food insecurity index. This indicates that because of the reduction in employment status after the COVID-19 pandemic in Pakistan, food insecurity is increasing. That is, on an average one-point decrease in employment status (after COVID-19) lead to an increase the food insecurity by 0.095 points. Due to the COVID-19 pandemic, the labor market was affected very badly, and job reduction is observed during and after a COVID-19 pandemic.

Furthermore, another variable that is, wages before the COVID-19 pandemic in Pakistan. This variable is statistically significant and positively related to the food insecurity index. This shows that, on an average, an one-point increase in wages leads to the 0.0000028 points increase in the food insecurity index. Food security increases

**Tables 1:** Province wise variation of Food Insecurity Index

Province	Mean
KPK	0.09690761
Punjab	0.06712872
Sindh	-0.26065406
Balochistan	-0.02902684

**Tables 2:** Region wise variation of Food Insecurity Index

Region	Mean
Rural	-0.05293
Urban	-0.04082

**Tables 3:** Province and Region wise variation of Food Insecurity Index

Province	Region	
	Rural	Urban
KPK	0.155306	0.068555
Punjab	0.078624	0.061916
Sindh	-0.30266	-0.24095
Balochistan	-0.09476	-0.00291

because of the wage increase. When a family is earning a good amount, they will spend more on food, because it is the requirement of life. Whereas wages after COVID-19 show a negative impact on the food insecurity index. This indicates that when one-point increase is observed in wage after COVID-19 there is a decrease in food security by 0.0000025 points.

**Table 4:** Regression Analysis

Food Insecurity Index	Coef.	Std. Err.	t	P>t
Employment Status	0.0839970	0.0195053	4.31000	0.0000
Emp Status After	-0.0959007	0.0185537	-5.17000	0.0000
Wages before COVID-19	0.0000028	1.45E-06	1.96000	0.0510
Wages COVID-19	-0.0000025	2.31E-06	-1.10000	0.2740
Education	0.0187152	0.009452	1.98000	0.0480
Log Cash Assistance	-0.0247517	0.0062685	-3.95000	0.0000
Adult	0.0019157	0.0020086	0.95000	0.3400
<b>Province</b>				
Punjab	-0.1992247	0.0827861	-2.41000	0.0160
Sindh	-0.3970490	0.0857549	-4.63000	0.0000
Balochistan	-0.5158830	0.1015647	-5.08000	0.0000
<b>Region</b>				
Urban	0.0977396	0.0657813	1.49000	0.1380
_cons	0.2527755	0.1204468	2.10000	0.0360
F (11, 958)	13.46		No. of obs	970
Prob > F	0.0000			
R-squared	0.1338		Adj R-squared	0.1239
Source	SS		df	MS
Model	116.94537		11	10.6313973
Residual	756.7624		958	0.789939879
Total	873.70777		969	0.90165921

*Source: Author's estimation*

Moving further, Cash assistance includes Zakat, Benazir Income Support Program (BISP), Ehsaas Program, EOBI, NGOs, Other Assistance, and Private Person cash assistance that includes friends and family. This variable shows a negative but significant impact on the food insecurity index. The negative sign indicates that when a family needs cash assistance from any of the above-mentioned source then it is obvious that the family need some financial help. So, food insecurity in these families is very high. It is observable that, a one-point increase in cash assistance leads to a decrease in the food insecurity index by 0.0247517 points.

As far as regional and provincial level variation is concerned, the KPK province and Rural region counted as a reference category. The result shows that all three provinces of Pakistan (Punjab, Sindh, and Balochistan) are statistically significant but

**Table 5:** Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
Employment status	2.96	0.337732
Employment status after COVID-19	2.83	0.353163
Wages before COVID-19	2.55	0.392173
Wages after COVID-19	2.47	0.404735
Education	1.26	0.791218
Log of Cash Assistance	1.06	0.943661
Adult	1.04	0.964772

*Source: Author's estimation*

Moving toward the heteroskedasticity analysis, the Breusch Pagan test is used to detect heteroskedasticity from the model. After using a test, the chi-square probability value is significant, this shows the presence of heteroskedasticity in the model. For removing heteroskedasticity, a robust test is used. Table 6 present the results of OLS after removing the heteroskedasticity from the model.

**Table 6:** Removal of Heteroskedasticity

Food Insecurity Index	Coef.	Robust Std. Error	t	P>t
Employment status	0.083997	0.0280105	3.0000	0.0030
Employment status after COVID-19	-0.0959007	0.0281167	-3.4100	0.0010
Wages before COVID-19	0.00000284	1.22E-06	2.3300	0.0200
Wages after COVID-19	-0.00000253	2.13E-06	-1.1900	0.2340
Education	0.0187152	0.0093168	2.0100	0.0450
Log Cash Assistance	-0.0247517	0.0065217	-3.8000	0.0000
Adult	0.0019157	0.0018428	1.0400	0.2990
Province				
Punjab	-0.1992247	0.0657126	-3.0300	0.0020
Sindh	-0.397049	0.0744378	-5.3300	0.0000
Balochistan	-0.515883	0.0849519	-6.0700	0.0000
Region				
Urban	0.0977396	0.0692659	1.4100	0.1590
cons	0.2527755	0.1048082	2.4100	0.0160

*Source: Author's estimation*

After using a robust test, no difference finds out related to the relationship of independent variables to the dependent variable. Employment status shows a positive and significant result whereas employment status after COVID-19 showed a negative but significant relationship with the food insecurity index. Wages before COVID-19 are positive and significantly related to the food insecurity index, Wages after COVID-19 show a negative relationship. Same as for Cash assistance, it shows the negative and significant relationship with the food insecurity index. Whereas education and adult are positively related to food insecurity. As far as provincial



variation is concerned, all three province shows a negative but significant relationship with the food insecurity index. Whereas urban region is positive and insignificant.

## **5. Conclusion and Policy Recommendations**

Food insecurity has emerged as one of the world's most pressing issues. This was exacerbated by the COVID-19 pandemic. Approximately 9.9 % of the world's population is vulnerable, and prey food insecurity and pandemics have made matters even more difficult. The pandemic has a negative impact on food insecurity, purchasing power, unemployment status, and wage - income. To keep in mind these facts, this study is to emphasize the impact COVID-19 pandemic on food insecurity in Pakistan. Therefore, the study developed Food Insecurity Index through Principal Component Analysis. The study used Special Survey for Evaluating Socio-Economic Impact of COVID-19 on Well-being of People - conducted by the Pakistan Bureau of Statistics (PBS) in 2020 (cross-section analysis) to evaluate the impact of the COVID-19 pandemic on food insecurity in Pakistan. For estimation of the model, the study employs the Ordinary Least Square (OLS) technique. Besides that, the study evaluates the impact of other social-economic variables: such as Employment Status, Wages, Education (pre-and post-COVID-19), Cash Assistance, and Adults.

The overall impact of the model is significant all the independent variables show an impact on the dependent variable. The study used 970 observations, and the Food insecurity index was created with 0, 1, and 2 that refused to answer the question or didn't know equaled 0, faced food insecurity equaled 1, and food security equaled 2. Furthermore, employment status before COVID-19 is extremely important. Households suffer during the COVID-19 pandemic due to a lack of income and food access. As a result, employment status after COVID-19 had a negative effect on the food insecurity index. Concerning other variables, wages are statistically significant and positively related to the food insecurity index before the COVID-19 pandemic and food security improves. However, wages after COVID-19, on the other hand, have a negative impact on the food insecurity index and distort food insecurity. Furthermore, KPK considers all other provinces (Punjab, Sindh, and Balochistan) as reference categories because they are statistically significant but negatively related to the food insecurity index. The urban area has a positive but insignificant outcome. Based on empirical estimates, the study concludes that the COVID-19 pandemic distorted Pakistan's already troubled food system and had negative economic consequences.

Finally, the study emphasizes the significance of the Pakistan government's appropriate interventions: The government needs to go beyond merely observing food insecurities to cope with the increasing vulnerability and confront food insecurities. A joint effort policy should be implemented with governmental and non-governmental organizations to reduce hunger and food insecurity while also lowering COVID-19-related rates. The government's current and future policies should focus on structural changes to provide more social security, such as developing responsive packages to help reduce poverty in such pandemics. The government should establish strong financial institutions to support businesses in the medium term, as well as to improve and secure the food supply chain, particularly for those who face nutrient-dense food. Human rights guaranteeing public policies developed to ensure adequate food must be improved and implemented for the population in poverty contexts with the goal of food security.

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# 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 relation 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<sup>2</sup>

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<sup>3</sup>. 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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<sup>2</sup> <https://tribune.com.pk/story/1716529/pakistan-needs-generate-1-3m-jobs-every-year-undp-report>

<sup>3</sup> [https://www.finance.gov.pk/survey/chapter\\_20/12\\_Population\\_Labour\\_Force\\_and\\_Employment.pdf](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. Fourth 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 minor 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 Technical 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 declare 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:

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

For job separation rate, equation 2 is modelled as:

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

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”.

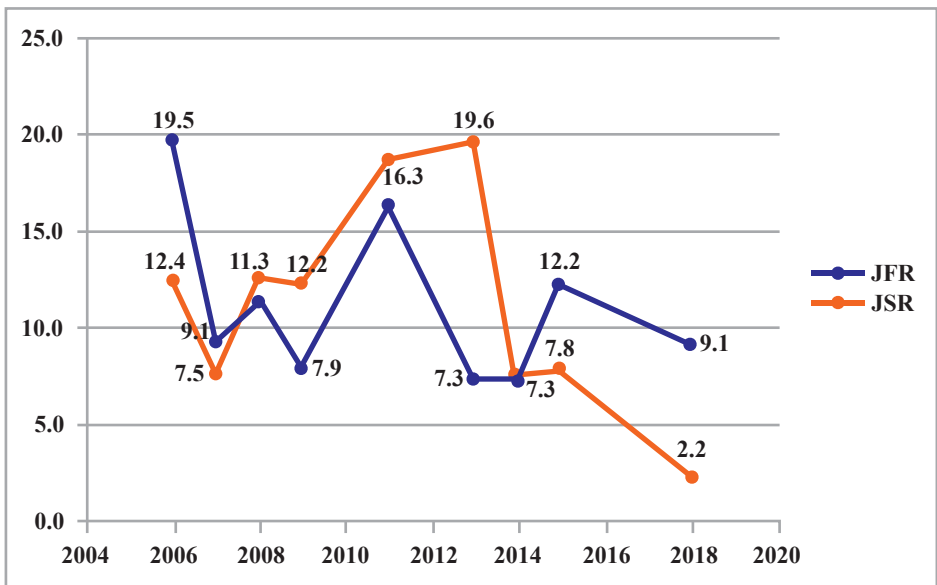
### **5. Descriptive Analysis:**

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.

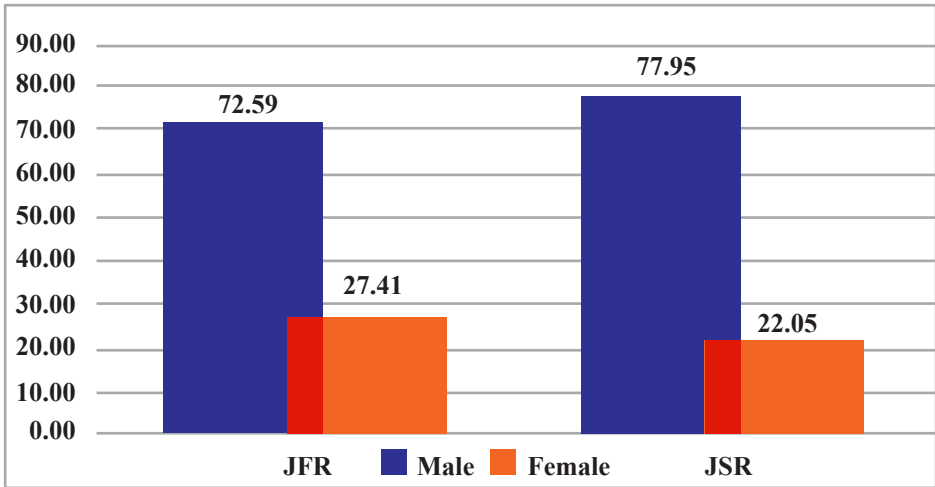
**Figure 1: Job finding Rate and Job Separation Rate by Year**



*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.

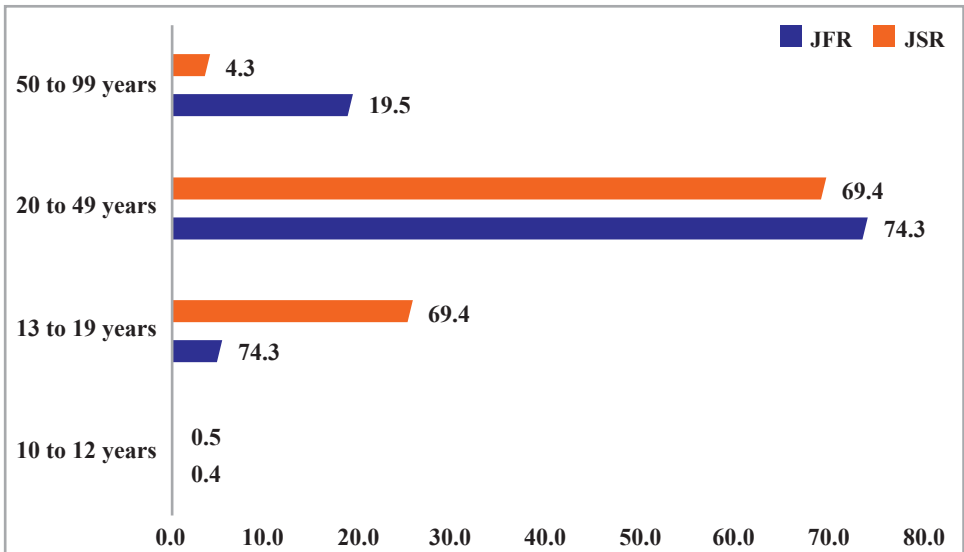
**Figure 2:** Job Finding Rate and Job Separation Rate by Gender



*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.

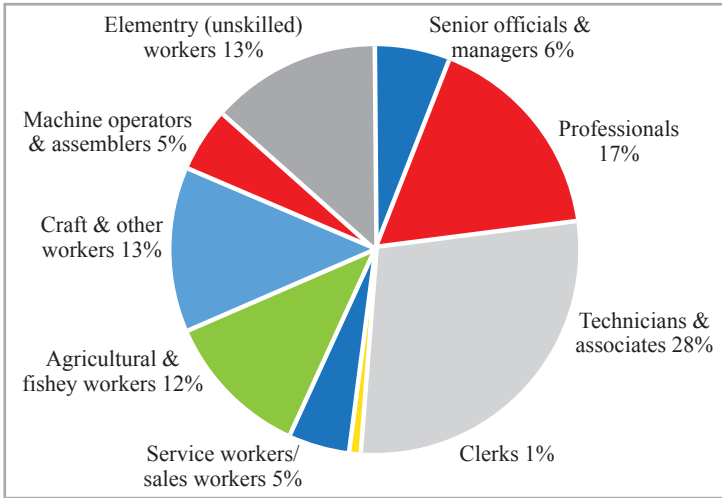
**Figure 3:** Job Finding rate and Job Separation rate by age groups



*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.

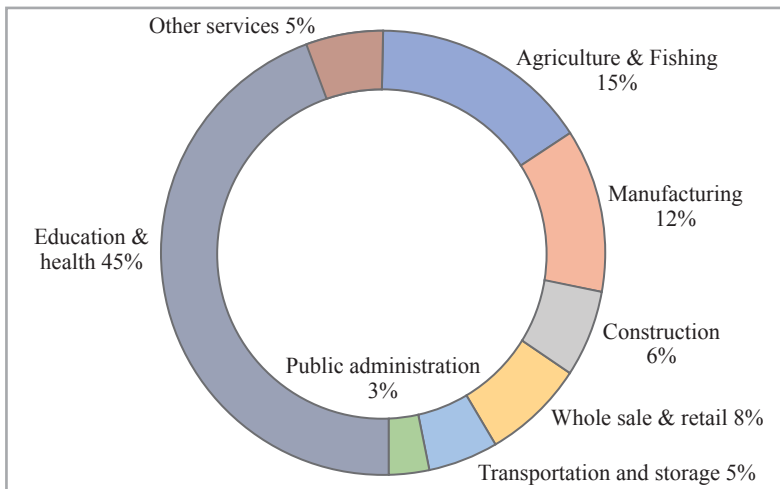
**Figure 4:** Job Finding rate by Occupation



*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	VARIABLES	JFR
Migration	0.00900*** (0.00280)	2009. year	-1.25e-05 (0.00109)
Education level	0.000917*** (0.000217)	2011. year	0.00238** (0.00101)
Informal sector	-0.00517*** (0.00113)	2013. year	-0.00104 (0.00102)
Training	0.00591* (0.00337)	2014. year	-0.00143 (0.00109)
Employment status	-3.15e-07** (1.26e-07)	2015. year	-0.000789 (0.00109)
Punjab	-0.00228*** (0.000622)	2018. year	-0.00384*** (0.000978)
Sindh	-0.000478 (0.000616)	Constant	0.00464*** (0.00102)
Baluchistan	-0.00219*** (0.000711)	Observations	570
Urban Region	-0.00116** (0.000465)	R-squared	0.247
2007. year	-0.00253*** (0.000891)	F (17, 552 )	10.67
2008. year	-0.00256*** (0.000898)	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	VARIABLES	JSR
Migration	-7.578 (7.659)	2007. year	3.570** (1.766)
Education level	2.557*** (0.517)	2008. year	-1.240 (1.804)
Informal sector	0.00653*** (0.000519)	2009. year	-0.974 (1.808)
Training	4.351 (7.036)	2011. year	3.444* (1.906)
Unemployment	0.00602** (0.00298)	2013. year	3.118* (1.871)
Punjab	0.672 (1.316)	2014. year	-6.697*** (1.932)
Sindh	3.677*** (1.322)	2015. year	-7.103*** (2.015)
Baluchistan	-3.562** (1.560)	2018. year	-6.865*** (1.945)
Urban	-0.845 (0.916)	Constant	-4.290** (2.092)
4.age	2.217 (1.366)	Observations	576
5.age	4.154** (1.827)	R-squared	0.555
6.age	-1.157 (1.503)	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 minor impact on job finding rate

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.

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## **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.

- **Acknowledgments**

All three authors did their part and contributed according to the positions they stand. Hence we do not acknowledge anyone for this study.

# COMPARATIVE STUDY OF STUDENTS GRADUATED FROM PUBLIC AND PRIVATE COLLEGES IN SINDH

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## ABSTRACT

*The present study was conducted to make a comparative evaluation between the role of the private and public sector in promoting excellent education in Sindh province of Pakistan. Data was collected with the help of google questionnaire from students at Sindh agriculture university Tandojam. MS Excel was used to analyze the data. The results show that average family members in public institute was greater than private institute and parents are less educated and less designation; therefore, upon their income they send their kids to the public institutes. The results also highlighted the factors that are involved in higher performance of students in private institutes as compared to that of students in public institutes, as their grades were higher. Because, students of public institution were irregular, and involved in political activities, therefore, they had little focus on their studies. It is recommended that government should bound the public sector institutes to provide same level of infrastructure and modern technical aids as provided at private institutes.*

**Keywords:** Government College, Private Education, Sindh, Pakistan.

## 1. INTRODUCTION

Educational institutions have shaped the world while producing quality professionals, teachers, political leaders, social and religious scholars, and skilled labor, who are serving the society for its resource development (Mustard, 1998). Education can be acquired formally and informally. Formal educational process begins from curriculum development to final assessment, for example, admission, teaching and learning objectives. In parallel, the education output is the consequences of the process (Memon, 2007). Shah (2003) has disclosed that in Sindh, the education system has several stages, i.e., pre-primary, primary, middle, secondary, higher secondary, and professional and/or technical education. Apart from that there is also religious education system named as madrassah.

The start of private sector's education was good, but then it became a business later on. One educational institute or academy turned into business sector. In private sector's education the owner of private educational institutes is mostly business minded people, so they compromise on each and everything. They don't hire high qualified teacher because he can't give the proper salary to that high qualified man, so he hires low qualified. Inexperienced man on less salary and that man are immature, untrained and inexperienced and having no qualified degree, the syllabus is good of private sector but useless because the teacher is not able to teach that syllabus, the private education the qualified teacher makes and builds up the personality of student and that teacher becomes a role model and inspiring for the students but high qualified teachers are not appointed in private sector, the low qualified teacher in private sector damages the entire personality of the students, so in private sector there is only spoon feeding now.

Awan and Zia (2015) have investigated that parents prefer private schools instead of government schools. The Government of Sindh is trying to universalize the school education by providing free education along with several schemes like, distribution of free reading materials (books), and provide stipends to girls for encouraging female education in the province. Ahmed et al. (2015) have exposed that schools and colleges located at underdeveloped regions encourage more students for bring more children to the schools. Despite of all, there is a remarkable competition between public sector and private sector schooling system in the province. It is commonly accepted that private schools and colleges provide quality education. As described by Rothschild and White (1995), the job market with new skill requirements affects the higher education system, which is main factor for encouraging private sector to invest in this sector. The main difference between private sector's education and public sector education is the syllabus, private sector's is based and made up of on modern perspectives, which become revised with the passage of time, new scientific theories, researches and trends, are introduced in that syllabus, by reading that syllabus the modern student become update and self-creative. While public sector's syllabus is less compatible with current job market. Thus, main difference between students of public sector and private sector is that the students of public sector are not updated from new trends, theories, scientific research, etc (Haque et al. 2022).

In fact, there is little literature is available on private and public university system as well as in their attraction. Therefore, this study is designed to investigate difference between two higher education systems prevailing in the province. Thus, specific objectives of our study were (i) to ascertain what inference makes significant difference between public and private education system; and (ii) to compare student's perspective about their choices towards public and private colleges prior to coming the universities.

## **2. Methodology**

Research survey was designed to measure the effectiveness of performance of public and private sector colleges in Sindh province regarding their quality assurance. In this connection students of Sindh Agriculture University Tandojam were interviewed through stratified sampling technique. Twenty students from each of the five faculties were selected as a sample; from which equal number of students were interviewed, who have studied in private and public colleges, prior to joining the university.

However, assessment was generally quantitative and qualitative in nature supported by sample comprised over hundred respondents. Thus, the primary data were collected through a pre-tested questionnaire. The questions were mainly comprised over the socioeconomic conditions of their parents, their choices of the selecting colleges, environment of their institutes, their grades, etc. Once the data was gathered, it was arranged and organized and placed in coding system by using spread sheet (MS Excel), further the data were tabulated summarized and analyzed statistically.

### 3. Results and discussion

The findings are comprised over socioeconomic characteristics of the respondents, and selection of public and/or private institutes for intermediate education. The result shows that average family member of private students are 5.7 and 7.2 percent and average age of students in private education institution is 21.3 and 21.8 percent age of public students. Majority of the students who studied in private institutions belongs to elite class or landlord, and those students who belongs to middle class family, have studies in public institutes.

#### 3.1. Socioeconomic conditions of the respondents

**Table 1:** Descriptive statistics of the respondents

Description		Private	Public
Average family member (numbers)		5.7	7.2
Average age of students (numbers)		21.3	21.8
Average education of their parents (years)		12.8	5.2
Family status (%)	Elite/Landlord	72	28
	Government servant	45	55
	Farmer	11	89
	Shopkeeper	6	94
	Doctor	100	0
Interest for selection college (majority)		Parents	Own
Average marks in intermediate program (%)		63.2	61.7

Results further show that the parents of the students graduated from private colleges were at least intermediate, where it was the choice of parents to send their kids to private colleges. On the other hands, parents of the student who attended public colleges were about primary education, where it was students' choice to select the college. This may be due to parent were unaware about higher education system. Siddiqui (2000) have also argued that there is signification difference between the opinions of private universities students of parents with regards to the quality of education. Above table highlights that student graduated from private colleges has higher grades then public colleges, which might be impact of educational environment. It is commonly assumed that private colleges often offer better forms of education, public colleges are often less able to respond to financial crisis and time to pass-out is often longer for public institution, etc. (Awan and Zia, 2015).

Haque et al. (2022) have highlighted that the public institutions with limited finance are depending on grants loans to fulfil their requirements, while private institutes charge huge tuition fee in this regard. For state institutions, limited finance lead to a reduced ability to offer merit scholarships, a reduction in the size of the institution building, larger classes, layoffs and the cutting of programs (World Bank, 2000).

### 3.2 Parents' choice regarding public and private college selection

In this section we have investigated that what are the main factors which are appealing parents to decide for whether public or private colleges for their children, in order to have a better future.

**Table 2:** Parents' choices of colleges selection for their Children

Description	Public	Private
Quality of education	×	✓
Location (nearest)	✓	×
Facilities	×	✓
Educational environment	×	✓
Quality of good teacher	×	✓
Fee's structure	✓	×
University standard	×	✓

Table-2 emphasis over the results regarding parents' preferences why they are making decisions towards institution selection for their children. Therefore, they prefer the public colleges for their children mostly choose on the base of location and fees structure, because they cannot afford the transport and hostel expenses and also highly tuition fees etc., so that they prefer public collages but other side they are not satisfy the environment of public institution as compared to private institution.

**Table 3:** Students opinion on public and private colleges' education environment

Description	Private	Public
Was number of students per class satisfactory?	4.4	3.2
Were you satisfied from fee charged by your institute?	1.7	3.7
Were Teacher highly qualified?	3.6	2.1
Was behavior of teachers with students good?	4.1	2.8
Were the classes equipped with Hi-tech?	4.8	2.9
Have you observed boycott of classes?	1.4	4.6
How do you rank facilities at your colleges/institutes?	4.2	3.1
How was over all environment of your institute?	4.5	3.9

Data was measured in Like type psychometric scale from 1 to 5, (one means poor and 2 means fairs, 3 means fair, 4 means good, 5 means excellent). Above table shows the performance measurement was between public and private colleges, as private



institutions try to provide suitable learning environment along with required facilities, while public sector institutes have well trained teachers. It was also observed that there was less attendance in public colleges, less facilities in the classrooms, huge number of students per class, and insufficient number teachers. Shaheen (2008) has found that private institutes provide better facilities as compared to government institutes. Moreover, he has also found that behavior teachers in private institutes better, while in public sector the teachers show anger and rudeness in nature. Results also show that private college students are more satisfied regarding cooperation of their teachers, teaching methods, and with their encouragement through competition. Similarly, Shabbir et al. (2014) have found that the public college students are not satisfied from their schooling, and teachers behavior; they always try to change the schools and/or colleges in their study area.

Most of the respondents have disclosed some facts about their college education environment that the political involvement affects education severely, i.e., fights, propaganda, shouting in classes, wasting time, etc. are commonly observed. It was also observed that few parents send their kids to private colleges just due to no political environment, they were afraid that their kids may not get indulged in political activities, even though it was hard for them to afford huge tuition fee of their child. Similarly, we examined that in public institution have less fees than private one and which is afforded by their parents easily because mostly lower-class peoples send their kids to public colleges. Literature suggests that the concept of private sector's education in Pakistan was good, but thereafter it became a business (Haque et al., 2022; Awan and Zai, 2015; Shabbir et al. 2014; Shaheen 2008).

#### **4. Conclusion and recommendations**

It is concluded that that private institutes are providing better educational environment as compared to public institutes. Results further show that students who were graduated from private colleges have higher grades. The private institution consist great equipment's used in their institute, and they live in great environment and a smaller number of students in classroom and their teacher are very comparative and their behavior were good with students. Where in public institution their equipment's and the infrastructure were just satisfactory. Elite class families and doctors have preferred to send their kids to private schools/colleges instead of free Government institutes, because of the facilities and secure educational environment. While others could not afford huge tuition fee, transportation, and accommodation costs; thus, they sent their kids to public colleges. That's why they compromise on the quality of education.

Thus, on the basis of above conclusions, it is recommended that there is need to devise a of check and balance mechanism in public sector colleges to improve their performance. Due to higher enrollment of student in public sector then private sector institutes, it is suggested to establish more schools in the public sector. Moreover, the school curriculum should be updated according to the market needs of the society and it should be revised regularly. Where, Government should also monitor the working of private institution and formulate specific rules and regulation to create harmony in their curriculum and required infrastructure; and private sector institutes should not be allowed just for commercializing the education in the province.

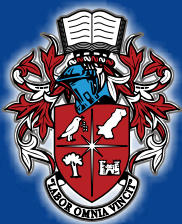
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