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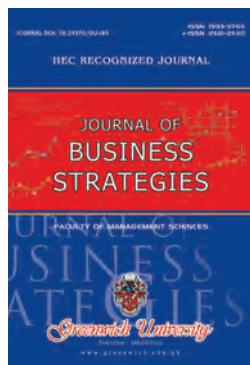
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EDITORIAL NOTE

I am pleased to present the 31nd issue of the Journal of Business Strategies (JBS, ISSN: 1993-5765) which started publishing in 2007. It is now an open access peer reviewed journal published biannually online on Open Journal System (OJS) platform. The submissions to the journal are subjected to the peer-review process by the editorial board members and external subject experts. All published articles of this journal having unique digital object identifier (DOI) are included in the indexing and abstracting coverage of EBSCO Business Source Complete EBSCO Business Source Premier, EBSCOhost, Crossref, RePEc, SyndiGate, Google search engine, and among many other reputed scientific databases..

The first article is a study which is a detailed description of Influence of Work Life Balance on Women Employability: A Phenomenological Study based in Karachi is basically a struggle for women working in banks in the city of Karachi. A thematic analysis method is used through primary data (interviews) of females that are currently working in banks or have a past experience of working with a bank. This thematic analysis shows the factors that are already validated through previous studies and concludes recent ones by gathering all of the fresh data.

The 2nd article explains the impact of Packaging on consumer buying intentions in FMCG Industry. The research conducted based on Fast Moving Consumer industry Goods in Pakistan and researcher evaluates the packaging and colors impact of consumer selection of products. The Packaging has significant role on consumer buying and attraction and hence marketers and researchers focuses on colors and analyze customers based on attraction points in packaging. The Consumer Behavior changes with preferences of Colors, has been evident with this research and many researches in same domain have been conducted based on consumer psychology.

The primary data collected from the Consumer who are using the Fast Moving Consumer Goods Brands (FMCG) and involve in purchasing of Brands.

3rd article is related to the research conducted The integration of

computer technology in various fields including agriculture has facilitated modernization and automation. One of the significant applications of computer technology in agriculture is the classification of flowers. Proper identification and classification of flowers are essential as they play a crucial role in the ecosystem. Morphological features of flowers and leaves are the basis of their classification. This study aims to propose a flower image classification system using an artificial neural network for four different types of flowers, namely sunflower, rose, lily, and dandelion. The proposed system can have various applications in floriculture and the classification of other plants. An image of a flower serves as the input to the system, and it is used to segmented based on the dataset images of similar flowers with comparable features. The artificial neural network is then trained using 125 samples

4th Undeveloped neighborhoods and multidimensional poverty are the two issues that rising countries encounter the most frequently. The goal of the study was to find concrete evidence of inclusive sustainable community development and poverty reduction in the chosen Sindhi regions. For the study, a survey that was conducted in five districts of Sindh yielded replies from 230 respondents. The study is based on a quantitative analysis of primary data gathered from five selected districts in the Sindh province of Pakistan, which was afterwards submitted to descriptive and inferential analysis using SPSS.

5th International remittances that migrant workers send back to their home countries have a profound impact on developing countries. Remittances are facing the changes that GDP brings. Examining how Pakistan's GDP affects the value of its currency is the central objective of this piece. Theoretically, high exchange rates indicate rapid economic expansion, which is linked to the expectation of future prosperity. This study aims to answer the question of whether remittances from abroad play a role in the rise of Pakistan's GDP per capita.

Dr. Mohammad Shaiq

Editor

Journal of Business Strategies

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INFLUENCE OF WORK LIFE BALANCE ON WOMEN EMPLOYABILITY: A PHENOMENOLOGICAL STUDY BASED IN KARACHI

Syed Abbas Haider

ABSTRACT

This study is a detailed description of Influence of Work Life Balance on Women Employability: A Phenomenological Study based in Karachi is basically a struggle for women working in banks in the city of Karachi. A thematic analysis method is used through primary data (interviews) of females that are currently working in banks or have a past experience of working with a bank. This thematic analysis shows the factors that are already validated through previous studies and concludes recent ones by gathering all of the fresh data s. The research shows a struggle behind the balance that the women try to create in between their work life and personal/ social life. Study investigated codes, themes and patterns which show the culture followed in a society and how females are struggling to come over these issues with time. It gives mirror reflection of the work environment in banks and day to day challenges each woman faces.

INTRODUCTION

Background to the Topic

The idea “balance between work life” is viewed as one of the significant issues that assume an imperative part in hierarchical achievement. (Tasnim. M, Hossain. M &Enam. F, 2017). More studies have been explored during the last decade on work- life issues because of the changing trends in gender roles in society. (Powell, 2019)

In this day and age, the idea “balance between life and work” is viewed as one of the significant issues that assume an imperative part in career achievement. In any case, balance between these two activities is seen distinctively in various societies.

Balance between life duties and work commitments is characterized

as the capacity of a employee to adjust the time designated for work, with the time distributed for different pieces of their life, like leisure exercises, family, chipping in, medical services, and so on. These different requests on opportunity can frequently arrive into struggle, with the end goal that individuals feel that they can't go to their obligations as a whole especially for females who try hard to sort issues in both the aspects of their life. (Powell, 2019).The management they try to fix between these two work and life issues is one of the major reasons that they leave their career opportunities according to different studies. However, many studies also shows that it is very important to earn for both the gender in the house that's why many females now opt for working for better futures managing both the work and life aspects systematically.

Work-family balance recommends that work shouldn't put a stop on different things which are significant in people's lives, for example, quality time with their family, relaxation time or then again sporting exercises, self-awareness, and so forth. Adjusting these two responsibilities similarly won't bring about balance between work and life activities, nor will the saving of an equivalent number of hours for every job lead to work-life balance. (Jenkins & Harvey, 2019)

The issue of balance between life and work activities has gotten the notice of analysts, researchers and scholastics in light of its impact on proficient as well as private life. It shows that while a decent work-life mix makes concordance in both expert and individual life, irregularity among work and life can make pessimistic effect on an employee's very own life which prompts work disappointment that harms association's (firm's) efficiency and productivity.

In Bangladesh, ladies have been taking part and contributing astoundingly in our economy. Notwithstanding of it, working ladies experience different obstructions in their own as well as expert life. Ladies are battling to adjust between work-life which at last hampering their public activity (Tasnim. M, Hossain. M &Enam. F, 2017).

Concurring a Asian Development Bank (2020) report, female workforce cooperation in Asia mainly including Pakistan said Women have been especially impacted by the pandemic has deteriorated orientation imbalance, orientation based savagery, and the weight of neglected work. Females depend on work in the economic and services areas that have been hardest hit, like the travel industry, production and banking.

A World Bank (2021) report on Female Labor Force Participation showed that the ongoing female workforce support rate remained at 21%. This is the most minimal in all of South Asia. These insights are for all areas, demonstrating a generally grim situation.

With regards to the financial area, it keeps on leftover overwhelmed by men. A report by Deloitte (2020) shows that the extent of women in influential positions in the money area remained at 24% by 2020

The paper aims to show the major reasons behind influence in female employability or productivity due to work- life balance, its consequences and the suggested solutions to resolve these issues and other issues which contribute into decisions like these. The paper mainly focuses on women working in banks. Other reasons apart from work- life balance that might contribute into annual female turnover are the education level of females, salaries earned by females and income of a household.

Studies prove that society's view of balance between work and life activities depends on gender as explored by Gautam & Jain (2018). The best test for women is the means by which to adjust their everyday life and their work (Lupu and Castro, 2021). Investigates showed that assuming on greater liability at work could adversely affect day to day life. The uneven state among life and work could be one of the significant obstructions to ladies' vocation improvement. However, in a study by Dumas & Smith (2018) shows that spouse or partner support helps to balance work- life issues better. A few ladies intentionally work fewer hours to accomplish balance between vocation improvement and everyday life as explored.

The scenario in Pakistan for working women laws can be seen through some of the legislations such as one made by NCSW and CIP to spread awareness about work place harassments. Both the commissions are advertising and constructing support groups for the law (C-190) by 'International labor organization (ILO) on putting a full stop to the increasing violence and harassment at work places. Different female oriented NGO's such as KASHF foundation are working for the women employability opportunities and their education. Government policies on the other hand support female specific seats in different sectors and competitive exams to encourage more females to work in the economy. Some of the banks for examples Habib Metropolitan Bank in Pakistan encourage female specific batch hiring. This encouraged a number of females to apply to banking jobs. Pakistan as a developing

nation is annually experiencing decrease in the number of working women according to ‘The world bank data’; which shows that in 2012 female labor force percentage was 21.43% whereas in 2021 it decreased to 20.16%. Over a decade the percentage fell by 1.27 percent (world banks data).

Statement of the Problem

Work – life balance in females is a major problem that continues to affect women’s employability in all sectors. In Pakistan, the service sector is no exception, where the number of women working in this field has decreased significantly in recent years.

This is due largely to the rampant sexual harassment that occurs in this industry. Women often face hurdles from their supervisors, colleagues and family, which makes it difficult for them to work in an environment that does not support their mental health. Other major issues include recent pandemic era from 2019 till date. Covid-19 has brought new problems regarding female jobs in market. According to a study female faced more implications in pandemic as they need to work for better financial position and balance their life at work and home both due to more burdens of responsibilities on both sides. (Insight, 2021)

As a result of this, many women have chosen to leave the work altogether in order to pursue other life responsibilities. This has had a negative impact on the Pakistani economy, as the country relies heavily on the service sector to boost its financial growth.

Not balancing between work- lives responsibilities not only limits women’s opportunities in the workplace, but also negatively impacts the economy as a whole. According to a report by the MSPB, female turnover in the workplace cost the government a heavy amount over a two-year period. The economic implications of women’s mental health in the workplace and at homes are devastating. Such loss is often hard to recover from, and ends up forcing females to leave their career goals.

It is important to list down consequences and impacts brought by this issue and its probable solutions.

Research Questions

- “How is the women employability affected by the work- life balance in banks of Karachi?”

- “What are the challenges faced by working women both at workplace and home?”
- “What is the role of society in challenges faced by these women?”
- “Does this work-life balance issue affect the mental health of women?”
- “How Covid- 19 has affected the work- life balances for women?”

Research Objectives

- The objective of this study is to understand the position of working women in the society.
- The paper aims to show the major reasons behind influence in female employability or productivity due to work- life balance, its consequences and the suggested solutions to resolve these issues
- This study aims to analyze what females go through when they have to keep balance in their work life as well as in their personal lives.
- It will also describe the challenges females face on everyday basis and its effects on their mental states.
- The study will show reasons due to which the gap between work and life is increasing and how society can encourage or discourage this gap.

Significance of the Study

The study will provide better answers to the research questions to fulfill research gap in a way that it provides insight of the problem and offer some solution to it. It will help both in theoretical and practical way for the readers. The importance of conducting this study is to explore what kind of issues women face while trying to balance two aspects of their life especially in a world which includes implications and effects of Covid-19. It will also provide the reasons due to which females decide not to work.

Scope of the Study

The study will only conduct interviews of females in baking sector due to limitation of time it will only be conducted in Karachi.

Definition of Terms Key Used

The following terms are used in this research study:

- Work- life balance: The division of time, physical and mental strength between work and family, social responsibilities.

- Women Employability, also known as Women's Employment: Any work for pay or profit in which women are engaged.

LITERATURE REVIEW

Introduction

Work-life balance in relation to women employability is getting heat in today's time. Many researches can be found regarding this issue. Researchers have thoroughly investigated the causes as well as impact of this major issue in women life and on economies. Probable solutions can also be seen in many studies and its implications are also practiced accordingly. This part of the study will focus on the previous and the most recent literature available to minimize the research gap.

Work- Life Balance

Gregnano and Simbula, (2020) in their study reported that work-life struggle or the balance among employees is known to be connected with numerous medical conditions, including physical wellbeing, poor-self announced health, mental health and life dissatisfaction.

Balance between work and life includes effectively dealing with the arrangement between paid work and other fundamental exercises like investing energy with family, taking part in activities and relaxation, offering neglected help or chasing after extra review. Upgrading balance among work and individual lives brings about certifiable compensations both for businesses and representatives. It helps with setting up tough gatherings and dynamic organizations. Balance between fun and serious activities has to do with adept prioritization of work and way of life. Work-life balance has hierarchical results like raised paces of non-appearance and turnover; diminished efficiency; dwindled work fulfillment; developing medical services costs and decreased degrees of authoritative responsibility and dependability (Fapohunda 2021).

Whereas, Pandiangan (2018) express that balance between work and life is an expansive idea that includes defining the right boundaries between "work" from one viewpoint and "life" (satisfaction, relaxation, family and improvement). Thalagvathy and Geetha (2021) mentioned in their paper that the research on work-life balance has expanded over the years but this expansion has also brought the research gap which concerns the issues regarding work and family which is still missing majorly from researchers'

knowledge. While in another study by Margaretha (2021), Work Life Balance is what is happening that offers employees chances to adjust their vocation work life and their own life, and this present circumstance won't prompt work pressure and weakness in doing their works. WLB is one variable that effects on worker responsibility, work fulfillment and association efficiency.

Hernandez & Lopez (2019) in their research showed that Work-life balance has hierarchical results like raised paces of employee leaves and turnover; diminished efficiency; decreased satisfaction at work; developing medical services costs and decreased degrees of authoritative responsibility and reliability or loyalty in general. Employers are generally not liable for giving work equilibrium to their workers especially women in this case, they can uphold the employees to look for and keep up with their own work balance. Balance between life and work has two-fold edged gains.

Work-life balance is considered to be a cycle not an achievement or a means of satisfaction. Working long for hours is harmful to both the genders and balancing lives with it becomes much more a stress than a satisfaction. Satisfaction is when you can have time for your peace not for responsibilities at work and in social or personal life. It's a cycle that is followed by billions just to pass another of life it cannot be called by "who balanced it better?" Lupu and Castro (2021).

According to Tinuke.F (2014)'s study; Work and balance is characterized as happiness and better working at work and at home with irrelevant job clashes. Balance between life and work activities is tied in with tracking down the right harmony between one's work and one's life and about feeling alright with both work and non-work responsibilities. Many individuals find it hard to deal with their time in a manner that is smart for work and for individual life not on the grounds that they are poor at using time productively, but rather essentially in light of the fact that a decent piece of the time isn't theirs.

An article on Forbes (2020) shows how people are not satisfied with their management of work and life .More than half of their interviews women complained about long hours of their partners work and their incapability to satisfy the needs of a relationship. In the same way Men also showed different response to their female partners working for long hours and not giving time to their household responsibilities in comparison to the men and females working for lesser hour and finding more time to spend at home and in friends.

A research study by Fapohunda. T (2021) mentions that when there are satisfied home life, work places will more often than not be without struggle and agreeable spots to be. Increasing attrition rates and raising interest for balance between work and life have made it obligatory for associations to look outside human asset mediations. Therefore, plans, for example, adaptable working hours, elective work plans, leave plans, benefits as opposed to family care liabilities and representative help programs have turned into a significant piece of association benefit projects and prize bundles particularly in created economies.

Women employability

Working females justifies a bold role in the progress of humans and stands at an important position in society, this is regarding the men who have been dominant in the past centuries, but with time the gap is decreasing to a positive extent as described by Shankar. M, (2019).

During pandemic women showed better employability results than men overall as remote jobs were increased and other household activities were also transformed into business such as home chefs, tailoring etc. (ILO,2021)

Studies also describe the overload of responsibilities on women who are working; they are expected to fulfill extra demands in different roles of life. Women employment is studied in all over the world. The cross-sectoral pattern of more unpredictable development responsiveness of females contrasted with male employment that society recognize portrays the hindered position of females in Pakistan. (Majid & Seigmann, 2021).

Numerous researches on employability of females can be found, it is as a rule battled that the social setting expects a significant part in females work market or labor market decisions. Countries contrast with respect to foundations, rules, guidelines, plans, and principles concerning women's work. While focusing on women's employability, it is consequently important to decide the institutional setting that deliberately influences the observations and exercises of individual women in a given time span. (Lippe & Dijek, 2022).

Females are experiencing discrimination in labor market and consequently are pushed to isolate relatively low income and lesser position occupations. Huge ratio of women is utilized in the chaotic areas or sectors. Generally, women are amassed in area known for low degree of efficiency, less pay and low security of work because of their double job at home and work

environment. Women are highly dependent on their roles and how they manage it to get better career opportunities. Women employability is proven to be correlated to their different roles in life as Sadaqat & Sheikh. Q (2022) in their study shared.

Work – Life balance and Women Employability

Qodrizana (2018) showed balance between work and life impacted satisfactory levels. The significant point is to adjust the level of somebody's fulfillment working and outside work. In the event that somebody can give time to the necessities of work and outside function admirably, it will make work fulfillment.

Pace and Sociotto (2021) in their paper mentioned that gender roles is progressively advanced both in the work environment and in the society, also, females have now completely entered the labor force markets, the issue of distinctions in gender roles comparable to career opportunities actually appears to be open. In spite of the fact that gender equality never again plainly characterizes who is liable for life (social and personal) consideration and who is answerable for work obligations, some studies shows that the contention between work and life has all the earmarks of being a more prominent issue for women than for men. For females, the connections between better career opportunities and balance between life and work and between professional opportunities and the impression of general wellbeing have fundamentally lower values contrasted with results from the men, while the impression of balance between life and work activities influences prosperity more essentially when contrasted with the male competitor instead.

Women are seen as housekeepers by managing families. They could answer remarkably as opposed to men when work-family conflicts occur. As per the social perspective, social suspicions, and direction challenges influence women's harmony among work and life activities and social practicality as said by Mushfiqret, (2018).

As per Shankar. M, (2019), females whose status and jobs generally were well defined and fixed in the general public have gone through broad changes. It describes how women in society having a respectable position at work had been through rough areas and consequences in their life. It is basic to concentrate on provokes of females as they keep on pervading the labor force. The importance of the study of Meera.S (2019) is required in light of the fact that the writing concerning balance between work and life

doesn't satisfactorily portray the encounters of expert working ladies and the numerous features of women, work and family.

However, Lonska&Mietule (2021) in their study regarding the situation built by the pandemic reported that, one of the apparatuses for balance between work and life is remote working, however it should be borne as a top priority that the COVID-19 crisis circumstance for representatives who have children changed the daily existence of private life, obligations, and timing. Taking into account that the crisis circumstance has empowered the utilization of remote working, which tends to expand, it is fundamental to work with/guarantee balance between work and life for employees, paying little mind to business type and type of working hours. Lonska&Mietule (2021) took covid-19 as a major issue due to which women could change their jobs to remote levels, this way many of their participants were more satisfied with the way they were able to balance both personal life and work together.

Research by Subraminan, Kalidasan&Poulpunitha (2017) says balance between work and life is the term used to depict rehearses in accomplishing a harmony between the requests of employee's family and work lives. The demanding requests and tensions of work make hard to extend time for adjusting work-life exercises. Women taking up balance between serious and fun activities challenges affect female progression. The great work-family adjusts incorporates the needs fixed by working females, consciousness of current working position and ambiance, update most recent innovation, fix timetable such a way that adequate chance to enjoy with family, checking self-execution and further develop the region when and where required.

Theoretical Foundation

The current study is based on number of theories that researchers have recognized in different studies. However, for this study boundary and border theory have been recognized keeping in focus the dilemma of work- life balance. Boundary theory is rooted by Sonnentang and Fritz. It is a theory of social classification and works as a general cognitive theory to bring outcomes related to the meanings people attach to work and life and also shows the frequency of roles transitioning. However, Border theory by Clark. S (2000) is all about time and gives a new shape to a unique theoretical framework which shows contemporary life is bounded from every side and direction. It is an attempt to show the complicated interaction between both work and life, predicting conflicts that will occur and providing a framework

to bring balance to it. (Ibrahim.T& Bello. Z, 2020)

Critical Review of Literature

Professional challenges faced by women is considered as the main problem in balancing work and life together as discussed by Tasnim, Hossain & Enam (2017). They also made it clear by their study that less support from supervisors and family creates more hurdles for working women. The pandemic in recent years brought more household difficulties for women and data all over the world showed almost same trend. These evolutions of increased responsibilities were made by Lonska and Meitule (2021). Mensah and Adjei (2020) showed the evidence of the variations that show the relationship of work-life balance and self reported health problems in their study. On the other side Silaban and Margaretha (2021) displayed the proof of work-life balance influencing job satisfaction by 8.3% whereas, work-life balance affecting employee retention is 4.4% on female employees in Bangladesh.

RESEARCH METHODOLOGY

Primary data collection method has been utilized for this paper. For this review, the size of the sample comprises of ten working women in Karachi, in the age bracket of between 25 to 40 years. The sampling is purposive and is not done randomly. Respondents are working in various areas of service sector mainly in banks. Interviewing method has been utilized for leading this study. Since it's easy to understand and give answers and then the responses can be easily analyzed and organized for accurate results. The sample includes married, unmarried and women with kids also. Ten working and not working females have been evaluated for this review. Deep interview technique has been utilized to figure out the causes, results, and likely answer for solutions to this issue. Pertinent books, articles, studies were additionally evaluated to make this concentrate more useful and satisfactory to all.

The consideration rules of choosing working and not working females was that everybody who is working at the moment or left jobs or work due to other issues. Not working women from the start are restricted to fulfill the interview requirement as they might have not experienced the struggle of balancing both work- life aspects.

Research Instrument

The study is a qualitative study due to which tool used for research instrument will be Interview protocol. Qualitative research is an interpretive way to deal

with researching subjects inside the setting of their regular elements which are natural. The interview protocol method incorporates a bunch of foreordained questions that could go either way that prompted different inquiries rising up out of the discourse between the interviewees and researchers.

Data Collection & Analysis

Data for this study will be collected from interviews which will then be organized and coded for further research and analysis purpose.

However, for the analysis the collected data from interviews will be assessed and analyzed through thematic analysis method.

POPULATION OF THE STUDY

Reference Frame

As the population of the study are women. This research will be conducted and the data will be collected only from those banks that include females as employees in the city of Karachi only. Women are used as the reference frame as they face day to day struggle in balancing their work and life commitments than man according to previous researches and studies as mentioned in literature review.

Participants

The participants of the study will be women working in banks and the ones who used to work at banks but are currently unemployed. Both working and non- working females have or had an experience of working in the bank, this sampling will help to understand why some of them left their work or the issues they face today and before covid-19.

Sampling Method

The sampling method that will be used is Purposive sampling method. A purposive sampling method is a sample without probability that is chosen in light of qualities of a population and the target of the review. Purposive sampling method is unique in relation to accommodation examining and is otherwise called critical, specific, or emotional testing. This sort of testing can be exceptionally helpful in circumstances when you really want to arrive at a designated test rapidly, and where examining for proportionality isn't the primary concern. The data will be collected from women who are working in service sector specifically banks in Karachi.

Study Validity

In qualitative study accuracy is the main element. To ensure accuracy and credibility of data credible women employees of banks in Karachi will be selected before the proceeding of final interviews.

DATA ANALYSIS & RESULTS OF THE STUDY

Introduction

This chapter discusses the thematic analysis used in the qualitative research “Influence of Work Life Balance on Women Employability:

A Phenomenological Study based in Karachi”. Thematic analysis is one of a broadly embraced strategy for dissecting qualitative information to illuminate various research questions across a large number of disciplines. It very well may be utilized for various sorts of datasets and applied in a wide range of ways, showing its adaptability. The themes in this research are produced through running and exploring the codes and different patterns from the results. The results however were collected from some interviews of female bank employees. There were two groups of the participants. The group A consisted of females who are currently working in banks and group B consists of females who had past working experience in a bank.

To get results for the research questions two interview guides were generated for both the groups. The answers were accurately recorded and were tried to keep concise and relevant to the topic.

Qualitative Data Collection

In total six interviews were conducted to collect required data for the discussion and analysis. The distribution of the interviews were on the basis of how many people are ready to give their interviews due to this random selection there were four females who are currently working and only two females who had past experience of working in a bank. All the banks are renowned commercial banks in the city of Karachi, with branches mainly located in south and are well- reputed. All the interviews were in depth- interviews and no question harmed the privacy of any employee. To keep up with the privacy protocol, some names of the participants were changed intentionally.

Demographic Information

All the interview guides were separately conducted but the questions

were same to keep accuracy of the results. All the interviews were conducted between dates August 2nd 2022 to August 9th 2022. The information of the interviews is listed below:

Table 1 (demographic information of respondents)

| S.No | Guide Used | Name of respondents | Bank Names | Designations | Experience (in years) | Marital Status |
|------|------------|---------------------|-------------------------|--------------------------------|-----------------------|----------------|
| 1 | A | Ashna | Habib Metropolitan bank | Relationship Associate (HR) | 8 months | Married |
| 2 | A | Sumaira | Meezan bank | Bank Manager | 12+ years | Married |
| 3 | A | Ayesha | Meezan bank | Teller | 1 year | Single |
| 4 | B | Zahra | HBL | Relationship Associate (Corp.) | 2 years | Single |
| 5 | B | Maha | HBL | Officer (talent & resourcing) | 3 years | Single |
| 6 | A | Mahnoor | Meezan bank | Banking Officer | 1.5 years | Single |

Content Analysis

For the purpose of content analysis mainly three steps were performed to retrieve the patterns and the themes. The first step is ‘coding’ which represents the important data that needs to be highlighted for further study. The second step is ‘Sorting’ which helps to maintain data in order to further transfer it into sheets and tables. The last step and one of the most important steps is ‘Sifting’. Sifting helps to merge data together to retrieve codes and themes out of it. Table 1.2 shows how data went through these three steps to get the emerging themes and how it further helped for the conclusion of results.

Table 2 (Content analysis matrix)

Content Analysis Matrix for currently working women

| Themes | Asna | Sumaira | Ayesha | Mahnoor |
|--|------|---------|--------|---------|
| Influencing factors to Female turnover | Yes | Yes | Yes | Yes |
| Challenges – Gender discrimination | Yes | Depends | Yes | Yes |
| Societal Criticism | Yes | Yes | Yes | Yes |
| Stress levels | Yes | Yes | Yes | Yes |
| Opportunity cost | Yes | Yes | Yes | Yes |
| Pandemic Crisis | Yes | depends | No | Yes |

Table 3 (Content analysis matrix)

Content Analysis Matrix for women with past working experience

| Themes | Zahra | Maha |
|-----------------------|-------|------|
| Time management | Yes | Yes |
| Gender discrimination | Yes | Yes |
| Cultural Norms | Yes | Yes |

Textural Discussion/ Description

Textural description is a reflection of the perspectives of the participants following a theme/ pattern during a study it helps to understand the common factors between all the collected data and further supports the results with accuracy.

Textural description of the content matrix for currently working women

During the content analysis process for women who are currently working in banks five main themes emerged commonly this includes factors that include female turnover; it explores all the acceptable reasons which participate in the affects caused to women employability through work- life balance, each participant agreed somehow that there are factor that affects women employability which involves struggle to achieve satisfaction at home and at job, the responsibilities that can be only fulfilled by women, their capabilities which are neglected and many other. This neglect of the capabilities and the struggle to link both work and life ends up to women quitting their jobs for the sake of their life responsibilities or neglecting life duties due to work pressure. As Hernandez & Lopez (2019) mentioned in their study that if an employee is satisfied, it has dual edged gains where the right side is laid out and kept up with, both the worker and the business gains. For the employees there is upgraded joy, unrivaled dealings with the board, effective correspondence, better feeling of worth, wellbeing, mindfulness, and confidence, improved administration of undertakings, intensified main thrust, and lower levels of pressure. Along these lines, the link can make the most of existing HR, has better allure than a more extensive assortment of candidates, and has added labor force dedication and drive, lower non-participation and more noteworthy result.

Gender discrimination also appeared as an emerging theme, in a country like Pakistan it is very difficult to get the same position and hold like males in the society. It is a male dominant society where females still are struggling to achieve their position as a strong personal. Women are still struggling at homes, educational institutes and workplaces (Rabia, Tanveer & Akbar, 2019); it's a challenge that is faced by almost every working female in our society. As one of the respondent mentions: "Gender roles assigned by society cast sole care giving and household responsibilities on the shoulders of women". This shows immense pressure on working females. The statement is self-explanatory, as it the interviewee is pointing towards the society which makes

decision and results are borne by women in the society afterwards. One of the respondents only said that discrimination depends on the environment and the capabilities of a woman. According to this thought it can be seen that a part of working females in these banks also believe that capabilities does not require a societal status. Talent and skills bloom itself.

Another theme that appeared commonly and was accepted by all respondents was societal norms, which includes numerous reasons why females are unable to work. This includes late working hours, male superiority etc. Opportunity cost is the core for every choice of women. As respondents mentioned that they have to choose between two responsibilities all the time, for e.g.: they have to choose between working back late or fulfilling their household chore responsibilities.

Covid- 19 pandemic crisis were one of the crucial phase that all working women experienced .For all four working females the crisis appeared and affected differently. As for our interviewer ‘Asna’ and ‘Mahnoor’ , the pandemic crisis were awful , it was a difficult phase to go through , both said it brought heavy workloads problems due to which it was difficult to manage both professional and personal life at the same time. Pandemic for them turned out to be as ‘zero motivation phase’ with more family responsibilities. However, one of the respondent thought that it made things more easy to manage at both ends. And another respondent mentioned both positive and negative aspect of pandemic. Pandemic brought financial issues for companies and workers but it also brought more and advance use of digitalization. For example: digital banking. All respondents responded differently to this theme and mentioned the main causes of their ideology behind it

Textural description of the content matrix for women with past working experience

Three major themes emerged for the women with past working experiences in banks. This involves cultural norms, gender discrimination and time management. Both the respondents agreed to all three themes as they said that time management leads to the decision of either they should work or not this includes marital and personal responsibilities which demand time. Gender discrimination is a base to ever reason that ends up in increased stress and anxiety levels. Lastly cultural norms of female inferiority, harassments also add up to the effects on women employability.

CONCLUSION

Plenty of researches on employability of females can be found, it is in many cases contended that the cultural setting assumes a pivotal part in female's labor market choices. Nations contrast as for establishments, guidelines, regulations, designs, and standards concerning ladies' work. While concentrating on ladies' work, it is subsequently valuable to determine the institutional setting that methodically influences the discernment and activities of individual ladies in a given timeframe (Lippe & Dijk, 2022). Women employability is affected by number of reasons. All of these reasons add up together for a working woman to decide whether to work or not. Balance between life duties and work commitments is characterized as the capacity of an employee to adjust the time designated for work, with the time distributed for different pieces of their life, like leisure exercises, family, chipping in, medical services, and so on. These different requests on opportunity can frequently arrive into struggle.

The needs frequently shift quicker than our everyday time allotment propensities. The interviewees that portrayed a more certain balance between work and life activities deliberately reprioritized how they invested their energy in a manner that agreed with their actual needs. One interviewee portrayed how she actually considered herself to be an expert, yet reclassified that proficient job to be more comprehensive of other esteemed jobs, like that of guardian.

Work – life balance is achieving satisfaction in both the roles of lives as said by a respondent that “Work-life balance for me is achieving your life goal with all your heart; having best time at work and home both.” Number of challenges comes into the pathway of achieving this satisfaction such as “failure to contribute in household chores, failure to spend time with family causing strained relationships, high stress levels leading to low productivity or High stress levels impacting the quality of time with family” as Ashna said. Lack of resources for females are contributing to these struggles. Resources like lesser female job opportunities, work back late resources, family and friends support etc. Society plays a major role between all this. This society is considered as male dominant society which puts females down not realizing their abilities and joining them to household roles only. Not a very vast line of options are there for females. More of the working females are going through anxiety and stress issues; increasing mental health related

problems more. Discouraging work environment with loads of physical and metal harassment are making women weaker and pressurizing them to leave their jobs as a result. Ms Zahra khan with past working experience in a bank mentioned about harassment that “In the eyes of our society woman are like a culprit who can’t to declare innocent in any situation”. According to Shankar, (2019), females whose status and occupations are higher, clear cut and fixed in the overall population have gone through wide changes. It depicts how ladies in the public eye having a good situation at work had experienced harsh regions and outcomes in their day-to-day existence. It is essential to focus on incites of females as they continue to swarm the workforce. The significance of the investigation of Meera, (2019) is expected considering the way that the composing concerning balance among work and life doesn’t sufficiently depict the experiences of master working women and the various highlights of ladies, work and family.

Throughout the previous two decades, work-life issues have turned into a developing worry among researchers because of huge changes in the work force, the passage of a rising number of females into the work market as well as the presence of double worker and families with single parent. (Subraminan, Kalidasak&Paulpothan, 2017)

However, Ms. Sumaira with 12+ years of working experience in a bank said that society always criticize but it’s on the person how she will react to it. According to her phenomena negativities are part of every working environment, every woman should be mentally aware of it and should work harder to prove these societal myths wrong. But this is what one respondent said, all other five respondents were thorough about their claims and supported all of their responses efficiently. Influence of Work Life Balance on Women Employability hasn’t changed over the years. This could be seen through the comparison of the responses submitted by currently working women and women with past experiences.

The pandemic of 2019 worked differently for all the respondents for almost more than two of the respondents took the affects negatively and the rest took it on a positive aspect. Reviewing the responses helped to understand the concept and the crisis people faced during last few years. But majority agreed with affects turning to be more negative and bringing in more work loads, financial crisis, motivational issues and mismanagement in professional-personal life.

The responses highly reflect the environment of banks in Karachi. Responses are dealt with accuracy during whole of the steps of analysis and show the personal perspectives and perceptions of the entire respondent. Before coming to any conclusion, it is very important to change the mind set of society and help females come over their mental states, only then it is possible to change the working environments of banks.

RECOMMENDATIONS

- More female job opportunities should be placed in banking sector of Karachi.
- New policies related to physical and mental harassment should be put into action by both bank and government to eliminate the male dominance in banks.
- Working hours should be adjusted according to female work capacity, this will help them to be active in their other life responsibilities and they can manage both work and life in a better way.
- Family and friends should encourage working women in their circle more by expressing their personal positive views or by allowing the female in their house to work specifically in a country like Pakistan.
- Society should promise status to females like men, gender discrimination should be finished or at least decreased by awareness that can be done through positive actions of influencers or more men supporting females etc.
- Security should be provided accordingly, they should not feel insecure in job environment or working back late or going home late as well.
- Career breaks should be given, like female should be allowed to get a gap for their personal commitments such as motherhood etc.
- Woman specific batch hiring should be appreciated.
- Sensitization sessions should be opted such as anti- harassment meet ups or opposite gender information sessions to explain behavioral changes.
- Government and banks should do partnership with schools and universities to help female learn and get aware on how to manage both work and life commitments in their practical life.

- Scholarships and mentorships programs should be arranged.
- Day care facilities for working mothers should be also arranged in order to facilitate females with tension free work environment, adding value to decreased mental stress.
- Moving towards more digitalization can be helpful for females in this society and will eventually create more job market as international investment can take place for better human resource.

All these recommendations can help to bring harmony and peace in the struggle between work and life of women working in banks in the city of Karachi. All these options were presented in this study by keeping in mind the banking sector of the country, the social norms of the country and the security of Karachi at the moment. None of the recommendations are impossible to achieve in Pakistan's job market, each of them are either in action in some different industry or are getting awareness with time.

Future Research

Future research on this particular topic can help to bring up more research ideas for the upcoming times such as new researches could take place on what are the most important reasons or commitments in a woman's personal life that can work as a variable in a research. Different variables can help to identify the correlation between women employability and other life commitment variables that may affect one's decision and bring hurdles in the balancing between work and life activities (Reddy, Vranda. Et, 2010) and (Pace & Sciotto, 2021). This particular paper can be used to discuss the probable matters these six interviewees face in their daily life. It can also help to understand the scenario for females working in banks in a country like Pakistan which is still developing. Recommendation can help to bring up new ideas and plans to overcome this issue.

Limitations & Delimitations

The research for this study was conducted within some delimitation that may have influenced the outcome. These included:

- A Small Sample Size: Only 6 interviews with working women were conducted, representing an even smaller portion of already few working women. Reviews and feedback, by nature, is more reliable when a greater number of people are pointing out the same issue. The

small sample size for this study may have influenced the results.

- Sensitive Topic: Due to the sociological constraints in the country, women don't openly talk about their responsibilities and duties, leading them to be less open to talk about this topic and agreeing to the issues generated through the work-life balance.
- Better Alternative: Some workplaces have better working conditions than others, a better work ethic and workplace culture, where it is easy for females to balance between both lives. Including these workplaces does not cover the females working in other sector and facing major hurdles in balancing between work and life.
- Geographical constraint: The research is only done on the banks located in Karachi and specifically with branches in South of Karachi. This limitation contracted the size of interviews as well as the opportunity to study the aspects of women employability in other provinces. Due to lack of mobility and limited data from the same city it was impossible to gather accurate data defining the work- life balance affect on women employability in whole Pakistan.

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IMPACT OF PACKAGING ON CONSUMER BUYING INTENTIONS TOWARDS FMCG PRODUCTS

Sumair Hasan Siddiqui and Emad-Ul-Karim

ABSTRACT

The purpose of this research is to analyze the impact of Packaging on consumer buying intentions in FMCG Industry. The research conducted based on Fast Moving Consumer industry Goods in Pakistan and researcher evaluates the packaging and colors impact of consumer selection of products. The Packaging has significant role on consumer buying and attraction and hence marketers and researchers focuses on colors and analyze customers based on attraction points in packaging. The Consumer Behavior changes with preferences of Colors, has been evident with this research and many researches in same domain have been conducted based on consumer psychology. The primary data collected from the Consumer who are using the Fast Moving Consumer Goods Brands (FMCG) and involve in purchasing of Brands. The research conducted based on Positivism research paradigm and quantitative approach used to collect and analyze the data. The 385 Questionnaire filled from customer based on Non Probability convenience sampling and using online portals. The reliability analysis performed and values of Cronbach's Alpha for all variables are greater than 0.7 shows more than 70% consistency of response over the scale. The Correlation Analysis shows the positive and significant relationship with Consumer buying intentions and factors Color Scheme in packaging, Color perception towards packaging, Personality Traits, Evaluations and Excitement towards packaging on consumer buying intentions. The results shows that all four independent variables having significant relationship and impact on Consumer buying intentions.

Keywords: Color Scheme in Packaging, Perceptions of consumers towards packaging, Personality Traits, Evaluations towards packaging and Consumer Buying intentions.

INTRODUCTION

Background of Research

The Product packaging is significant decision for marketers and producers. The product packaging affects the sales of brands and impact of consumer buying intentions. The consumer buying intentions affected due to products packaging and colors in packaging. The marketers create customers attraction by creating effective packaging and better colors scheme so that they can effectively target the consumers and increase sales of brands (Baker et al., 2020). The researcher focuses on color psychology and enhance the customer attraction towards buying the products specially in FMCG Brand and clothing brands.

The Consumer Behavior changes with preferences of Colors, has been evident with this research and many researches in same domain have been conducted based on consumer psychology. The Color Scheme and Ecological valance used in Packaging and Branding used by marketers to increase customer attraction and increase the sales of Brands. The Consumer Buying behavior is changed with change in Colors and selection of products may vary with change in colors scheme. The Colors affects the consumer decisions and change in Colors, Packaging affects the consumer's decisions. The colors should be eye catching and attractive so that consumers focus may increase and aesthetics of color demand for purchased and affects the purchases decisions (Bethan&Nobbs, 2020).

Color plays a vital role in alerting (attracting attention), attribution (consistency with product range), and consistency (consistent with positioning and brand personality). Obviously, packages that are different from neighbors have a greater impact on the shelves and will attract more consumer attention (Devismes, 2000; Rouillet, 2006). Color can affect the speed of perception. In fact, colors do not have the same inherent ability to draw attention (Rouillet, 2006). Some colors are more focused on linearity than others. First orange, red, blue, green, and finally yellow. In addition, Arabi (2017) uses colored backgrounds instead of figurative backgrounds, which arouse interest in visual and cognitive ergonomics.

Color preference is a significant part of human interest. It impacts a wide range of choices individuals make all the time, including the items they purchase, the garments they wear, the manner in which they embellish their

homes and workplaces, and how they plan their own and expert sites, to give some examples models. One motivation behind why shading inclination assumes such a conspicuous job in dynamic (Arabi, 2017). The Kolenda (2016) describes the importance of Colors in marketing and branding, the marketer used the colors in Branding and Advertising to promote the Brands and creates customers attraction. The Kolenda also describes the colors vision, consumer perception, and how consumers attracted towards the colors. Kolenda evaluates the brightness in colors increase attention and recall and hence consumers are intended to buy the products and services. Colors schemes based on Ecological valance includes the dimensions of Exposition, Attention, Hue and Brightness, Comprehension, and Retention.

In the Study of Colors, Psychology specialists fostered the applied model later investigating the writing that the Colors Psychology and Ecological valance made sense of to Learning and Perception of purchasers and afterward influences on Consumer purchasing conduct or expectations. Numerous associations are dealing with marking and presenting Neuro marketing furthermore, one of the methods that is connected with the comprehension of customer insights and colors plans as it truly draws in the purchaser conduct and view of individuals (Kolenda,2016).Buyer Buying conduct is changed with change in Colors and the determination of it emsmay shift with change in colors plot. The Colors influence the customer choices and change in Colors Packaging influences the customer's choices. The tones ought to be attractive and alluring so that customers' center might increment and style of variety interest for procurement furthermore, influences the buys choices (Bethan and Nobbs, 2020). Variety inclination is a critical piece of human interest. It influences a great many decisions people make constantly, including the things they buy, the articles of clothing they wear, the way in which they decorate their homes and work environments, and how they plan their own also, master destinations, to give a few models. One inspiration driving why concealing tendency expects such an obvious work in unique (Arabi, 2017).

Kolenda (2016) depicts the significance of Colors in advertising and marketing, the advertiser involved colors in Branding and Advertising to advance the Brands and make client's fascination. The Kolenda additionally depicts the tones vision, shopper discernment, and how buyers are drawn to the varieties. Kolenda assesses the brilliance in colors increment consideration and review and thus customers are planned to purchase the items and administrations.

Colors plans in view of Ecological valance incorporate the elements of Exposition, Attention, Shade and Brightness, Comprehension, and Retention.

The Theory of Ecological valance made sense of by Palmer and Schloss (2010), expounds that Brands have worth and this is shown through brand picture and acknowledgment of brands by buyers. The creators depict the Natural valance, in light of acknowledgment, variety, picture, splendor Consumers are drawn in towards brands, for example, Lipton and Tapal both have contrasts in tones and brand values same as the case with Olpers and Milk Pack. This exploration was directed to assess the significance of varieties in marking and dissect the effect of variety plans, biological valance, and purchaser discernment on shopper purchasing choices. There are different exploration has been led in this space, however scientists dissect the interceding job of purchaser learning, buyer insight, and impact on buyer purchasing conduct.

Overview of FMCG Industry in Pakistan

The FMCG is the biggest industry in Pakistan and worldwide and industry related the routine buying and monthly bulk buying of various products and services. The core products includes Milk, Tea, Water, Bevarages and other Food items. There are many Brands in FMCG Sector give the items related food and refreshments incorporates the Coca Cola, Pepsi, Nestle, Unilever, P&G, R&B, Engro Food varieties, McDonalds, Tapal, etc are the Brands. Taking a model Nestle has 300 Brands in assortment of classifications incorporates the Mineral Water, Furita vitals, drinks brands, Power items incorporates Nido, Every Day, Cereal, Chocolates, etc. The Industry is developing and contest is additionally developing, and neighborhood marks likewise presented in the business furthermore, give Quality items. The specialist needs to assess purchaser insight towards brands in light of Colors, and hardly any FMCG's chosen and with agreeable items Like Milk Pack by Nestle and Olpers by Engro Foods, Tapal and Lipton, Aquafina and Dasani to assess the significance of varieties and shopper decisions in light of Colors and Perception of Quality.

Scope of Study

The research will be conducted to analyze the influence of colors in packaging design and consumer with evaluations and how they are affecting consumer buying intentions. The research will be conducted in FMCG Sector

of Pakistan considering with competitive brands with different packaging and how the marketers use colors in design and packaging to influence the customers. The consumer can be gained attention towards colors, and quickly their perceptions have been developed and this may effect on buying decisions. This research addresses the Sustainable development goal No. 8.1 which relates to better production and better growth and overall affects the output and economic growth of country.

Statement of Problem

The Packaging of product is the core decision for organizations and Brands. The marketers and advertisers concern for better product packaging which attracts consumers and enhance the consumer buying behavior. The Consumers buying pattern and choices are based on various factors packaging and colors is one of the core factor among them. The research conducted based on Fast Moving Consumer industry Goods in Pakistan and researcher evaluates the packaging and colors impact of consumer selection of products. The Packaging has significant role on consumer buying and attraction and hence marketers and researchers focuses on colors and analyze customers based on attraction points in packaging. This research addresses the impact of colors scheme in packaging and design and consumer perception on buying intentions with mediating impact of consumer evaluations and excitement towards precuts and this affects on consumer buying behavior.

Objectives of Research

1. To analyze the impact of Colors Scheme in Packaging on Consumer Buying Intentions.
2. To analyze the impact of Colors Perception towards Packaging on Consumer Buying Intentions.
3. To analyze the impact of Personality Traits towards consmer Buying Intentions.
4. To analyze the impact of Evaluation and Excitement towards packaging on Consumer Buying Tntentions.

Research Questions

1. What is the impact of Colors Scheme in Packaging on Consumer Buying Intentions?
2. What is the impact of Colors Perception towards Packaging on

Consumer Buying Intentions?

3. What is the impact of Personality Traits towards Consumer Buying Intentions?
4. What is the impact of Evaluation and Excitement towards packaging on Consumer Buying Intentions?

Hypothesis

H1: There is significant impact of Colors Scheme in Packaging on Consumer Buying Intentions.

H2: There is significant impact of Colors Perception towards Packaging on Consumer Buying Intentions.

H3: There is significant impact of Personality Traits towards Consumer Buying Intentions.

H4: There is significant impact of Evaluation and Excitement towards packaging on Consumer Buying Intentions.

Definitions of key terms

Color Scheme

Color is the combination of brightness, attraction and useful for recognition of some thought and memory. Colors Scheme impact on human mind and cause for learning and perception of people and affects the decision making capability (Alexandra and Nobbs, 2020).

Consumer Perception towards packaging

The consumer preferences are changing over the period of time, and consumer perceive colors in packaging differently, the perception develop the intention to buy the products and service (Ezan and Piris, 2010).

Personality Traits

The Attributes of person which relates to psychographic characteristics that helps in decision making. The personality type, learning, emotions, cognition towards brands and people helps consumer towards buying decision (Sawean & Ali, 2020; Arabi, 2017).

Evaluations and Excitement of consumers

The process related to human cognition where consumers relates the packaging and colors with emotions and creates favorable and unfavorable

behavior towards purchase and hence purchase decision may be affected due to packaging and colors of packaging (Spangenberg, Crowley, Henderson, 2019).

Consumer Buying Intentions

The Consumer attraction towards brand based on various factors includes its Brand image, Colors, Advertising, Promotion and consumer loyalty (Kotler, 2012). The Consumer attraction is based on Colors, and consumer buy the product due to attraction of packaging and brands (Kolenda, 2016).

Delimitations of Research

The research conducted to analyze the colors of packaging and how packaging affects the human perceptions and decision making towards buying. The buying behavior is changed due to change in packaging and colors in packaging. The research conducted to analyze the packaging impact of consumer buying decisions and sales of the organization. This research was conducted in Karachi, Pakistan and limited to FMCG products and specifically in packaging and design context of products. The data collected from consumers based on online Google forms due to unavailability of consumers.

LITERATURE REVIEW

The Consumer Buying behavior is changed with change in Colors and selection of products may vary with change in colors scheme. The Colors affects the consumer decisions and change in Colors, Packaging affects the consumer's decisions. The colors should be eye catching and attractive so that consumers focus may increase and aesthetics of color demand for purchased and affects the purchase decisions (Bethan&Nobbs, 2020).

Color preference is a significant part of human interest. It impacts a wide range of choices individuals make all the time, including the items they purchase, the garments they wear, the manner in which they embellish their homes and workplaces, and how they plan their own and expert sites, to give some examples models. One motivation behind why shading inclination assumes such a conspicuous job in dynamic (Arabi, 2017).

The Kolenda (2016) describes the importance of Colors in marketing and branding, the marketer used the colors in Branding and Advertising to promote the Brands and creates customer attraction. The Kolenda also describes the colors vision, consumer perception, and how consumers are attracted towards

the colors. Kolenda evaluates the brightness in colors increase attention and recall and hence consumers are intended to buy the products and services. Colors schemes based on Ecological valance includes the dimensions of Exposition, Attention, Hue and Brightness, Comprehension, and Retention. **The Theory of Ecological valance explained by Palmer and Schloss (2010)**, also elaborates that Brands has value and this is shown through brand image an recognition of brands by consumers, this terms refers Palmer has Ecological valance, based on recognition, color, image, brightness consumer are attracted towards brands, such as Lipton and Tapal both have difference of colors and brand values same as case with Olpers and Milk Pack.

In the Study of Colors, Psychology specialists fostered the applied model later investigating the writing that the Colors Psychology and Ecological valance made sense of to Learning and Perception of purchasers and afterward influences on Consumer purchasing conduct or expectations. Numerous associations are dealing with marking and presenting Neuro marketing furthermore, one of the methods that is connected with the comprehension of customer insights and colors plans as it truly draws in the purchaser conduct and view of individuals (Kolenda,2016).Buyer Buying conduct is changed with change in Colors and the determination of it emsmay shift with change in colors plot. The Colors influence the customer choices and change in Colors Packaging influences the customer's choices. The tones ought to be attractive and alluring so that customers' center might increment and style of variety interest for procurement furthermore, influences the buys choices (Bethan and Nobbs, 2020). Variety inclination is a critical piece of human interest. It influences a great many decisions people make constantly, including the things they buy, the articles of clothing they wear, the way in which they decorate their homes and work environments, and how they plan their own also, master destinations, to give a few models. One inspiration driving why concealing tendency expects such an obvious work in unique (Arabi, 2017).

Branding and Advertising to advance the Brands and make client's fascination. The Kolenda additionally depicts the tones vision, shopper discernment, and how buyers are drawn to the varieties. Kolenda assesses the brilliance in colors increment consideration and review and thus customers are planned to purchase the items and administrations. Colors plans in view of Ecological valance incorporate the elements of Exposition, Attention, Shade and Brightness, Comprehension, and Retention. The Theory of Ecological

valence made sense of by Palmer and Schloss (2010), expounds that Brands have worth and this is shown through brand picture and acknowledgment of brands by buyers. The creators depict the Natural valence, in light of acknowledgment, variety, picture, splendor Consumers are drawn in towards brands, for example, Lipton and Tapal both have contrasts in tones and brand values same as the case with Olpers and Milk Pack.

Consumer Buying Intentions

The Consumer attraction towards brand based on various factors includes its Brand image, Colors, Advertising, Promotion and consumer loyalty (Kotler, 2012). The Consumer attraction is based on Colors, and consumer buy the product due to attraction of packaging and brands (Kolenda, 2016).

Color preference is a significant part of human interest. It impacts a wide range of choices individuals make all the time, including the items they purchase, the garments they wear, the manner in which they embellish their homes and workplaces, and how they plan their own and expert sites, to give some examples models. One motivation behind why shading inclination assumes such a conspicuous job in dynamic (Arabi, 2017). The Kolenda (2016) describes the importance of Colors in marketing and branding, the marketer used the colors in Branding and Advertising to promote the Brands and creates customers attraction. The Kolenda also describes the colors vision, consumer perception, and how consumers attracted towards the colors. Kolenda evaluates the brightness in colors increase attention and recall and hence consumers are intended to buy the products and services. Colors schemes based on Ecological valence includes the dimensions of Exposition, Attention, Hue and Brightness, Comprehension, and Retention.

A consumer buys products according to his needs, his preference and the purchasing power whether he is buying a routine life product or some special product out of routine. How, what, when consumer buy is totally dependent on the consumers perception, age, family cycle, personality, motivation and many more. A consumer also consider before buying any product that whether he should really buy this product or not or from which seller he should buy (Ma, Zhang, Ding & Wang, 2021).

This study is in support of the factors that influence consumer buying behavior. These factors are personal, psychological, social and economic factor. This study summarizes the research and concluded that consumers are

affected at the different age of life cycle. Consumer behavior also affected by perception and motivation. Surrounding of a consumer has a big and important role in the buying decision of consumer (Qazzafi, 2020).

The Brand image is important construct in the organizations and every brand build Brand image with various sources, includes customer satisfaction, Brand image, loyalty, developing relationships and so forth. The Brand image is the value of Brand in the mind of customers and how brand is giving revenues to organizations. The Brand image is effected by many ways includes the organization branding, advertising and promotion, customer satisfaction, customer value and so forth. The Corporate Social responsibility is also important construct that effects the Brand Equity, organization spending on CSR to build value and recognition in the minds of customers and create value for organizations (Bajic & Yurtoglu, 2018).

Physical appearance with variety of casing designing, lure the end user directly which identifies the product and assess However color plays very essential role in describing consumer's choice in selecting any product. Are we then affected by color? If it is so then at what level color effects on our emotions, choices, assurance and vantage point regarding wrapping style which we select? As his previous buying experience buyer establishes his choices and detestation for the product design based on several factors such as, age, sex, rituals, faith, sentiments and his behavior. For different surveyors color has different uses. Most of the time we first notice the color and get inspired as color has strong first imprison on consumer's mind. Inspiration comes from color, which has a far-reaching first hurdle to consumer thinking (Arabi, 2017; Motoki, Toshiki, Nouchi & Kawashima, 2019; Bethan & Nobbs, 2020).

The Consumer Buying conduct is changed with alternate in Colors and selection of products may additionally range with alternate in colorations scheme. The Colors impacts the customer choices and alternate in Colors, Packaging influences the consumer's selections. The colours need to be eye catching and attractive in order that clients consciousness may additionally boom and aesthetics of shade demand for purchased and influences the purchases decisions (Bethan & Nobbs, 2020).

Color choice is a vast part of human interest. It impacts a extensive variety of choices people make all of the time, which includes the items they buy, the garments they wear, the manner in which they enhance their homes and

offices, and the way they plan their very own and expert web sites, to present a few examples fashions. One motivation in the back of why shading inclination assumes this kind of conspicuous activity in dynamic (Arabi, 2017).

Color performs a vital role in alerting (attracting attention), attribution (consistency with product range), and consistency (steady with positioning and logo persona). Obviously, programs which might be distinct from acquaintances have a more effect at the cabinets and could appeal to more purchaser attention (Devismes, 2000; Roulet, 2006). Color can affect the rate of belief. In fact, hues do now not have the identical inherent capacity to draw interest (Roulet, 2006). Some hues are extra centered on linearity than others. First orange, pink, blue, inexperienced, and subsequently yellow. In addition, Arabi (2017) uses coloured backgrounds in place of figurative backgrounds, which arouse hobby in visible and cognitive ergonomics.

The Packaging of product is the center decision for groups and Brands. The marketers and advertisers issue for better product packaging which pulls consumers and decorate the consumer buying behavior. The Consumers buying sample and selections are primarily based on different factors packaging and hues is one of the middle component among them. The research carried out based on Fast Moving Consumer enterprise Goods in Pakistan and researcher evaluates the packaging and shades effect of purchaser choice of products.

The Packaging has good sized role on customer buying and attraction and therefore entrepreneurs and researchers makes a speciality of colors and analyze clients based totally on appeal factors in packaging. This studies addresses the effect of colors scheme in packaging and design and customer perception on buying intentions with mediating impact of patron opinions and exhilaration closer to precuts and this affects on patron buying behavior.

For making a successful brand, brand should be matched with human characteristic i-e; lifestyles and preferences. A retrospective analysis makes this thing clear that a little effort has been made to prove the relationship psychological element of human and the brand itself. Therefore it becomes a dire need of studying human psychology. Psychologists' states that streams of information comes to human on daily basis and all these informational flows can't be perpetually stored in human mind. In addition to it, human mind is thought to be insecure when it comes to emotional and rational vulnerability. Starbucks seems to be a remarkable example expounding this very matter of fact.

Consumer is requested to understand the surrounding environment of the sight that describe that in the process of perception color is dominant variable that intercede occurring again in way of product choice. Mostly colors are the very fast procedure to transmit messages, colors make easy for the consumer to behave, sustain and remembering information in more practical way then black and white. Usually colors are used as a sign of product's category that make easy recognition by consumer (Bethan and Nobbs, 2020).

The Brand image assets for advantage able social running system were resulting in a negative relationship between the investors and management. On the other hand, many other researchers have find out that increased in social performance may lead to acquiring better assets great experience of working areas which are better in advertising of products with management benefit. Additionally, it is also studied that it also results in better chances of increasing higher market of products (Tiwari, 2015).

The exploration led to research because of Celebrity supports on buy aim in cell phones. It was found that aptitude and dependability impact buy expectations in cell phones. The estimated VIP support influences the brand unwaveringness of Nepalese purchasers. The review affirmed source aptitude and coordinating impact buy aim. The exploration led to research on the viability of celebrity underwriting via web-based media towards buyers' buy goals in FMCG. It was affirmed that source aptitude, dependability, and commonality impact buy expectation. The effect of source mastery, reliability, and commonality is dependent upon male and female shoppers

Color Scheme in Packaging

Consumers are attracted towards colors, and develop image in the mind act accordingly to increase customer intentions to buy. The ecological valence hypothesis in this manner expect that a person's shading inclinations at a specific time are controlled by their consolidated full of feeling reaction to natural articles and circumstances related with each shading. Environmental valence hypothesis in which shading inclinations emerge from individuals' normal full of feeling reactions to shading related items (Palmer and Schloss, 2010). Comparative with elective hypotheses, the environmental valence hypothesis the two fits the information better (even with less free boundaries) and gives an increasingly conceivable, far reaching causal clarification of shading inclinations (Motoki, Nouchi, Kawashima & Sugiura 2019). Buyer Buying conduct is changed with change in Colors and the determination of it

ems may shift with change in colors plot. The Colors influence the customer choices and change in Colors Packaging influences the customer's choices. The tones ought to be attractive and alluring so that customers' center might increment and style of variety interest for procurement furthermore, influences the buys choices (Bethan and Nobbs, 2020). Variety inclination is a critical piece of human interest. It influences a great many decisions people make constantly, including the things they buy, the articles of clothing they wear, the way in which they decorate their homes and work environments, and how they plan their own also, master destinations, to give a few models. One inspiration driving why concealing tendency expects such an obvious work in unique (Arabi, 2017).

Customer pride is the predominant factor of brand equity, it influences on brand fairness and will increase purchaser consciousness toward unique manufacturers. Customer happiness by using the products and services, and services and products designed consistent with wishes of Consumers, boom Customer Satisfaction. Customers Satisfaction is a behavioral aspect, evaluated from an understanding of consumer values and achievement of wishes. The requests through clients hold to increment considering that value and high-quality end up extra equivalent and they're looking for emblem esteems that healthy their very own herbal beliefs. Critically, those sports additionally assist to construct emblem ubiquity and energize brand devotion amongst clients (Jones, 2015).

The Product packaging is substantial selection for entrepreneurs and manufacturers. The product packaging influences the sales of manufacturers and impact of consumer buying intentions. The purchaser buying intentions affected because of merchandise packaging and colours in packaging. The marketers create clients attraction by way of developing effective packaging and higher colorations scheme so they can effectively goal the purchasers and growth sales of brands (Baker et al., 2020). The researcher specializes in coloration psychology and decorate the consumer enchantment closer to shopping for the products specially in FMCG Brand and clothing brands.

The Consumer Behavior changes with possibilities of Colors, has been obvious with this studies and lots of researches in same domain had been carried out based on client psychology. The Color Scheme and Ecological valance used in Packaging and Branding used by marketers to growth consumer enchantment and boom the income of Brands. The Consumer

Buying conduct is modified with trade in Colors and selection of products may additionally range with trade in hues scheme. The Colors affects the client selections and trade in Colors, Packaging affects the consumer's selections. The colorations should be eye catching and attractive so that clients awareness can also increase and aesthetics of coloration demand for purchased and impacts the purchases decisions (Bethan&Nobbs, 2020).

Color desire is a widespread part of human interest. It affects a huge variety of choices individuals make all of the time, which include the objects they buy, the garments they wear, the way wherein they adorn their houses and offices, and how they plan their personal and expert web sites, to offer a few examples fashions. One motivation behind why shading inclination assumes this type of conspicuous activity in dynamic (Arabi, 2017). The Kolenda (2016) describes the significance of Colors in advertising and branding, the marketer used the colors in Branding and Advertising to promote the Brands and creates clients appeal. The Kolenda also describes the colours vision, patron notion, and the way consumers attracted in the direction of the colors. Kolenda evaluates the brightness in colorations increase interest and bear in mind and therefore clients are meant to shop for the goods and offerings. Colors schemes based totally on Ecological valance includes the scale of Exposition, Attention, Hue and Brightness, Comprehension, and Retention.

In the Study of Colors, Psychology specialists fostered the carried out version later investigating the writing that the Colors Psychology and Ecological valance made experience of to Learning and Perception of customers and later on impacts on Consumer buying conduct or expectancies. Numerous institutions are handling marking and supplying Neuro advertising and marketing furthermore, one of the techniques this is related with the comprehension of patron insights and shades plans as it truely attracts within the client behavior and consider of individuals (Kolenda,2016).Buyer Buying conduct is changed with change in Colors and the determination of it emsmay shift with trade in colors plot. The Colors influence the patron selections and trade in Colors Packaging impacts the customer's choices

Consumer Perceptions towards packaging

Color is the combination of brightness, attraction and useful for recognition of some though and memory. Colors Scheme impact on human mind and cause for learning and perception of people and affects the decision making capability (Alexandra and Nobbs, 2020).

Color plays a vital role in alerting (attracting attention), attribution (consistency with product range), and consistency (consistent with positioning and brand personality). Obviously, packages that are different from neighbors have a greater impact on the shelves and will attract more consumer attention (Devismes, 2000; Rouillet, 2006). Color can affect the speed of perception. In fact, colors do not have the same inherent ability to draw attention (Rouillet, 2006). Some colors are more focused on linearity than others. First orange, red, blue, green, and finally yellow. In addition, Arabi (2017) uses colored backgrounds instead of figurative backgrounds, which arouse interest in visual and cognitive ergonomics.

Consumers especially need a line of sight to understand his surroundings. This explains why color is a key variable in its perceptual process and repeatedly intervenes in product selection. Color is one of the most direct ways to convey information. Color helps consumers process, retain and remember information more effectively than black and white (Arabi, 2017; Motoki, Toshiki, Nouchi & Kawashima, 2019; Bethan & Nobbs, 2020).

Advertising company used as celebrity endorsements support draws consideration, expands trust towards the brand, and assembles validity that is brought about higher deals. Distinctive promoting requests are utilized to make the interests of customers that will uphold buy aim. Advertisers designate more assets to build up their image. Advertisers support VIPs and convey supported messages to various media to make natural their image. Big name support is a significant part of present day publicizing nowadays. Big name support adds to the arrival of promoting interest in publicizing (Hunjet & Vuk, 2017).

The organization anticipates great monetary advantages consequently after big name support. It is seen that superstar support is the triumphant equation in advertising and brand the executives deliberately. Big name underwriting makes moment brand mindfulness, upholds building up the brand, and expands brand review. Celebrity is high-profile characters so they are embraced in the brand. Superstar underwriting elevates to start the precedent in the business sectors that assistance to build buy expectation in the embraced brand (Muthukumar, 2014). Supporting superstar is a costly errand yet an organization can get more advantages through big name underwriting. Purchasers see it as of superior grade whenever embraced Celebrity. The supported brand draws speedy consideration. Media openness

is powerfully expanded. The supported brand could get more apparent on the lookout. The organization could get a monetary return. The big name supported item could be separated effectively from contenders. Big name support straightforwardly affects buy aim (Shimp, 2018).

The Consumer Behavior changes with preferences of Colors, has been evident with this research and many researches in same domain have been conducted based on consumer psychology. The Color Scheme and Ecological valance used in Packaging and Branding used by marketers to increase customer attraction and increase the sales of Brands. The Consumer Buying behavior is changed with change in Colors and selection of products may vary with change in colors scheme. The Colors affects the consumer decisions and change in Colors, Packaging affects the consumer's decisions. The colors should be eye catching and attractive so that consumers focus may increase and aesthetics of color demand for purchased and affects the purchases decisions (Bethan&Nobbs, 2020).

Color plays a vital role in alerting (attracting attention), attribution (consistency with product range), and consistency (consistent with positioning and brand personality). Obviously, packages that are different from neighbors have a greater impact on the shelves and will attract more consumer attention (Devismes, 2000; Rouillet, 2006). Color can affect the speed of perception. In fact, colors do not have the same inherent ability to draw attention (Rouillet, 2006). Some colors are more focused on linearity than others. First orange, red, blue, green, and finally yellow. In addition, Arabi (2017) uses colored backgrounds instead of figurative backgrounds, which arouse interest in visual and cognitive ergonomics.

The Consumers are using online networks and engage in online shopping via various sources includes companies websites and other E-commerce tools. The COVID-19 has change the pattern of buying of products and services. The firms inclined towards launching services via websites and provide access to people to do online shopping. There are various issues that companies are facing, includes the various organizations operating through online and E-commerce network provides like Daraz.pk, i-shopping, Ali Baba, etc these are various networks to provide facilities to consumers.

Consumers are using online networks and available on social media websites like Google, YouTube, Instagram, Facebook, Snapchat and so forth. The Marketers and advertisers used to attract to them on online mediums to

promote their brands. The organization want their customers to buy online and use various mediums to perform online shopping. The COVID-19 pandemic is the paves way to move consumers from traditional to online mediums and enhance their exposure of online shopping (Alavi, Mehdinezhad & Kahshidinia, 2019)

E-commerce is the availability of infrastructure to consumers to change the mind of set of consumers to buy online and sale the products and services via online mediums. The online medium is used to enable the consumers to perform shopping online. There are various networks provides the opportunity and availability to sale products online and B2B business transactions need to perform. The COVID-19 is the pandemic and medium to promote the consumers to perform online. The platforms include the Ali Baba, Amazon, E-Bay, WalMart, Daraz.pk and so forth. There websites are central and core business platforms for all to develop and enhance their business and for customers is the ease of shopping and availability of products (Bosman, , Boshoff, & Van Rooyen, 2013).

As previously discussed several times that consumer purchasing behavior plays an essential role when it comes to the marketing of fast moving goods. This behavior is usually caused by many factors. In this current era with the passage of time consumer's needs and wants are changing rapidly. FMCG sector plays a major role in the increase in a country's GDP. It is necessary to maintain the knowledge of change that comes in the consumers buying behavior with time. This study proved that consumer behavior works according to the place, product, and way of promoting the product, price, and physiological and psychological factors. The effect of these factors is different with different products (Elliot & Maier, 2014).

Personality Traits

The Attributes of person which relates to psychographic characteristics that helps in decision making. The personality type, learning, emotions, cognition towards brands and people helps consumer towards buying decision (Sawean & Ali, 2020; Arabi, 2017).

The critical human psychological factors in decision making and may change the relationship of Perception and Purchase intentions. That's also explained in way consumer willing to buy due to change in preferences unable to buy the Brands. Evaluating to various color, some contributions suggest that different

variables such as age and gender influence consumer color preferences. Each color affects the consumer differently. It can stimulate or calm. Some studies have shown that warm colors (red, yellow, orange) stimulate the individual's sympathetic nervous system. In fact, red seems to increase blood pressure, pulse rate, and respiratory rate. Thus this play moderating role between impact of colors on Consumer perception and buying behavior, Due to age and Sex the preferences may change even positive and strong perception towards brand to buy may reduce (Alexander & Nobbs, 2020).

Consumers establish product appearance choices and aversions based on several factors such as age and gender, culture and beliefs, emotions and attitudes. For marketers, colors have many uses. Often this is the first thing we notice. Color directly and internally shapes our thinking. Color can be a key tool for marketers. In a society facing an overload of information and stimuli, colors communicate with fresh simplicity and influence. Colors have a strong association meaning they can communicate quickly and can trigger a strong subconscious response (Yadav and Paul, 2014).

Advertising company used as movie star endorsements assist draws attention, expands accept as true with closer to the emblem, and assembles validity that is delivered about better offers. Distinctive promoting requests are applied to make the pursuits of customers a good way to uphold buy purpose. Advertisers designate greater property to build up their photograph. Advertisers help VIPs and produce supported messages to diverse media to make herbal their photograph. Big call support is a considerable part of modern publicizing nowadays. Big name support provides to the appearance of selling interest in publicizing (Hunjet & Vuk, 2017).

The company anticipates super monetary advantages consequently after huge call guide. It is visible that celebrity aid is the successful equation in advertising and logo the executives deliberately. Big name underwriting makes second logo mindfulness, upholds constructing up the logo, and expands logo review. Celebrity is excessive-profile characters so they are embraced within the brand. Superstar underwriting elevates to start the precedent within the business sectors that assistance to construct buy expectation within the embraced emblem (Muthukumar, 2014). Supporting celebrity is a expensive errand yet an employer can get extra benefits through huge call underwriting. Purchasers see it as of superior grade on every occasion embraced Celebrity. The supported emblem attracts rapid consideration.

Media openness is powerfully elevated. The supported emblem should get more obvious looking out. The employer could get a financial go back. The big call supported object could be separated effectively from contenders. Big name help straightforwardly influences purchase goal (Shimp, 2018).

The Endorsement is the method, via which celebrities are worried in marketing and advertising and recommended the manufacturers. The logo endorsements affects the client intentions to shop for the product, the purchaser's desires complete information, interest and the manner to apply the product and service. The celebrities are endorsing severa brands, the endorsements direct the consumer selections to shop for the goods and offerings (Bhatt, Jayswal, & Patel, 2016).

The Endorsement is the system, thru which celebrities are concerned in marketing and encouraged the manufacturers. The logo endorsements impacts the patron intentions to buy the product, the patron's needs complete records, recognition and how to use the product and carrier. The celebrities are endorsing numerous brands, the endorsements direct the consumer choices to buy the products and offerings (Bhatt, Jayswal, & Patel, 2016).

Marketers and Advertiser used Celebrity endorsements as tool for prompting the manufacturers. The diverse brands like FMCG products, need to be promoted by using information with familiarity and similarity of product like Shahid Afridt selling the Clear Shampoo, Waseem Akram Promoting actual estate tasks, Mahira Khan selling diverse splendor merchandise and Soaps these are referred as celeb endorsements.

Celebrity endorsement is used as device for advertising and advertising and logo promotions. The Celebrity is credible supply for selling the manufacturers thinking about the significance and repute of celebrities inside the marketplace. The movie star endorsements is used to investigate the clients attitude of usage of merchandise and how they product may be used and gain to clients. The Celebrity can be Actor, Doctor, Cricketer, Sports Man, and Politician, Anchor person any person, whose credibility is in people and people understand him and recall his or her recommendation for usage of services or products (Shrestha, 2019).

Evaluations and Excitement towards Packaging

The Packaging has tremendous role on client buying and appeal and as a result entrepreneurs and researchers focuses on hues and examine customers

based on attraction factors in packaging. The Consumer Behavior modifications with possibilities of Colors, has been glaring with this studies and plenty of researches in same area were performed primarily based on patron psychology.

Color psychology research the extraordinary reactions of people on certain colors and how colour allows people to evaluate certain components of an object. Color may be seen whilst mild passes thru an item whose atomic shape causes it to supply a awesome colour. As the atoms range from one object to any other, so does the colour they produce. Color performs a vital function in alerting (attracting attention), attribution (consistency with product range), and consistency (consistent with positioning and logo character). Obviously, programs which might be specific from acquaintances have a greater impact on the shelves and could appeal to more consumer interest (Devismes, 2000; Roullet, 2006). Color can have an effect on the speed of notion. In fact, colours do not have the same inherent ability to draw attention (Roullet, 2006). Some shades are extra centered on linearity than others. First orange, purple, blue, inexperienced, and in the end yellow. In addition, Arabi (2017) uses coloured backgrounds in place of figurative backgrounds, which arouse hobby in visible and cognitive ergonomics.

Color preference is a sizeable a part of human interest. It affects a huge variety of choices people make all of the time, such as the items they purchase, the clothes they put on, the manner wherein they beautify their houses and workplaces, and the way they plan their own and expert websites, to provide a few examples fashions. One motivation behind why shading inclination assumes this sort of conspicuous task in dynamic (Arabi, 2017). The Kolenda (2016) describes the importance of Colors in advertising and branding, the marketer used the colours in Branding and Advertising to sell the Brands and creates clients appeal. The Kolenda additionally describes the colours imaginative and prescient, purchaser perception, and how clients attracted in the direction of the colours. Kolenda evaluates the brightness in colorings boom attention and consider and for this reason clients are supposed to shop for the goods and services. Colors schemes based on Ecological valance includes the scale of Exposition, Attention, Hue and Brightness, Comprehension, and Retention.

RESEARCH METHODOLOGY

Geographical Distribution of Sample

The research conducted in FMCG organizations and selected organizations

are focused includes Nestle and Unilever. The research conducted based on primary data collection and Positivism research paradigm. The research conducted based theory of ecological valance and Kolenda model of colors and packaging. The researcher targets the FMCG consumers of brands who are attracted towards advertising and use brands which are endorsed by celebrities. The data collected from population or consumers of Karachi Pakistan.

Demographic Distribution of Sample

The research respondents are varying in terms of demographic factors. The respondents are the FMCG consumers of Karachi Pakistan. The respondents are males and females both and with various level of income, age groups and education.

Research Design

The research design elaborates the selection of research Paradigm, Methods, approach, data collection and data analysis technique. The marketers focus on packaging to increase customer attraction and better packaging influence customer behavior and enhance sales.

Type of Research

The research conducted based on Positivism research paradigm and primary data collected through questionnaires. In this research our approach is deductive approach. The theory is adopted and results are analyzed based on hypothesis testing, hence research is applied research and explanatory in nature.

Population of the Study

The research conducted for FMCG Brands in Pakistan and Population consider the customers of Nestle and Unilever. The research has taken 95% confidence interval and 5% margin of Error approach for collection of data. The target population is the customers of Nestle and Unilever Brands in Karachi Pakistan.

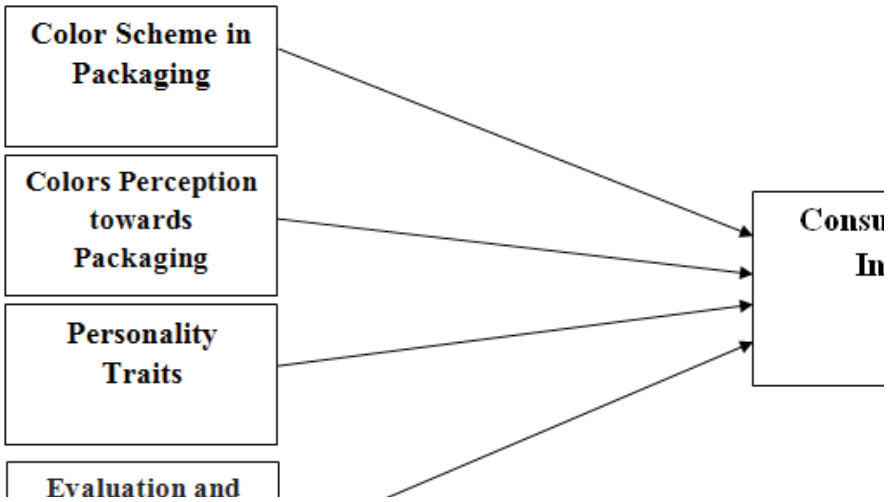
Sampling Technique and Sample Size

The sampling method is the Convenience sampling. The researcher taken sample based on 95% confidence interval approach and statistics calculator describes the minimum sample size to cover is 385 customers. The researcher collected the data from 385 consumers of FMCG Brands in Karachi Pakistan and data collected through online Google survey forms based on adapted questionnaire.

CONCEPTUAL FRAMEWORK

Independent variables (IV)

Dependent variable (DV)



Source: Adapted: Alexander & Nobbs (2020), Arabi (2017) & Babin, Hardesty & Suter; (2013)

Research Instrument

The research conducted based on Questionnaire and survey conducted from consumers of FMCG Brands, those who are involved in buying the consumer products related to foods, grocery and beverages.

Data Collection & Analysis Techniques

The data will be collected through the Questionnaire, then collected data processed through the SPSS Software.

DATA ANALYSIS

The research conducted to analyze the impact of social media advertising on Brand image. The research analyzes how social media creates attraction for consumers, how consumer involved in buying decisions and how this affects on brand image. The research conducted to analyze the brand image of FMCG brands specifically the brands of Nestle and Unilever while consideration of population. The consumers are watching the social media advertisements for brand awareness, for information and for consumption of brands. The consumers prefer that organization promotes their brands on social media and millions of customers are available online watching social media advertisements.

The research conducted to analyze the impact of social media advertising on consumer decisions and overall brand image of FMCG Brands. The Primary research conducted to analyze the impact of based on customer perspectives, the data collected from 385 users of FMCG Brands and prefer social media advertng for brand awareness and brand promotions. The data collected through online Google forms, Questionnaire is based on Likert scale, and collected data analyzed through SPSS software, reliability testing, correlation analysis, regression analysis and hypothesis testing performed to evaluate the results.

Reliability Testing

The data collected through questionnaire the internal reliability test (IRT) conducted to analyze the consistency of response over the scale.

Table 1: Reliability of Collected Data

| Reliability Statistics | |
|-------------------------------|-------------------|
| Cronbach's Alpha | N of Items |
| 0.86 | 20 |

Table 2: Reliability of Constructs

| Variables | Items | Cronbach's Alpha |
|---|--------------|-------------------------|
| Color Scheme in Packaging | 4 | 0.86 |
| Consumer Perception towards Packaging | 4 | 0.79 |
| Personality Traits | 4 | 0.699 |
| Evaluation and Excitements of Consumers | 4 | 0.70 |
| Consumer Buying Intentions | 4 | 0.70 |

The reliability test of constructs, elaborated in the table, the table shows the collected data is reliable and Color Scheme in Packaging with 5 items the value of Cronbach's alpha is 0.86 which is reliable. The Consumer Perception towards Packaging value is .79, the value of Personality Traits is .70 and value Evaluation and Excitements of Consumers is 0.669 and Consumer Behavior intentions are 0.70 The values are above 0.6 in primary research that is consistent and all construct invidiously having sufficient reliability.

Demographics of Respondents

Table 1: Demographics - Gender

| Gender | | | | | |
|--------|--------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 295 | 76.6 | 76.6 | 76.6 |
| | Female | 90 | 23.4 | 23.4 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |

The data collected from both customers male and female, among 385 customers 295 are males and 90 are females.

Table 2: Demographics - Age

| Age | | | | | |
|-------|-------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 18-25 | 179 | 46.5 | 46.5 | 46.5 |
| | 26-33 | 154 | 40.0 | 40.0 | 86.5 |
| | 33-40 | 52 | 13.5 | 13.5 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |
| | 18-25 | 179 | 46.5 | 46.5 | 46.5 |

The research data collected from people of various age groups includes 18-25 years includes 179 customers, 26-33 are the 154 customers, 33-40 years are the 52 customers and total are 385 customers.

Table 3: Demographics – Education

| Education | | | | | |
|-----------|---------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Intermediate | 13 | 3.4 | 3.4 | 3.4 |
| | Graduate | 270 | 70.1 | 70.1 | 73.5 |
| | Post graduate | 102 | 26.5 | 26.5 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |

The data has been collected from the people of different level of education, so that has clear idea about level of purchase and how they are attracted towards online shopping. The customers normally are Graduate and about 270 customers are Graduate and under graduate people and 102 are people with Masters degree.

Table 4: Demographics – Income

| Income | | | | | |
|--------|---------------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Rs. 40,000 - 60,000 | 110 | 28.6 | 28.6 | 28.6 |
| | Rs. 60,001 - 80,000 | 172 | 44.7 | 44.7 | 73.2 |
| | 80,001 - 100,000 | 103 | 26.8 | 26.8 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |

The data has been collected from the people of different income groups, the majority of customers having income in between 60,001 to 100,000. The 172 customers having income in range of 60,000 to 80,000 and 103 customers are having range of income of 103.

Correlation Analysis

Table 6: Correlation Matrix

| Correlations | | | | | | |
|--------------|---------------------|--------|--------|--------|--------|--------|
| | | CS | CP | PT | EE | CB |
| CS | Pearson Correlation | 1 | -.007 | .223** | .615** | .566** |
| | Sig. (2-tailed) | | .928 | .003 | .000 | .000 |
| | N | 385 | 385 | 385 | 385 | 385 |
| CP | Pearson Correlation | -.007 | 1 | .033 | -.028 | .199** |
| | Sig. (2-tailed) | .928 | | .658 | .709 | .007 |
| | N | 385 | 385 | 385 | 385 | 385 |
| PT | Pearson Correlation | .223** | .033 | 1 | .095 | .058 |
| | Sig. (2-tailed) | .003 | .658 | | .203 | .040 |
| | N | 385 | 385 | 385 | 385 | 385 |
| EE | Pearson Correlation | .615** | -.028 | .095 | 1 | .749** |
| | Sig. (2-tailed) | .000 | .709 | .203 | | .000 |
| | N | 385 | 385 | 385 | 385 | 385 |
| CB | Pearson Correlation | .566** | .199** | .058 | .749** | 1 |
| | Sig. (2-tailed) | .000 | .007 | .040 | .000 | |
| | N | 385 | 385 | 385 | 385 | 385 |

** . Correlation is significant at the 0.05 level (2-tailed).

The above Correlation Matrix table shows the relationship of independent and dependent variables. The Color Scheme (CS), Ecological Valance (EV) is independent variables and Associative learning (AL), Consumer

Perception (CP) is mediating variables and Consumer buying Intention (CBI) is dependent variable. The Correlation Matrix just explains the relationship of all variables with dependent variable based on 95% confidence Interval and 5% Margin of Error on which sample is drawn from population. The Variables Color Scheme in Packaging, Consumer Perception towards packaging, Personality Traits, Evaluation and Excitement towards packaging, values 0.00 have strong positive relationship and personality traits value of probability is 0.18 shows the significant relationship with consumer buying intentions.

Regression Analysis

The model explains the model summary, ANOVA and analysis of coefficients based on variables.

Table 7: Regression Model Results

| Model Summary | | | | |
|---------------|------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .791 | .715 | .7142 | .27635 |

The R Square is the model shows the model explanatory power, the model shows the R Square value 0.71, this elaborates the model is significant and 71% consistency can be gained through selection of these variables.

Table 8: Regression Model Results - ANOVA

| ANOVA | | | | | | |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 31.369 | 5 | 6.274 | 13.715 | .000 ^b |
| | Residual | 173.372 | 379 | .457 | | |
| | Total | 204.741 | 384 | | | |

The model shows the significance with the value of F Statistics, as probability value less than 0.05, the model is significant and value. The model is significant and value of F Statistics is significant. The overall model is significant and value is significant based on variables, thus all variables explained that social media advertising is significant and affects on brand image of consumers.

Table 9: Regression Model Results – Co-efficient

| Coefficients | | | | | | |
|--------------|-----------------------------|-------|---------------------------|------|-------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | |
| | Std. Error | Beta | | | | |
| 1 | (Constant) | 2.100 | .624 | | 3.365 | .001 |
| | CS | .212 | .056 | .184 | 3.779 | .000 |
| | CP | .334 | .051 | .325 | 6.618 | .000 |
| | PT | .097 | .065 | .077 | 2.503 | .013 |
| | EE | .138 | .049 | .140 | 2.794 | .005 |

a. Dependent Variable: BI

The Variables Color Scheme in Packaging with Consumer Buying Intentions with t value 3.7 and probability value 0.00, with Consumer Perception towards packaging with t statistics value 6.6 and probability value 0.00 and Personality Traits with t value 2.5 and probability value 0.013 and last Evaluation and Excitement towards consumer buying intentions with value 2.74 and probability value 0.05 these are significant predictors.

Hypothesis Testing

Table 10: Hypothesis Testing

| Hypothesis | T Value | Sig Value | Decision |
|---|---------|-----------|----------|
| H1: There is significant impact of Entertainment provided in Social media advertising on Brand image. | 3.779 | .000 | Accepted |
| H2: There is significant impact of Information provided in Social media advertising on Brand image. | 6.618 | .000 | Accepted |
| H3: There is significant impact of Customization provided in Social media advertising on Brand image. | 2.503 | .013 | Accepted |
| H4: There is significant impact of Trendiness in Social media advertising on Brand image. | 2.794 | .005 | Accepted |

The Hypothesis H1, H2, H3 and H4 are accepted are t value greater than 2 and probability value less than 0.05. The Variables Color Scheme in Packaging with Consumer Buying Intentions with t value 3.7 and probability value 0.00, with Consumer Perception towards packaging with t statistics value 6.6 and probability value 0.00 and Personality Traits with t value 2.5 and probability value 0.013 and last Evaluation and Excitement towards consumer buying intentions with value 2.74 and probability value 0.05 these are significant predictors.

CONCLUSION

The research analyzes the Colors Scheme and Ecological valance on Consumer Buying intentions in FMCG industry in Pakistan. The researcher

analyzed the impact based on Kolenda Model and Quantitative approaches with empirical founding's. The research evaluate that the Colors Schemes is very important construct in consumer buying decisions marketers understand it's important to work upon packaging, trade marketing and Display or products in shopping malls and markets. The marketing approaches differ today based on understating consumer behavior and analyze basis of customer decisions in various contexts. The research conducted considering the Color Scheme in packaging, consumer perception, personality traits and evaluation and excitements are is independent variables and Consumer Buying Intentions is dependent variable.

The Color Scheme towards packaging, Consumer perception, Personality Traits, used in Packaging and Branding used by marketers to increase customer attraction and increase the sales of Brands. The pilot testing conducted based on 30 responses and internal reliability test showing the 92% consistency of responses over the scale. The correlation analysis and regression analysis applied to evaluate the relationship and impact of various factors on Consumer Buying Intentions. The Correlation Analysis shows the positive and significant relationship with Consumer buying intentions and factors Color Scheme, Ecological Valance, consumer perception, associative learning, and gender affects the buying decision.

The regression results show the Color Scheme, Ecological valance and associative learning has significant impact of Consumer buying intentions. The variables are significant and impact on consumer buying intentions. The results shows that all three independent variables having significant relationship and impact on Consumer buying intentions but moderating factor impacts the relationship of independent and dependent.

SUMMARY OF FINDINGS

The reliability test of constructs, elaborated in the table, the table shows the collected data is reliable and Color Scheme in Packaging with 5 items the value of Cronbach's alpha is 0.86 which is reliable. The Consumer Perception towards Packaging value is .79, the value of Personality Traits is .70 and value Evaluation and Excitements of Consumers is 0.669 and Consumer Behavior intentions are 0.70 The values are above 0.6 in primary research that is consistent and all construct invidiously having sufficient reliability.

The above Correlation Matrix table shows the relationship of independent

and dependent variables. The Correlation Matrix just explains the relationship of all variables with dependent variable based on 95% confidence Interval and 5% Margin of Error on which sample is drawn from population. The Variables Color Scheme in Packaging, Consumer Perception towards packaging, Personality Traits, Evaluation and Excitement towards packaging, values 0.00 have strong positive relationship and personality traits value of probability is 0.18 shows the significant relationship with consumer buying intentions.

The regression analysis shows the values of t statistics and probability, the criteria based on 95% confidence interval, the t value greater than 2 and probability value less than 0.05 shows the variable is significant and can explain and predict the dependent variables. The Variables Color Scheme in Packaging with Consumer Buying Intentions with t value 3.7 and probability value 0.00, with Consumer Perception towards packaging with t statistics value 6.6 and probability value 0.00 and Personality Traits with t value 2.5 and probability value 0.013 and last Evaluation and Excitement towards consumer buying intentions with value 2.74 and probability value 0.05 these are significant predictors.

RECOMMENDATIONS

The research evaluates the impact of Colors Scheme in Brands of FMCG and its effects on consumer buying decisions. The research is useful for FMCG organization and marketers to create customer attraction based on FMCG Brands and increase customer focus towards the selection of goods and services.

- The research is considerably important to analyze the colors scheme in packaging on consumer buying behavior.
- The research is considerably important marketers must focus on consumer perception towards of packaging while consider the packaging material in buying intentions.
- The research conducted and analyzed the personality traits are important to evaluate in packaging of FMCG Brands.
- The research is conducted to and analyzed the evaluation and excitements towards purchasing the brands.

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USING ELEMENTS OF DEVELOPMENT TO COMBAT POVERTY IN PAKISTAN

Abid Iqbal

ABSTRACT

Undeveloped neighborhoods and multidimensional poverty are the two issues that rising countries encounter the most frequently. The goal of the study was to find concrete evidence of inclusive sustainable community development and poverty reduction in the chosen Sindh regions. For the study, a survey that was conducted in five districts of Sindh yielded replies from 230 respondents. The study is based on a quantitative analysis of primary data gathered from five selected districts in the Sindh province of Pakistan, which was afterwards submitted to descriptive and inferential analysis using SPSS. Four research topics, covering a wide range of aspects of integrated and sustainable community development and poverty reduction, are addressed by the findings. The study examined the relationship between complex poverty and broad-based, long-term community development. The study examined the relationship between complex poverty and broad-based, long-term community development. Additionally, the impact of individual and group income levels on growth is examined. The findings of the study will be beneficial in creating inclusive community development strategies that will reduce poverty.

Keywords: *Multi-dimensional poverty, Community development, Sustainable development.*

INTRODUCTION

As a social and economic ill, poverty looks to be spreading across practically all economies. Society has been ruled by poverty for a very long time, and it has many different manifestations now, according to the current reality. Almost all nations still struggle to reduce poverty despite the use of numerous strategies. However, as societies are essential to tackling these concerns, this barrier may be overcome via inclusive and sustainable community development.

What is Poverty

People are considered to be in a condition of poverty when they do not have the resources to buy the necessities of life. Existence is predicated on social, biological, and even spiritual needs in addition to material ones. It is a challenging, ill-defined concept that is based on a number of factors.

A person is considered poor if their total income or actual purchasing power is below Pakistan's Total Poverty Line (TPL), which includes miscellaneous costs such as gifts, weddings, and other special occasions as well as food, clothing, and footwear, housing, transportation, and communication, cleaning, and laundry (Ali, 1994).

“Lack of resources—financial and nonfinancial—necessary for maintaining people and families, a phenomenon that has existed throughout history and was first documented in the Paleolithic period. However, this has changed in the modern day, and it may now be characterised as the collapse of social and economic links that provide the security of life and income (Bugra, 2016).

Poverty is defined as the inability of a population to earn enough money to meet their fundamental necessities (Sam, 2014).

According to Jim Levinsohn, it's crucial to focus on the appropriate sectoral policies and programmes while discussing the poverty reduction strategy, which may include those for social security, health, and education (Levinsohn, 2003).

Professor Sbina Alkire claims that despite poverty's complex effects, they can be largely attributed to three key variables: education, health, and way of life. She has identified 10 distinct poverty indicators for the rest of the world, but she has named 15 indicators for Pakistan under the headings of living standards, health, and education (Foster, 2017).

Community

Community is an abstract idea without a precise definition or measurement method. It is predicated on particular persons coexisting in the same location with specific shared wellness goals from the same caste or other castes, tribes, and ethnic groups. There is no predetermined or specified number of people or defined area.

A group of nearby inhabitants is referred to as a “community,” and they

may congregate in one area to use facilities like schools, prayer rooms, shops, and legal or medical facilities. Community scope may include geography, economy, and demography (Coyle, 1941). A community is made up of a group of people who live together and collaborate to solve pressing problems in their everyday lives (Queen, 1923).

Community Development

The main goal of community development is to raise local residents' quality of life. A community's well-being is expanded methodically in all respects based on its economic, social, environmental, and cultural components. This process is known as "community development." To raise quality of life, the community must be reinforced so that it can act as a unit and tackle common problems. (Smith). The objective of community development is to create and maintain communities through enhancing the social, economic, and environmental dimensions of people's lives. It is grounded in both internal and outward community growth (Theodori, 2006). Promoting the community's general wellbeing is the aim of community development. The concept of community development, according to Rhonda Phillips and Robert H. Pittman, has expanded beyond social activism and housing to include a wide variety of elements, such as economic, social, environmental, and physical elements. They defined it as a process of enhancing a community's capacity to cooperate for the common good on any level, including physical, ecological, cultural, communal, political, and economic, among others (Pittman, 2009). The process of providing a community's sovereignty and consent for improvement is known as community development. There is a local society and shared land in the area (Chang, 2010).

Sustainable Integrated Development

When creating a development programme, sustainability is a component that must be considered; otherwise, the resources invested would be squandered. When development and sustainability are combined, a defined degree of development is attained and should be maintained, according to the dictionary definition of sustainability, which is the ability to be maintained at a given level. The most common definition of sustainable development, according to the World Commission on Environment and Development, is "humanity's capacity to guarantee that it satisfies the requirements of the present generation without jeopardizing the ability of the future generation to satisfy its own needs" (Brundtland, 1987)

The concept of sustainable development has defined standards for an economic and social advancement model with environmental preservation and human well-being as its primary objectives. Given the current status of the economy, environment, and natural resources, sustainable development aims to maximise human enjoyment while simultaneously making the greatest use of the resources at hand. (2015) Duran Etal (Alin Artenea Luminita Maria Gogana, Vasile Durana, and Dan Cristian Durana, 2015)

Community development is based on a number of aspects, including economic, social, environmental, and cultural considerations, as was previously stated. The community is regarded as underdeveloped if any of the aforementioned elements are not established. As a result, development in all forms is necessary for achieving the objective, and all types of development can be included. Multi-sector development, a recently trendy idea for multi-sector growth, is referred to as integration.

Poverty and Underdevelopment Interconnection

There are a total of 14 indicators of multi-dimensional poverty identified by Alkire for Pakistan, all of which are included in the SDGs and are anticipated to be accomplished by 2030. This demonstrates that “poverty reduction” and “community development” may both be achieved by addressing these fundamental problems. Addressing inequality may stop the transition from complainers to violent conflict, which is one of the causes of poverty (Goodhand, 2003). People who are poor and disadvantaged may benefit from sustainable development by developing their capability, decreasing their overall vulnerability, and helping them secure their livelihoods (Abdul Halim Etal. 2018). Brownwyn Hayward, Markku Kanninen, Diana Liverman, Chukwumerije Okereke, Sharina Abdul Halim, Philip Antwi-Agyei, Purnamita Dasgupta, Patricia Fernan, May 2018).

Community and Economic Development

The term “community development,” which is closely related to “economic development,” refers to actions performed by the state in conjunction with charitable organisations to enhance the general quality of life for its residents. In order to reduce poverty, increase employment and educational success, increase access to social services and health care, and lessen the negative effects of unemployment and poverty, which can include illnesses, crime, and health issues, among other things, policies and programmes are put into place (Kautzman, 2018).

Problem Statement

The greatest way to prevent or lessen multi-dimensional poverty is through community development, which may be accomplished by combining numerous development initiatives under one roof. The provision of livelihoods for community members is a prerequisite for development, and sustainability can only be achieved with their active involvement as beneficiaries.

Research Questions

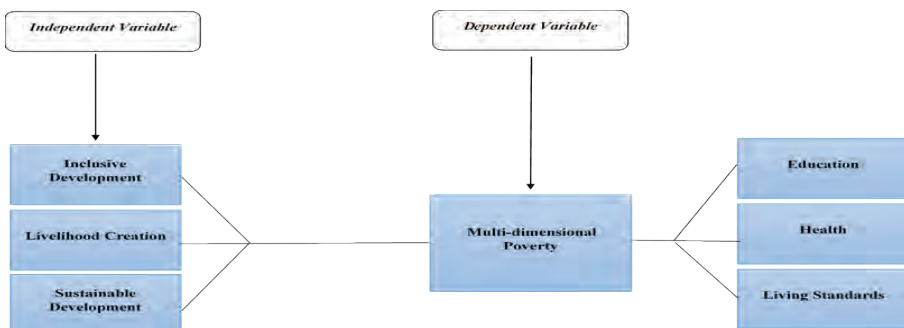
The following set of questions served as a direction and guide for the research:

1. Is it possible to lower the MDP through inclusive community development?
2. Is the development of livelihoods a requirement for community growth and the reduction of MDP?
3. Is inclusive development required to achieve the community's and MDP's development goals?
4. Do neighbourhood development and MDP reduction need sustainable development?

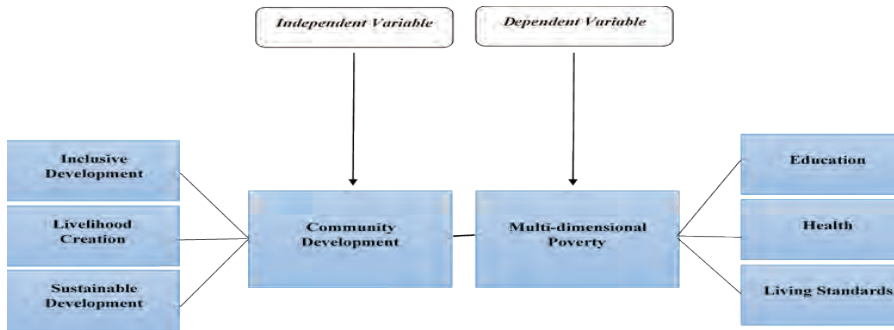
Conceptual Framework Of The Study

To support the research, two models and a total of five variables are employed. In both models, the MDP is treated as the dependent variable. Development, the establishment of livelihoods, and sustainable development are the three independent variables in Model 1. The inclusive sustainable community development variable in the second model incorporates all independent variables (ID, LC, and SD).

Conceptual Framework (Model 1)



Conceptual Framework (Model 2)



Nature of the Study

The study method known as social research is one technique to illustrate social life in society. It is the result of someone’s or a group’s efforts to talk about important social issues. It alludes to concepts or social philosophy, either directly or indirectly. Additionally, a sizable number of crucial indications are acquired, and conclusions are made as a result. In social research, a variety of data gathering methods are employed, such as surveys, interviews, event participation, and observations (Ragin, 2011).

Quantitative data is gathered and analysed using survey methods. Data collection methods that include measuring and rely on obtaining responses from respondents include surveys. It is beneficial for gathering data from a range of people and essential for social research (Headlam).

Literature Survey

The study on inclusive sustainable community development and multidimensional poverty reduction (MDP) is examined in this chapter (ICSD). The aim of studying the literature was to analyse past investigations on the phenomena that were conducted by other researchers. The literature review also assists the researcher in gathering the information and backing required to carry out the investigation. The purpose of a literature review, according to Babbie and Mouton (2001), is to ascertain the extent to which the subject of the inquiry is covered by the prevailing form of facts. The linked theoretical orientations have thus been examined by the researcher to see whether they are relevant to the investigation of ISCD and MDP reduction.

Multi-Dimensional Poverty and Sustainable Development Goals of Pakistan

According to Alkire's 2018 report to UNDP, poverty has a range of repercussions and is based on three main indicators: health, education, and living conditions. Eleven sub-indicators are then broken down into these three dimensions for the entire world. These sub-indicators come within the areas of living circumstances, health, and education. She does, however, increase the 10 sub-indicators already provided for Pakistan by five. One of the additional five factors that are grouped with the primary indicator of education is quality education. The availability of medical facilities, complete immunization, prenatal care, and assisted delivery are all recognized as health indicators. With more land, more cattle, and more powerful defenses, there are more indications of a greater standard of living. Pakistan's population density is considered to be worrying by the multi-dimensional poverty index.

Nearly all of the indicators described are included in the Sustainable Development Goals, commonly known as the 2030 Agenda for Sustainable Development, which were revealed by the UN during the United Nations (UN) Summit on Sustainable Development. Professor Sabina Alkire's multidimensional poverty is explored together with the first six SDGs: No Poverty, No Hunger, Good Health, Quality Education, Clean Water, and Sanitation. This example demonstrates how the MDP may be addressed while still achieving development goals. The SDGs estimate that about a billion people worldwide live-in severe poverty and make less than \$1.25 per day (LEAD Pakistan 2016). There are 800 million people who don't have enough food to eat. Numerous types of inequality affect women, and millions of women lose their lives while giving birth to their children. The biggest obstacles to realising the goal of a sustainable environment and human wellbeing are climate change, excessive consumerism, income disparity, and economic development reliant on fossil fuels.

Community Development and Poverty

According to Infanti and Teye (2004), if a town is momentarily ignored by the national economy, a vicious cycle of economic and social problems may persist, leading to a problem with disinvestment and declining levels of human resource availability. Such disadvantaged populations burden the economy by causing problems like unemployment, company failure, family stress, crime, poor health, illnesses, and subpar housing, rather than furthering

the country's wealth. In order to form a community, local institutions must be established and supported, and social infrastructure must be built. Utilizing a range of skills and working with the people can help communities become more capable and resilient.

According to an article's conclusion (Akbari Etal 2008), the idea of social sciences has gained more recognition as a means of enhancing local communities. In order to minimise conflict, end poverty, and enhance the social climate in the neighbourhood, trust must be established. Social programmes should be created to increase a community's social capital so that the poor may network and grow their skills. Global poverty and environmental challenges are only two of the numerous topics that have been brought up. The majority of those who are poor are employed in agriculture and cultivate food for their own subsistence. According to academics, poverty is caused by environmental issues and the rapid population expansion. As a result, there is a direct connection between social growth and environmental sustainability.

Because of their research, (Qian Etal, 2015) came to the conclusion that eliminating poverty is both the world's largest issue and a key component of China's soft power. According to them, poverty and sustainable development are linked, even if efforts should be undertaken to alleviate extreme poverty and to emphasise its eradication.

Since poverty is associated with higher rates of mortality, accidents, and asthma underdevelopment, it has an impact on children's health and development, claims (Aber Etal 1997)

According to Murphy and Walsh (2014), a range of shocks, such as changes in the economy, the environment, or health problems, may cause people to become poor since they may lose their employment possibilities at that time. People may be protected from these kinds of damages by a more comprehensive social safety net and insurance system. The 5.1 billion people who live in unstable and risky conditions may be protected by a worldwide social safety net, which would also lessen the temporary poverty brought on by the aforementioned shocks. In order to reduce social inequality and fight structural poverty, this tactic may also be adopted.

According to (Dashiff Etal; 2009), poverty and inequality both have an impact on people's mental health.

Individuals in impoverished countries have less access to healthcare

than people in affluent ones, claims Peters Etal (2008). Living conditions, geographic accessibility, financial accessibility, and acceptance of services are bad for individuals who reside in developing nations. The problem is dealt with on many different levels using a variety of strategies, but the steps done to involve communities and the underprivileged are what make them effective. Mobilization, monitoring, and evaluation supported local adaptation. The use of “health equity funds,” “conditional cash transfers,” and “co-production of health services” appears to have improved the delivery of healthcare services in several nations. However, as long as the opinions of vulnerable communities are valued, the problem cannot be fixed.

Livelihood Creation, Development and Poverty

According to certain studies, the introduction of new business sectors and industries to rural and urban areas may foster societal and economic progress (Summers and Branch; 2016). The social structure and effects of the reorganisation of contemporary industrial societies can be better understood through community development projects. Increased public income from more jobs may result in better housing, services, and other amenities. However, industries where capital mobility may spur economic growth are the best places to create jobs.

Institutional initiatives may be employed to solve the complex problem of poverty, claims (Dewild; 2008). He contends that creating more and better work opportunities may serve to improve the region’s overall quality of life while stringent employment rules and regulations help to eliminate the threat of poverty.

According to research by Maltzahn and Durrheim (2008), families with lower earnings frequently deal with substandard living circumstances. The study was conducted in five South African nations. They argued that a society with a lower standard of living would also face challenges such as high newborn mortality rates, a short life expectancy, and fewer people enrolling in education. However, strengthening the agricultural industry and increasing agricultural earnings directly contribute to the eradication of poverty. This is validated by (Reddy Etal; 2003).

Hossain Etal (1997) used two national sample surveys to perform a research study on Bangladesh’s rural development and rural economy during a ten-year period. The study’s primary emphasis was on issues relating to household

income and tactics for reducing poverty. To reduce the cost of production per unit, these experts advised concentrating on higher-demand yields and careful management of land and water. To increase the production of more sought-after and high-income generation yields, research and development should be used.

Sustainable Integrated Community Development:

The World Commission on Environment and Development defines sustainable development as advancement that meets current demands without compromising those of the future, suggesting that development undertaken today should have long-term effects. Markandya (2001) argues that the definition is lacking since it doesn't state what will be deemed appropriate in the future. The duration is also unknowable. Welfare shouldn't decline over time, according to sustainable development, but history shows that this doesn't always happen. For instance, there have been nations. However, it can be claimed that if a society as a whole is in poor condition then the poor will never be enjoying the better life.

(Gladwin Etal; 1995) asserts that the disconnect between mankind and nature and morals caused by management philosophy has to be mended. Organizational science should promote both a sustainable environment and a suitable environment. Development that does not harm the environment is always acceptable, but development that threatens the ecological system should never be accepted since it jeopardises the well-being of future generations.

The conflict between development, poverty, the environment, and peace, according to (Guamba; 2017), is proof of the difficulties that contemporary humanity confront. Even while some areas have benefitted from expansion, it also has a negative impact on people's sense of security, belonging, and strangeness. It also adds to social inequities, poverty, and environmental degradation. Therefore, in addition to achieving social ideals by developing plans and putting into practise programmes that should concentrate on behavioural changes and the eradication of poverty, the actions required to achieve sustainable development should involve environmental education and participatory management.

When examining the need of planning for development and poverty reduction in Bangladesh, Nasreen Et. al (2016; cited in Nasreen Et. al) asserts that working without a plan is not only unsustainable but also less effective. Even while everyone's spending patterns must change, the regulations should be developed with an eye toward environmental development, with

an emphasis on the top and middle classes.

METHODOLOGY AND DATA COLLECTION

In this chapter, the study’s methodology is thoroughly explained.

Research Design

Quantitative and empirical methods were used in the study since they can be statistically tested and work well when used with the correct data. Hirani and Advani (2016) state that an empirical or quantitative approach provides the foundation for acceptance or rejection based on evidence. Both mathematical modelling and tool testing are done.

Pilot Study And Data Analysis

A pilot study on the aforementioned objectives was also conducted by the researcher, who collected data from 50 respondents and determined the reliability of the data using Cronbach’s alpha. The SPSS is used for the analysis of the current research investigation.

Validity And Reliability Of Data

To assess the reliability of the findings in this study, questionnaires created to examine the relationship between dependent and independent variables were employed. both the initial validation of the survey and the use of professional data validation. The tools and data are regarded to be more reliable when the number gets closer to one (1). To assess the reliability of the data, Cronbach alpha, whose value spans from zero (0) to one (1), was utilised. The Cronbach alpha is calculated in this study using a database of 50 respondents, and the dependability score is .846 or 84.6%, as shown in tables 3. A .70 is often seen to be satisfactory.

| Case Processing Summary | | | | Reliability Statistics | | |
|-------------------------|-----------------------|----|-------|------------------------|--|------------|
| | | N | % | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| Cases | Valid | 50 | 100.0 | .846 | .838 | 5 |
| | Excluded ^a | 0 | .0 | | | |
| | Total | 50 | 100.0 | | | |

a. Listwise deletion based on all variables in the procedure.

Study Area

With 19 districts, Sindh is Pakistan’s second-largest province by population. Five districts in Sindh’s northern region are used for the study.

These districts, which were chosen among 230 responders, include Sukkur, Khairpur, Shikarpur, Larkana, and Kashmore.

DATA PRESENTATION AND ANALYSIS

The results of the data analysis are presented along with their interpretation. It also discusses how the four null hypotheses are approved or disapproved in light of the results.

Data analysis procedure

The survey’s core consisted of 28 Likert scale questions and four demographic elements. A competent crew was enlisted to help with the data collection. The 230 study participants were selected at random from the general population. While the UCs were chosen using a random sample strategy, five districts were picked by convenient sampling in order to acquire a diversity of data.

The four main hypotheses were looked at in two different ways using data analysis. The effects of ID, LC, and SD on MDP were investigated in the first part using linear regression. In the second phase, dimension reduction (factorization) was used to combine all the variables into a single community development variable, and linear regression in SPSS was used to analyse how ISCD affected MDP.

All three of the basic dimensions (ID, LC, and SD) as well as all related dimensions for MDP, ID, LC, and SD were factorised further by the ISCD. The reliability of the outcomes of the study’s pilot test was assessed by calculating Cronbach alpha. The Model Summary was used to assess the model’s goodness of fit. The coefficients matrix was utilised to assess the strength of the correlation between the variables, and ANOVA was performed to identify the statistically significant connection. In order to evaluate how well changes in the value of one variable predict changes in the value of other variables, coefficients of correlation were determined.

Goodness of Fit Model

| Model Summary ^b | | | | | | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .275 ^a | .076 | .063 | .96784713 | .076 | 6.156 | 3 | 226 | .000 |

a. Predictors: (Constant), Sustainable Development, Inclusive Development, Livelihood Creation

b. Dependent Variable: Multidimensional Poverty

The ID, LC, and SD significant values on MDP were evaluated separately by the first model. The model summary displays the R value. At 275, the straightforward correlation between the variables may be noticed. R square explains both the overall strength of the connection as well as the data variability of the model around its mean. The model’s fit is explained by the variance of all the variables. When it is smaller than 1, the model often fits the data more well. The 076. Std. shows the model’s fit. To ascertain the distribution of the dependent variables and roughly calculate the mean, one uses error of the estimates.

Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .173 ^a | .030 | .026 | .98708272 | .030 | 7.033 | 1 | 228 | .009 |

a. Predictors: (Constant), CD

b. Dependent Variable: Multidimensional Poverty

The second model is also found fit as R square calculated .030 is below 1 while value of R .173 shows the simple correlation among variables.

ANOVA

ANOVA^a

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|-----|-------------|-------|-------------------|
| 1 Regression | 17.299 | 3 | 5.766 | 6.156 | .000 ^b |
| 1 Residual | 211.701 | 226 | .937 | | |
| Total | 229.000 | 229 | | | |

a. Dependent Variable: Multidimensional Poverty

b. Predictors: (Constant), Sustainable Development, Inclusive Development, Livelihood Creation

The variance accumulation in the least square line-based regression model is determined as the slope’s sum of squares. The variance for which the probability of the regression model is unclear is the sum of the remaining squares. The variance’s squares are multiplied by 229, 000. More variance with the model can be explained at various levels, depending on how important the sum of the remaining regression squares is.

The mean regression and the mean residual value are used to compute the regression model F-test. For instance, 6.156 would be equal to 5.766 /.937. Test R or R in null hypotheses must be zero. The likelihood of acquiring an F-state with as many degrees of freedom as the one we have obtained or more than a 3 F split and 226 degrees of freedom has a very low value,.001,

according to the significance test. The researcher determined that this alternative statistical hypothesis was not zero and hence rejected the null hypothesis since R Square in the population is equivalent to zero. It is evident from Sig =.000 (b) that our model has been calibrated properly.

| ANOVA ^a | | | | | |
|--------------------|----------------|-----|-------------|-------|-------------------|
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 Regression | 6.852 | 1 | 6.852 | 7.033 | .009 ^b |
| Residual | 222.148 | 228 | .974 | | |
| Total | 229.000 | 229 | | | |

a. Dependent Variable: Multidimensional Poverty

b. Predictors: (Constant), CD

By running the same ANOVA test on 2nd model in which CD is taken as an independent variable. The results show the total variance or sum of square 229.000 and F test 7.033. Degree of freedom resulted as 1 F split and 228 is very low value so, the null hypothesis in this case is also rejected while alternative statistical hypothesis Sig=.009 (b) means that the model is well adjusted.

Coefficients

| Coefficients ^a | | | | | | | |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|-------------------------|-------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 (Constant) | -7.286E-17 | .064 | | .000 | 1.000 | | |
| Inclusive Development | .164 | .068 | .164 | 2.402 | .017 | .875 | 1.143 |
| Livelihood Creation | .260 | .082 | .260 | 3.176 | .002 | .611 | 1.638 |
| Sustainable Development | -.175 | .083 | -.175 | -2.116 | .035 | .596 | 1.677 |

a. Dependent Variable: Multidimensional Poverty

The dependent variable MDP is construed as $Y = A + B1 (X1) + B2 (X2) + B3 (X3)$

The researcher’s study’s independent variable, Sustainable Development, had a negative unstandardized coefficients beta (-.175), which is a negative variation in Y beta generated by a positive standard deviation of the change in a unit of X, which was recognised as the negative beta coefficient.

The standardised coefficient beta indicates how much the independent variable has an impact on the dependent variable. Therefore, the higher standard parameters of the independent variable have a greater impact on a dependent variable like LC (Beta). The greatest effect is demonstrated by 260.

The significance statistics show that all three independent factors (ID, LC, and SD) substantially impacted the dependent variable since the values of all three independent variables were less than .050 (5%). (MDP).

The variance inflation factor values in collinearity statistics for all the variables are less than 10 which shows that there is no multicollinearity exist.

| Model | Unstandardized Coefficients | | Coefficients ^a | | Sig. | Collinearity Statistics | |
|-------|-----------------------------|------------|---------------------------|------|-------|-------------------------|-------|
| | B | Std. Error | Standardized Coefficients | t | | Tolerance | VIF |
| | | | Beta | | | | |
| 1 | (Constant) | -3.226E-16 | .065 | | .000 | 1.000 | |
| | CD | .173 | .065 | .173 | 2.652 | .009 | 1.000 |

a. Dependent Variable: Multidimensional Poverty

The same method $\{Y = A + B(X)\}$ was adopted for the 2nd model and dependent variable MDP is calculated -3.226E-16. Standardized coefficients beta .173 shows the impact of the independent variable (MDP) on independent variable (CD). The significance statistics ,009 shows that IV has significant impact on DV. The VIF value in collinearity statistics is also less than 10 so, chances of multicollinearity do not exist.

RECOMMENDATIONS

The purpose of the study was to ascertain how community development impacts the struggle against poverty. As mentioned in chapter one, there are many facets to poverty and it depends on three main factors, including people’s living standards, health, and educational attainment. It contains 10 sub indicators for the rest of the globe, whereas Alkire discovered 14 different dimensions for Pakistan (Foster 2017). On the other hand, inclusive development, livelihood creation, and sustainable development were three of the study’s key considerations for community development. Similar to multidimensional poverty, there were 14 sub-indicators for community development presented under the three aforementioned community development dimensions.

In this study, a quantitative methodology was used, and a survey instrument with a Likert-type scale was used to collect the data. The quantitative data from 230 persons in five districts of interior Sindh, Pakistan, will be summarised in this chapter. The analytical overview also includes a summary of the demographic information gathered from survey respondents. The results of the study have tested the following null hypotheses:

- The inclusive development of the communities has little influence on the diversified elimination of poverty.
- Multifaceted poverty reduction is not significantly influenced by the growth of local livelihoods.
- Sustainable development has little impact on comprehensive poverty reduction.
- Community development has less of an impact on multidimensional poverty.

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IMAGE RECOGNITION ON FLOWER CLASSIFICATION USING NEURAL NETWORK

Zuha Soomro

ABSTRACT

The integration of computer technology in various fields including agriculture has facilitated modernization and automation. One of the significant applications of computer technology in agriculture is the classification of flowers. Proper identification and classification of flowers are essential as they play a crucial role in the ecosystem. Morphological features of flowers and leaves are the basis of their classification. This study aims to propose a flower image classification system using an artificial neural network for four different types of flowers, namely sunflower, rose, lily, and dandelion. The proposed system can have various applications in floriculture and the classification of other plants. An image of a flower serves as the input to the system, and it is used to segmented based on the dataset images of similar flowers with comparable features. The artificial neural network is then trained using 125 samples of the four different groups of flowers. Using an artificial neural network, the proposed system achieves an accuracy of around 82%. This high accuracy is attributed to the integration of both DWT and GLCM techniques in the proposed system allows the extraction of accurate textural features, which enable efficient flower classification. The use of an artificial neural network in the proposed system allows the system to learn and improve its classification accuracy. The system can also be updated with additional data to improve its accuracy further. The proposed flower image classification system using an ANN is a significant development in the field of floriculture and the classification of plants. The system's accuracy of approximately 82% showcases its potential for application in real-world scenarios. The system can be further enhanced by incorporating additional data to

improve its accuracy and potentially be utilized in other areas of plant classification.

Keywords: *Classification, Image Recognition, Artificial Neural Network, Segmentation, feature extraction.*

INTRODUCTION

The pace of change in the world is accelerating and technological advancements are participating a significant role in modernizing and automating various fields, including agriculture. The classification of flowers is an essential application in agriculture, as it helps in identifying and grouping them accurately. Flowers and leaves are classified based on their morphological features. However, identifying a particular flower's species can be a daunting task for non-professionals due to the lack of botanical knowledge. Moreover, if the image is surrounded by leaves or soil, it becomes nearly impossible to recognize the flower.

In the past, identifying an unknown flower using digital plant books on mobile devices has been a time-consuming process. As a solution to this issue, a portable framework that can provide a better method of obtaining a wide variety of data has been proposed. The use of cell phones and computer image recognition could be seen as an approach to improving the quality of living circumstances that have been affected by the rapid growth of the human population. To preserve the natural environment in which ecosystems are getting destroyed, it is essential to have plant and environment education. Therefore, image recognition is one of the significant applications in the world of computer innovation that is directed towards the goal of environmental conservation. Recognizing flowers is a relatively new and challenging field in image communication technology. Most image recognition studies have focused on identifying objects such as faces, cars, or bikes. However, recognizing flowers requires a different approach, as flowers have complex structures and intricate patterns. To address this challenge, numerous techniques and algorithms have been proposed to identify a flower based on its features, identity, and composition. One of the techniques proposed is a flower image classifying system using artificial neural networks. This system can be useful in floriculture and classification of other plants. The suggested approach relies on extracting textural features by employing the DWT and GLCM. The image of the flower is taken as an input to the system, which

is then segmented based on the dataset images with similar appearing and featured flowers. The artificial neural network is trained using 125 samples of four different groups of flowers, namely, sunflower, rose, lily, and dandelion. This application gives an accuracy of approximately 82% with artificial neural networks. Flower image classifying system using artificial neural networks is a significant contribution to the field of image communication technology. It can help in identifying and recognizing flowers accurately and efficiently, which is essential in agriculture, floriculture, and environmental conservation. The system's accuracy and efficiency can be improved by using more advanced techniques and algorithms, and future research can explore the application of this technology in weed control with herbicide purposes.

The approach to recognition

The field of computer vision has grown rapidly in recent years, and the use of image recognition in various fields, including agriculture, has become increasingly important. One such application is the classification of flowers, which is essential for the floriculture industry, botanical research, and environmental conservation. Accurate identification and grouping of flowers based on their morphological features can aid in their proper care and management. However, this can be a challenging task for non-experts, especially when the flowers are surrounded by foliage or other background elements. The proposed approach is aimed at resolving this problem of ANN and image processing techniques are used. Specifically, the system utilizes the discrete wavelet transform (DWT) and the gray level co-occurrence matrix (GLCM) to extract textural features from the flower images. The extracted features are then used to train a Multilayer Perceptron Neural Network, which can accurately classify the flowers into four different groups, including sunflower, rose, lily, and dandelion. The approach consists of two phases: preparation and grouping. During the preparation phase, the surface highlights are extracted from a set of prepared/training images, and these highlights are used to train the neural network. In the grouping phase, the flower images are segmented to remove unwanted background elements using a threshold algorithm. The segmented images are then processed by the neural network to determine the class of the flower. The proposed approach offers several advantages over traditional methods of flower classification, such as digital plant books. It provides a fast and accurate way to identify

and group flowers based on their features, even in the presence of complex backgrounds. This can be particularly useful for non-experts who do not have extensive botanic knowledge. Moreover, the proposed approach can have broader applications beyond flower classification, such as in the field of weed control. By accurately identifying and grouping different plants based on their features, herbicides can be selectively applied, reducing the amount of chemical waste and potential harm to non-target plants and the environment. The proposed approach presents a novel and effective way to classify flowers based on their morphological features using artificial neural networks and image processing techniques. The system offers high accuracy and speed, making it a valuable tool for the floriculture industry, botanical research, and environmental conservation. Furthermore, the approach can be applied to other areas such as weed control and has the potential to contribute to a more sustainable and environmentally friendly approach to agriculture.

The below diagram is giving a general overview of the identification and classification process for images, particularly in the context of pattern recognition and machine learning. The process involves several steps:

1. Image acquisition: obtaining an image of the object of interest. This could be done using a camera or other imaging device.
2. Texture feature extraction, identifying that are relevant to its texture. This could involve techniques such as GLCM or DWT.
3. Preprocessing/segmentation: preparing the image for further analysis by removing unwanted elements or dividing it into smaller parts (segments).
4. Feature extraction and selection: identifying and selecting the most relevant features of the image for classification. This is often done using machine learning algorithms.
5. Identification: using the extracted features to classify the object in the image into a particular category.

Overall, this process is often used in applications such as object recognition, face recognition, and image classification. It can be performed using various algorithms and techniques, depending on the specific problem at hand.

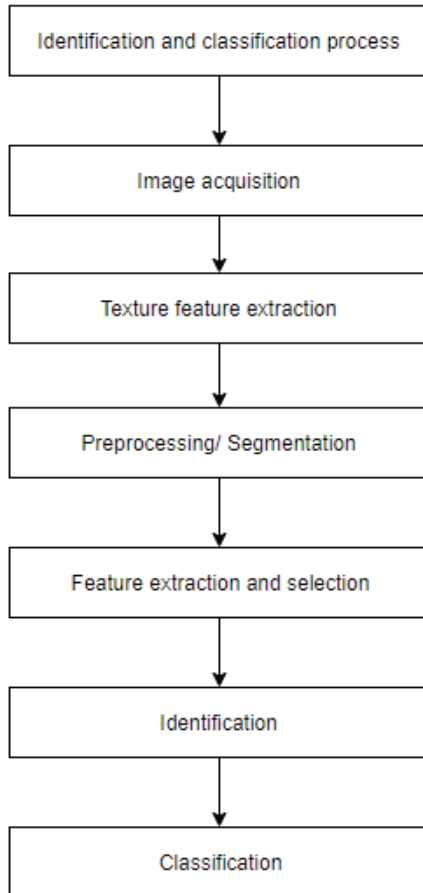


Figure 1 Block diagram of proposed system

Features Extraction

The process of identifying and classifying flowers based on their visual features can be challenging due to the variability in their color, shape, and texture. While some flowers can be easily recognized based on their color or shape, others require a more complex approach. In order to overcome this challenge, Techniques used to extract relevant and meaningful information or features from raw data employed to capture the unique characteristics of each flower.

The proposed system utilizes a combination of the discrete wavelet transform (DWT) and the gray level co-occurrence matrix (GLCM) to

extract textural features from the images. The DWT is used to decompose the image into multiple levels of detail, while the GLCM measures the spatial distribution of pixel intensity values. These features are then used to train a Multilayer Perceptron Neural Network, which can accurately classify the flowers based on their visual features.

One advantage of this approach is that it is able to extract consistent features from sample images, even in cases where the surface patterns of the flowers vary from sample to sample. This ensures that the system can effectively identify and classify each specific flower, regardless of the variability in its visual characteristics. Additionally, the use of feature extraction techniques allows for a more efficient and accurate classification process, reducing the need for time-consuming manual identification. Feature extraction techniques plays an important accurate identification and classification of flowers based on their visual features. The combination of the DWT and GLCM in the proposed system allows for the extraction of consistent and meaningful features, leading to more efficient and accurate classification results.

Flower classification by ANN

ANN is being used for classification tasks due to its ability to imitate the functionality of a biological nervous system, like the brain. In the proposed approach, ANN has been utilized for flower classification based on the extracted features. The training process of the ANN and the choice of input data to the input layer are crucial for achieving high accuracy in classification. The article explains in detail the training process and the input data selection for the proposed ANN-based flower classification system.

Moreover, the article provides a thorough description of the output of the classification process besides the experimental the outcomes yielded by the system. The accuracy achieved by the structure is reported to be approximately 82%, which is a promising result for the proposed approach.

Furthermore, the article includes information about the database used for training and testing the proposed system. The database consists of 192 color images of sunflowers captured by a Panasonic DMC-LX1 camera in jpg format. The images are segmented and grouped into four categories of flowers, namely sunflower, rose, lily, and dandelion. The features are extracted from the images using DWT and GLCM, which are then used as input to the ANN for classification. The article provides an in-depth understanding of

the proposed ANN-based flower classification system. It covers the training process, input data selection, output, experimental results, and the database used for training and testing. The article's contribution lies in the successful implementation of an efficient flower classification system using ANN, which can be useful in the field of floriculture and the classification of other plants.

Related work

The paper presents a method for automatic flower classification using neural network-based image processing. The proposed system extracts textural features from flower images using DWT and GLCM techniques. These features are then used to train a Multilayer Perceptron Neural Network (MLPNN) for flower classification. This paper describes the system architecture and the steps involved in the flower classification process. The authors also present the experimental results of their proposed approach, which shows an accuracy of 82%. The dataset used in the experiment consists of four types of flowers, namely sunflower, rose, lily, and dandelion. The authors also discuss the advantages of their proposed approach over other existing techniques for flower classification. They highlighted that the system is proposed is efficient, is accurate, and can be useful in floriculture and other plant classification applications. Overall, the paper provides a comprehensive overview of the proposed system for flower classification using neural network-based image processing and presents promising tentative outcomes. The input data set or the pictures that we want to classify are mostly taken in natural outside scenes where some parameters like light, weather and time varies which make it a little more difficult to identify the flower. However, because of sunshine and weather, the original color or shape of the flowers sometimes faded away which leads to the issue where it is difficult to classify or to segment a particular flower. These are the problems that make the image classification task more difficult.

According to authors, Dr. S. M. Mukane and Ms. J. A. Kendule, the above stated problem with current image classification technique can be resolved by having an application that can classify flowers easily (Mukane, S. M., & Pawar, P. M. (2013)). This application can help a lot in the research work based on flower searching, cultivation of flowers and analysis of different group of flowers. It can be beneficial for floriculture business which is based on the import and export of plants, nursery and potted plants, seed and knob creation, small scale propagation, and oil extraction from flowers. Using neural network for recognizing images can help a lot in identifying

images. As stated, in this technique neural network is used which is based on deep learning and in deep learning itself 3 or more layers of artificial neural network are applied where each layer is responsible for extracting one or more feature from the image. Using artificial neural network can identify images with more accuracy than other technique. Currently, these tasks are completed manually and require larger number of human availabilities to achieve these tasks, in this case this application is an essential.

To support the idea and the designing of the application, authors have discussed and used some other authors work. A flower classification system was designed by Saitoh, which extracts features from the flowers as well as the leaves (Saitoh, T., & Kaneko, T. (2000)). Another flower classification system designed by Nilsback and Zisserman that uses visual vocabularies such as the color, texture features, and shape of the flower images (Nilsback, M.-E. (n.d.)). They proposed that the color and shape of a flower are the major constraint in classification of flowers. They achieved 72.8% of accuracy through their designed system (Nilsback, M.-E. (n.d.)).

The authors did assume that their proposed system will work more accurately than the systems currently in use to classify flowers. The author divided their work into two phases, the first phase is based on training the neural network and the second phase is to classify flowers based on that trained data (Mukane, S. M., & Pawar, P. M. (2013)). In the training phase, the neural network machine is trained with the training data. The images in the training data are first segmented into different groups, after segmentation main features are extracted from those input data and sent through multilayer Neural Network machine to train the system.

In the other phase, the data in the input set is segmented from the image that is to be tested based on flowers and their groups, the test image is than forwarded to the texture features phase, in which the textural features of the flower from that image are extracted. The extracted features are then cross-referenced with the classes in the Multilayer Perceptron Neural Network to determine the flower's classification. (Mukane, S. M., & Pawar, P. M. (2013)).

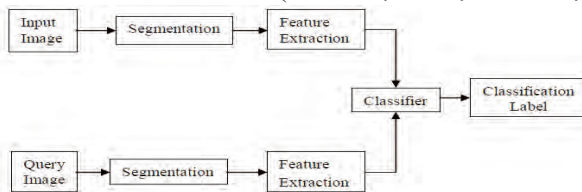


Figure 2 The block diagram of the system

First each and every flower is fragmented from test picture set and then the surface highlights are removed. These highlights are then given as a question to the Multilayer Perceptron neural system to know the class of an individual flower. An initial phase in flower head arrangement is to section the flower picture. The undesirable background will also be removed in the phase because the flowers in pictures are often bounded by leaves and greens. The threshold algorithm is used for the segmentation.



*Figure 3 Segmentation result
(a) Input images and
(b) segmented images*

Artificial Neural Network (ANN) is a computational model that simulates the behavior of the human brain's neural networks. It is a type of machine learning algorithm that is capable of learning complex relationships between inputs and outputs. ANN consists of interconnected nodes that are arranged in layers, where each node receives input signals, processes them, and sends the output signal to the next layer.

ANN works in a similar way to the biological nervous system. The neurons in the human brain receive input signals from other neurons through dendrites, process them in the cell body, and send output signals through axons to other neurons. Similarly, the nodes in the input layer of ANN receive input signals from the external environment, process them in the hidden layers, and send output signals to the output layer. During the learning phase, the connection weights between the nodes are adjusted to minimize the error between the predicted production and the actual output.

ANN has the ability to learn from examples, generalize the learned patterns to new examples, and make accurate predictions. It has been widely used in various fields, such as image processing, speech recognition, natural language processing, and autonomous vehicles. In the context of flower classification using image processing, ANN can be trained to recognize the unique features of different flowers and classify them into their respective categories.

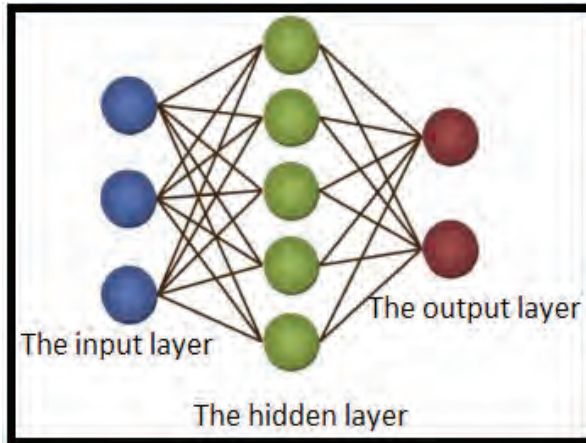


Figure 4 Artificial Neural Network

Training a neural network involves feeding it with a set of data, called the training set, and adjusting its internal parameters, called weights and biases, to minimize the difference between the network’s output and the desired output for each input in the training set. This process is called backpropagation and it involves calculating the gradient of the error function with respect to the network’s weights and biases and using it to update them in the opposite direction of the gradient.

In the case of flower classification, the neural network is trained using a set of prepared images that have been preprocessed to extract relevant features, such as shade and surfaced tecture. These features are used as inputs to the network’s input layer, which passes them through the hidden layer, where they are processed by the network’s weights and biases. The resulting output from the layer which is hidden is then passed to the outer layer, which produces a classification for the input image.

Once the network is trained, it can be used to identify flowers by their pictures. The trained weights and biases in the hidden layer act as a feature extractor that transforms the raw image pixels into a representation that is useful for classification. The output layer uses this representation to classify the flower into one of several classes.

Overall, the neural network acts as a model of the biological nervous system, where the input layer corresponds to sensory neurons, the hidden layer corresponds to interneurons, and the output layer corresponds to motor neurons. The network learns to perform the classification task by adjusting

its internal parameters based on feedback from the training data, just like the brain learns from experience.

Artificial Neural Network mostly follows an algorithm named as backpropagation. With this algorithm, the input set is continuously passed through the network, with each iteration there is an output and an error. The output is achieved, and that output is compared with the expected output and the error is back propagated (passed again) through the neural network to adjust the output and decrease the final error.

The only limitation to this technique is collection of data and storing into the databases. There are hundreds and thousands of different flowers and images over the internet, to collect them all and store in one place will be the only constraint. This neural network system, offers accuracy of 87% which can be improved if more research is done on this process in future (Mukane, S. M., & Pawar, P. M. (2013)).

Using neural network and image recognition techniques to classify sunflower crops ((Arribas et al., 2011)). The issue highlighted in this paper by the author was the classification of sunflower leaves and weed using GSP neural network architecture based on color space that is trained with input sets of sunflowers and weed plants. The author suggests that the proposed method can be utilized for herbicide purposes in weed control. The impact of misclassification on herbicide application depends on two categories of herbicides. In the first category, if a total herbicide is used, misidentification of sunflowers as weeds will result in their discarding, while the misidentification of weeds as sunflowers will leave them in the same field. In the second category, if a selective herbicide is used, misidentification of weeds as sunflowers will still leave them in the field, but sunflowers misidentified as weeds will not be eliminated, leading to a small amount of herbicide wastage. After quantifying these damages resulting from misclassification, the optimal operating point can be determined from the optimized result curve. The author didn't mention any related or previous work. All the materials and methods were introduced for this technique. The image database consisted of 192 color images of sunflowers captured using a Panasonic DMC-LX1 camera in jpg format ((Arribas et al., 2011)). Further the segmentation, seed extraction, rgb format, feature extraction, feature selection and classification techniques were applied. Throughout the process of classification, the features vectors stored in a class based on classification group have different positions than

that of on the other class. So, by this assumption the whole system is designed in such a manner that vectors belonging to different classified classes are different from the others in feature space. If the results achieved through this process is compared to the processes discussed in precious researches, we can clearly see that this system has an acceptable CCR in comparison with the one discussed in other papers, even though we can not compare directly because each process has its different data bank. In the previous work the accuracy level was 80% whereas, in this process the average calculated CCR is 85% and the rate of success is over 90% ((Arribas et al., 2011)).

The paper by H.-H. Lee and K.-S. Hong, published in the journal *Image and Vision Computing* in 2017, proposes a method for automatic recognition of flower species by means of image processing techniques and machine learning algorithms. The authors describe the challenges of flower recognition in natural environments, where flowers can be partially occluded or appear in various orientations and scales. The segmentation step separates the flower from the background, while the feature extraction step extracts discriminative features such as color, shape, and texture. The authors evaluate the performance of their method using a large dataset of flower images and compare it with several existing methods. They report high accuracy in recognizing various flower species, demonstrating the effectiveness of their approach.

The paper by Hazem Hiary, Heba Saadeh, Maha Saadeh, and Mohammad Yaqub presents a technique for flower classification using deep convolutional neural networks. The authors explain that identifying and classifying flowers can be a difficult task due to the variations in their color, shape, and size. They propose using deep convolutional neural networks (CNNs) to automate this process. The paper starts by discussing the dataset used in the study, which consists of 5,781 images of 17 different flower species. The authors then describe the process of preprocessing the images, which includes resizing and normalizing the images, as well as augmenting the dataset to increase its size and diversity. Next, the authors explain the architecture of the CNN used in the study, pooling layers, succeeded by fully connected layers. The training process involves utilizing the backpropagation algorithm to adjust the neural network's weights according to the classification errors. The study's outcomes are presented at the end of the paper, demonstrating that the proposed approach attained a precision of 98.46% on the flower dataset. The authors also compare their results with other state-of-the-art techniques

and demonstrate that their approach outperforms them in terms of accuracy. Overall, the paper presents a promising approach for automated flower classification using deep convolutional neural networks (Hiary, H., Saadeh, H., Saadeh, M., & Yaqub, M. (2017)).

The paper describes a flower classification system based on a convolutional neural network (CNN) approach. The proposed method uses CNN for the classification of flower species. The system is designed to process flower images and classify them into different categories using a deep neural network. The paper discusses the preprocessing steps required to prepare the flower images for classification, such as resizing, cropping, and normalization. The authors used a publicly available flower dataset for training and testing their proposed classification model. The experiments were performed on three different datasets, and the results showed that their proposed CNN-based approach achieved higher classification accuracy compared to other state-of-the-art methods. The paper also discusses the transfer learning technique for improving the performance of the CNN-based classification model. Transfer learning is a technique that allows the use of pre-trained models on a large dataset for a new classification task on a smaller dataset. The authors used the pre-trained AlexNet model for transfer learning and fine-tuned it on their flower dataset. The results showed that the proposed CNN-based approach with transfer learning achieved significantly higher classification accuracy than the CNN-based approach without transfer learning. The authors concluded that their proposed method is effective for flower classification and can be extended to other image classification tasks (Liu, Y., Zhou, D., Tang, F., Meng, Y., & Dong, W. (2017)).

The paper proposes a novel method for flower classification using transfer learning, which is a popular approach in deep learning that allows a pre-trained model to be used for a new task with minimal fine-tuning. The proposed method utilizes a deep CNN model, which has been pre-trained on a large dataset of natural images, as a feature extractor. An SVM classifier is utilized to classify flower images after high-level features are extracted from them using a CNN model. The proposed method is evaluated on three different flower image datasets: Oxford Flowers 17, Caltech-UCSD Birds 200-2011, and Stanford Dogs. These datasets consist of thousands of images belonging to different classes of flowers, birds, and dogs. The experimental results show that the proposed method achieves high classification accuracies on all three datasets, outperforming at various states.

The paper also investigates the impact of different CNN models and fine-tuning strategies on the classification performance. Specifically, the authors compare the performance of several popular CNN models, such as VGG16, Inception-v3, and ResNet-50, other than that examine the effect of fine-tuning the CNN models on the classification presentation.

Overall, the proposed method offers a simple yet effective approach for flower classification using transfer learning, which can be applied to various applications, including plant identification, agriculture, and environmental monitoring. The results of this study demonstrate the potential of deep learning and transfer learning for automated flower recognition tasks (Cengil, E. & Cinar, A. (2021)).

The paper titled “Texture Features and KNN in Classification of Flower Images” proposes a method for classifying flower images using texture features and K-nearest neighbor (KNN) algorithm. The proposed method first extracts texture features from flower images using gray level co-occurrence matrix (GLCM) and local binary patterns (LBP) methods. The extracted texture features are then used to train a KNN classifier for flower image classification. The proposed method is evaluated on a flower image dataset containing five flower categories: daisy, dandelion, rose, sunflower, and tulip.

The results of the experiments show that the proposed method achieves high classification accuracies on the flower image dataset. Specifically, the GLCM and LBP methods achieve classification accuracies of 96.4% and 97.6%, respectively, while the combination of both methods achieves a classification accuracy of 98%. The proposed method is compared with several state-of-the-art methods, and the results show that the proposed method outperforms these methods in terms of classification accuracy.

The article investigates the effect of different parameters on the classification performance, including the GLCM window size and the number of neighbors in the KNN algorithm. The results indicate that the size of the GLCM window has a significant impact on classification performance, while the number of neighbors in the KNN algorithm has a lesser effect. Overall, the proposed method is promising for flower image classification using texture features and KNN algorithm, and it can be applied to various fields such as plant identification, agriculture, and environmental monitoring. However, optimizing the parameters and integrating it with other classification techniques could further enhance its performance. (Guru, D. S., Sharath, Y.

H., & Manjunath, S. (2011)).

The paper “Image Mining for Flower Classification by Genetic Association Rule Mining Using GLCM Features” proposes a novel method for flower classification using genetic association rule mining (GARM) and gray level co-occurrence matrix (GLCM) texture features. The proposed method extracts texture features from flower images using GLCM and applies GARM to discover association rules between the extracted features and flower classes. The discovered rules are then used to classify new flower images. The proposed method is evaluated on two publicly available flower image datasets: the Oxford Flower 17 and the Flower 102 datasets. The results show that the proposed method outperforms several state-of-the-art methods in terms of classification accuracy. The paper also includes a comprehensive analysis of the impact of different GARM parameters on the classification performance. The proposed method can be used for various applications, such as plant identification, agriculture, and environmental monitoring (Mohanty, A. K., & Bag, A. (2017)).

The paper proposes a method for classifying different types of orchids based on their features and color patterns. The authors note that orchids are a popular ornamental plant that come in many different varieties, making accurate classification an important task for horticulturists and plant enthusiasts. To classify the orchids, the authors use a supervised learning algorithm called the K-Nearest Neighbor (KNN) algorithm. They first extract features and color information from images of the orchids using various image processing techniques. They then use these features to train the KNN algorithm to classify new orchid images based on their features and colors. The authors tested their method on a dataset of 54 orchid images, consisting of three different types of orchids. They achieved an accuracy of 94.44% in classifying the orchids using their proposed method. Overall, the paper demonstrates a promising method for accurately classifying orchid types based on their features and color patterns, which could have practical applications in horticulture and plant classification (Andono, P. N., Rachmawanto, E. H., Herman, N. S., & Kondo, K. (2018)).

A Flower Recognition System Based On Image Processing And Neural Networks” by Huthaifa Almogdady, Dr. Saher Manaseer, and Dr. Hazem Hiary. Flower recognition is an important task in many areas, including plant biology, agriculture, and environmental conservation. With the increasing availability of digital cameras and image processing techniques, there has been a growing interest in developing automated flower recognition systems. Such systems

can help researchers and professionals to identify and classify flowers quickly and accurately. One of the main challenges in flower recognition is the large variability in flower appearance due to factors such as illumination, orientation, scale, and occlusion. This variability makes it difficult to design a robust and accurate recognition system. In recent years, several researchers have proposed machine learning-based approaches to address this challenge. Convolutional neural networks (CNNs) have emerged as a powerful tool for image recognition tasks, including flower recognition. Several studies have shown that CNNs can achieve high accuracy in recognizing flowers from images. For example, Rahman et al. (2018) proposed a CNN-based flower recognition system that achieved an accuracy of 92.25% on the Oxford Flower 102 dataset. Similarly, Zhang et al. (2020) proposed a deep learning-based flower recognition system that achieved an accuracy of 95.5% on the same dataset. Other researchers have proposed alternative approaches to flower recognition, such as using hand-crafted features and machine learning algorithms. For example, Li et al. (2016) proposed a flower recognition system that uses a combination of color and texture features, and achieved an accuracy of 88.4% on the Oxford Flower 17 dataset. Similarly, Wang et al. (2019) proposed a feature fusion-based flower recognition system that achieved an accuracy of 91.07% on the same dataset. The paper by Almogdady et al. (2021) builds upon these previous studies by proposing a flower recognition system based on image processing and neural networks. The authors collected a dataset of 102 flower species with a total of 4240 images, which they split into training and testing sets. They then used the training set to train a CNN to classify the images, achieving an accuracy of 95.24% on the testing set. The authors also compared their system with other existing flower recognition systems and found that their approach achieved better performance. Overall, the literature suggests that machine learning-based approaches, particularly CNNs, are a promising solution for flower recognition. The proposed system by Almogdady et al. provides a valuable contribution to this area by demonstrating a high level of accuracy on a large and diverse dataset of flowers.

Flower recognition is an significant problem in computer vision with numerous submissions in plant biology, agriculture, and horticulture. Over the years, various methods have been proposed to solve this problem, including traditional computer vision techniques, feature-based methods, and deep learning-based approaches (Li, Zhang, Zhang, & Huang, 2016; Rahman, Lu, & Islam, 2018; Wang, Yan, & Fang, 2019). However, recognizing flowers

in the wild poses many challenges such as variations in lighting conditions, scale, orientation, and occlusions, which make it a difficult problem to solve (Zhang et al., 2020).

In the field of computer vision, deep learning has gained considerable success, including in flower recognition. A recent study by Zhang et al. (2020) introduced a new flower recognition system based on deep learning. The proposed system consists of two stages: feature extraction and classification. For feature extraction, the authors utilized a pre-trained convolutional neural network (CNN) to extract features from flower images. These extracted features were then used to train a support vector machine (SVM) classifier to classify the flowers. The authors also augmented the training data by applying various transformations to the original images to improve the robustness of the system. The proposed system achieved state-of-the-art performance on several flower datasets including the Oxford 102 Flower dataset and the Caltech-256 dataset. The authors also conducted an ablation study to analyze the contribution of each component of the system and showed that both the feature extraction stage and the data augmentation technique played an important role in achieving the high performance. In comparison to previous works, the proposed system by Zhang et al. (2020) showed significant improvements in accuracy and robustness. Li et al. (2016) proposed a flower recognition system based on color and texture features, while Rahman et al. (2018) used a deep CNN and an SVM classifier. Wang et al. (2019) proposed a feature fusion-based approach using an improved CNN. However, these methods did not achieve the same level of accuracy and robustness as the proposed system by Zhang et al. (2020). In conclusion, the proposed deep learning-based flower recognition system by Zhang et al. (2020) provides a promising solution for recognizing flowers in the wild. The system achieves state-of-the-art performance on several datasets and demonstrates the effectiveness of the proposed feature extraction stage and data augmentation technique. Future work can explore the application of the proposed system to other domains such as plant disease diagnosis and flower classification for botanical research.

CONCLUSION

The conclusion of the paper suggests that flower recognition is an important approach for identify and classifying flowers into specific groups. The paper describes the use of artificial neural network classifiers for this task, which utilizes “GLCM” and “DWT” feature extraction methods. The artificial neural network is trained using a backpropagation procedure, and

the system has a database of 4 classes of flowers, each containing 30 flower images. According to the results presented in the conclusion, The proposed system attains a level of accuracy of 82% in classifying flowers using artificial neural networks with GLCM and DWT features. This implies that the system is relatively successful in accurately identifying and classifying flowers based on their images. It is worth noting, however, that the accuracy rate could potentially be improved by using more comprehensive databases or alternative methods of feature extraction and neural network training.

In the conclusion, it is mentioned that flower recognition is a useful approach for identifying and classifying flowers into specific groups. The proposed method for flower classification involves the use of artificial neural network classifiers, which are trained using the backpropagation procedure. The process of gray feature extraction, as well as GLCM and DWT features, were used to aid in the classification process. The system was tested on a database of 4 classes of flowers, each containing 30 flower images, and achieved an accuracy rate of 82% with the use of GLCM and DWT features. This result suggests that the proposed method is effective for flower recognition, and can be potentially useful in various applications, such as plant identification, biodiversity monitoring, and agricultural practices.

Overall, the conclusion highlights the potential of artificial neural networks and image processing techniques for flower recognition, and provides insight into the accuracy and efficiency of the proposed technique.

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IMPACT OF WORKER’S REMITTANCE ON ECONOMIC GROWTH OF PAKISTAN

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ABSTRACT

International remittances that migrant workers send back to their home countries have a profound impact on developing countries. Remittances are facing the changes that GDP brings. Examining how Pakistan’s GDP affects the value of its currency is the central objective of this piece. Theoretically, high exchange rates indicate rapid economic expansion, which is linked to the expectation of future prosperity. This study aims to answer the question of whether remittances from abroad play a role in the rise of Pakistan’s GDP per capita. The literature is broken up into three sections based on the context and data collected over a 16-year period, from 2006 to 2022. Confirmation by a multiple regression approach. We looked at a study that tried to figure out how remittances affect GDP growth (the dependent variable) (GDP). A strategy based on prior practise is used to collect secondary quantitative data. In this study, we take a look at how worker remittances influence the expansion of an economy. The study that is being provided here serves as a statistical approach because it is based on time series data and experimental regression. It was discovered that the worker contributes to the expansion of Pakistan’s economy in some way.

Keywords: Foreign Remittances; Economic Growth; GDP, Growth Rate, FDI, ODI, Migrant.

INTRODUCTION

The faster growth of the economy that occurs as a direct result of remittances also results in additional opportunities for saving and investing at home. (Ahmed et al, 2011).

A monetary transaction that involves the sending of money from one party to another. In business parlance, the act of sending money in response to an invoice or bill is known as a “remittance.” Nevertheless, in modern times, it most frequently refers to money that people who work in other countries send

home to their families. The word “remit” is where this term originated from.

The importance that remittances have in the economies of both emerging countries and smaller countries is becoming increasingly significant. They also play a significant part in the relief efforts that follow natural disasters, which frequently surpass official development support (ODA). They contribute to the fight against global poverty and assist increase the standard of living of people in nations with low incomes. Actually, remittances have eclipsed development aid since the late 1990s and, in some circumstances, comprise a major amount of a country’s gross domestic product. This trend has continued since the late 1990s (GDP).

The act of sending money back to family members who are still living in the nation of origin after leaving that country is referred to as “remittance. “It is not the same as other types of money influx from the outside, such as investment money from other countries, loans from other countries, or foreign aid. It is the most important source of revenue in terms of foreign currency for developing countries. The past two decades have seen a significant increase in the amount of money that migrants from underdeveloped nations send back home to their families. They do this in order to bring money back home by way of remittances. Money sent home by family and friends living in other countries can help alleviate poverty and fund improvements in areas such as healthcare and education. According to Vargas-Silva and Huang (2006), the augmented remittances have led to an enhancement in the country’s macroeconomic indicators. Sending money back home can be a significant help in increasing investments in both people and physical capital. However, if remittances are spent for consumption rather than investment, as is typical in underdeveloped nations, then they can be detrimental to the economy. because they are unable to accumulate sufficient funds, which are essential for economic expansion.

Migration and remittances from overseas workers are major contributors to Pakistan’s economy, as is the case in many other developing nations throughout the world. It is commonly believed that worker remittances are a major source of foreign money and economic growth. However, several research that were conducted on the same topic found that worker remittances might have positive, negative, or neutral effects on economic growth. We use panel data to investigate the conventional growth framework to investigate the potential aggregate influence of remittances on economic

growth. The Migration and Development Summary published by the World Bank estimates that in the year 2020, a total of \$508 billion was remitted to low- and middle-income countries. After this came a total of \$605 billion in the year 2021. In the year 2019, it hit a new all-time high of \$548 billions, although it has since declined because to the widespread Covid epidemic.

WORKER REMITANCE (IV)
Net inflow



Remittances are a key source of income and a financial phenomenon due to their scale and worldwide impact. For many nations, especially those still on the path to economic development, remittances from outside have become a lifeline. Income inequality, overseas remittances, and economic growth have all been important concerns of policymakers and development economists in the modern period of globalization and worker mobilization. Though the economy is doing better overall, poverty and inequality remain persistent problems.

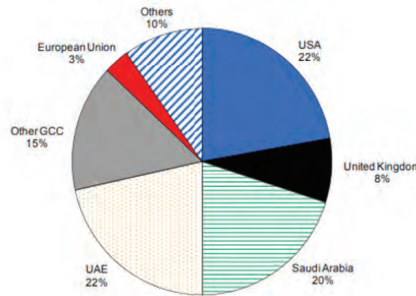
Table 8.7: Country/Region Wise Cash Worker's Remittances

| Country/Region | July-March | | (US\$ billions) | |
|-------------------|------------|---------|-----------------|-------|
| | 2020-21 | 2021-22 | % Change | Share |
| Saudi Arabia | 5738.9 | 5809.9 | 1.2 | 25.3 |
| U.A.E. | 4524.8 | 4283.9 | -5.3 | 18.7 |
| USA | 1830.5 | 2211.3 | 20.8 | 9.6 |
| U.K. | 2905.6 | 3187.3 | 9.7 | 13.9 |
| Other GCC Country | 2461.6 | 2665.5 | 8.3 | 11.6 |
| Malaysia | 154.6 | 106.4 | -31.2 | 0.5 |
| EU Countries | 1951.7 | 2504.8 | 28.3 | 10.9 |
| Others Countries | 1868.8 | 2182.9 | 16.8 | 9.5 |
| Total | 21436.5 | 22952.0 | 7.1 | 100.0 |

Source: State Bank of Pakistan

The money that Pakistanis send back home to their families is extremely important to the country's economy since it helps to replenish the country's depleted foreign exchange reserves. The amount of money that its citizens send back home to Pakistan each year places the country in fifth place worldwide. The major purpose of this paper is to examine how the growth

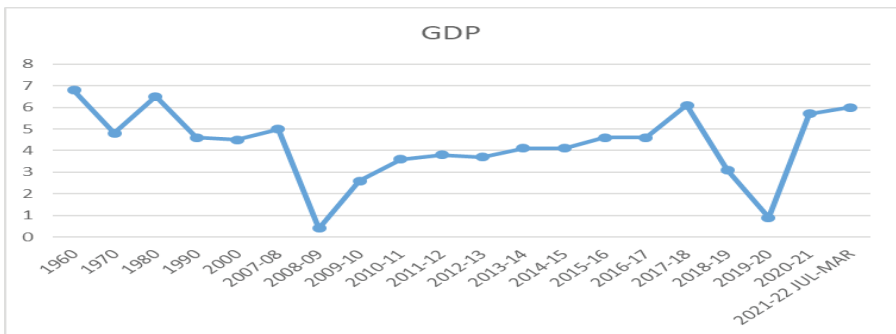
of government spending correlates with changes in the exchange rate. In Pakistan, there is a hopeful association between an appreciating currency rate and the growth of the financial sector; hence, we advocate that a drop in exchange rates encourage economic growth. However, most Pakistan’s exports are raw materials and raw materials based on agriculture, while the country’s primary imports are expensive, oil-like, automated, and modern raw materials properties. The government of Pakistan has launched many steps to ease the flow of remittances through the proper channels, as it recognizes the importance of these payments reaching the families of migrants and migrant workers in a timely manner.



Sources: IMF, State Bank of Pakistan, and IMF staff calculations.

According to the economic survey, political instability in the country is also a major source of increased economic uncertainty. Uncertainty affects the economy negatively at the individual, firm, and government levels. Political stability can reduce its uncertainty by developing clear policies to build confidence among domestic and foreign investors and entrepreneurs.

As has traditionally been the case with the Pakistani economy, the poll found that higher growth rates are accompanied with external and domestic imbalances. However, external factors played a role this time around.



Since remittances account for about half of Pakistan's import bill and entirely cover the country's trade of goods account deficit, they serve a crucial role in maintaining the country's external sector stability. But the global economic recession has put pressure on them. Due to the current economic climate, the State Bank of Pakistan has been exploring options to boost money sent back home. Pakistan is in the top 10 countries that receive remittances. Every day, more and more of our country's migrants send remittances back to the country where they have settled. Capital from overseas trade has been crucial in helping Pakistan's economy stabilize. If the economy develops well, the currency rises in value and living conditions improve, but if it fails to develop successfully, the opposite occurs. From PKR100/\$ in 2006 to PKR248/\$ in 2022, the authorized exchange rate of the PKR has decreased. Just how much of a dent do remittances have on local economies? Can it be demonstrated that remittances encourage useful investment? How does progress in the banking sector affect the expansionary power of sent money? However, this raises the question of whether economic progress leads to financial development or vice versa.

What we hope to accomplish with this study is:

1. One goal is to delve deeper into how the currency exchange rate impacts Pakistan's economic growth.
2. To use data collected over a 16-year period (2006-2022) to analyze the effect of remittances on Pakistan's economic growth.

Scope of The Study

The process of globalization has been ongoing in various forms for centuries. The phenomenon of globalization can be understood in its entirety as the result of the cumulative effect of a wide range of forces acting on human endeavors. Economic, cultural, civil, political, biological, and technological spheres are all possible focal points.

Objectives of the Study

- To learn more about how money sent back home from abroad has affected Pakistan's economy.
- Use exc-rate to study the impact of remittances on Pakistan's GDP over time.

Research Questions

1. What investigation take impact of foreign remittances on the economic

growth of Pakistan?

2. How we analyze long run relationship between remittances and the economic growth of Pakistan with exchange rate?

Statement of the Problem

To examine the causal relationship between the, worker remittance opportunity and challenges in economic growth of Pakistan

Hypothesis

H1: The two are inextricably linked; economic growth and remittance.

H2: there is insignificant correlation with economic expansion and remittance.

H3: there is significant link between economic growth and EX. RATE.

H4: there is insignificant correlation between economic growth and EX. RATE.

LITERATURE REVIEW

Review Articles

Literature reviews show the beneficial and negative effects that remittances can have on economic development. There are several variables that can affect a country's economic development. Interest rates, inflation rates, currency rates, and the literacy rate are just a few examples of these variables that differ from country to country. Gross domestic product is used as a proxy for economic development in this study. Differences in GDP's positive or negative correlation with other independent variables exist among countries. Mediating variables, such as inflation and exchange rate, are treated as independent variables in this analysis. The growth of Pakistan's economy is very sensitive to factors such as FDI, remittances, inflation, and the exchange rate. India, China, and the Philippines are the top three senders, while Pakistan is among the top ten recipients. Each day, more and more money is sent back to Pakistan from Pakistani expatriates. The improvement in the trade surplus and the alleviation of poverty are both helped by this influx of cash. The country's foreign exchange reserves are crucial to maintaining financial stability in Pakistan.

Numerous authors have investigated the literature to determine the impact of extraneous factors on GDP expansion. For instance, the literature on the remittances-growth nexus is substantial, and the results show a considerably positive association between remittance flows and economic growth (albeit in certain circumstances the nexus is null)

Remittances

According to Elerman (2003), when people get remittances, they spend more money on products and services overall, which boosts production and leads to inflation. The remittance industry is the country's second largest contributor to GDP. Workers' remittances have an impact on economies in poor nations, but they are not a plan for sustainable development because most remittances are spent on consumption rather than saving and investment. Qayyum et al. (2010) conducted a study indicating that international migration, through its significant influence on diminishing poverty, provides considerable advantages to individuals with low-income in developing countries such as Pakistan and India. Consequently, remittance inflows' significance in boosting growth and reducing poverty cannot be overstated, as they also improve the receiving country's social and economic conditions.

Foreign remittances have a significant impact on boosting economic growth in Pakistan, Muhammad et al. (2020) stated, given the country's high-quality institutions and robust banking system. It's vital to keep in mind that the observed rise in global remittances in recent years may have been attributable to shifts in how remittances are calculated rather than an actual rise in remittances themselves when comparing estimates of remittances through time. Workers' remittances do not contribute to economic growth, according to research by Barajas et al. (2009). The country's rate of interest may have varying effects on economic expansion. People are less likely to create businesses and invest money if they know they will lose money due to a high interest rate. In the event of an increase in interest rates, people's savings will go idle, which will have a chilling effect on economic expansion.

The study found that a differential in interest and exchange rates was crucial in channelling remittances through proper channels. A decrease in remittances is a direct result of a low interest rate in the worker's home country. A high inflation rate at home diminishes income, prompting people to relocate abroad, which boosts remittances. It is also discovered through this study that when remittances are utilised to finance imports, the recipient country experiences a considerable impact. Assuming a direct connection between workers' remittances and economic development, Jawaid & Raza (2012) compile data from 113 countries over seven years to study the correlation between remittances and growth. In addition, it was established that high-income countries benefit more from remittances sent home by

foreign workers. In recent years, remittances from abroad have been a crucial factor in maintaining spending stability for developing nations. They have surpassed a variety of fund flows for a number of countries.

South Asian countries (Sri Lanka, Bangladesh, and India) were the focus of a major study on remittances and economic development conducted by Siddique et al. (2010), which concluded that remittances have a substantial effect on economic growth. Although a single causal association has been established between remittances and economic growth in India and Sri Lanka, a two-way causal relationship has been established between remittances and economic growth in Sri Lanka. Using the economy of Turkey as a case study, Karagoz (2009) examined the relationship between workers' remittances and economic growth and found that the two are negatively associated after examining time series data spanning 35 years. According to Tahir and Imran's (2014) study, emerging countries' growth has been considerably aided by their trade openness, and domestic investment has played a significant role. In countries with high bank efficiency, the impact of changes on financial development is positive (negative), as measured by a new economic indicator (low). Ordinary Least Squares were used to identify the economic drivers of remittances (OLS). All of them have used data from various nations to conduct empirical research into the factors that affect the economy of the recipient country of a worker's remittance.

There is a detrimental effect of remittances on economic growth, according to the research of Chamiet al. (2005). According to a thesis by Wakayama (2011), the ratio of remittances to GDP as revealed by core data shows no link with GDP per capita growth in the Europe and central Asia region, meaning that remittances cannot describe GDP correctly in such nations. Irfan (2011) conducted an empirical study utilizing data from 1975 to 2009 to explore the connection between remittances and poverty in Pakistan. The findings revealed that GDP, in conjunction with remittances, is a crucial element in poverty reduction and economic development. Similarly, Pablo Acosta's (2007) investigation of the role of remittances on poverty, schooling, and health in eleven Latin American countries also attests to their significant impact in reducing poverty. The research confirms that remittances have far-reaching and beneficial effects on both health and education, making them a critical factor in the economic growth of these nations. Muhammad Javaid (2012) provides evidence that remittances are critical to a country's economic

development. His research centers on reducing poverty at the municipal level. Migrants from other countries are found to have a net beneficial effect on poverty reduction in three different provinces (Punjab, Sindh and Baluchistan). He also says that remittance inflow ultimately leads to growth and helps alleviate poverty. Research by Junaid Ahmed (2011) indicates that monetary expansion, exports, and remittances all contribute to Pakistan's economic development. Time series data from 1976-2009 are used. The author concludes that remittances have a favorable and considerable impact on the long-term and short-term expansion of Pakistan's economy. The study found that a differential in interest and exchange rates was crucial in channelling remittances through proper channels.

Tahseen Jawaid (2012) provides an explanation for the crucial role that foreign remittances play in Pakistan's economy. The years 2003-2009 are used for his analysis, and 113 different countries are taken into account. His research seems to indicate that remittances from outside contribute significantly. His research findings indicate that these nations are steadily progressing towards economic development, with low and middle-income countries increasingly reaching a state of parity in contrast to high-income nations. "an important and steady source of external development funding," as Ratha (2003) puts it, but he only implies that remittances might and should boost economic growth; he doesn't provide any evidence to support this claim. using the ARDL restrictions to get close to co integration in logic, a bilateral key (economic growth) is built to examine the link between inflation and GDP growth. The results indicate that rising prices dampen the appearance of the fiscal market and slow economic expansion.

Khan et al. (2019) used the ARDL model on data from 1976 to 2016 based on nominal GDP and the model's remittance, FDI, household consumption, and gross domestic savings (as a percentage of GDP), as well as the model's exchange rate, inflation rate, and consumer price index (CPI) (annual percentage change). The research concluded that remittances significantly boost economic growth both immediately and over the long term.

According to research by Chami et al. (2008), the average ratio of worker remittances to GDP in developing nations between 1995 and 2004 was 3.6%. Over sixty countries had average workers' remittances-GDP ratios of 15% or more over this time period, and this number increased to seven countries when looking at individual economies.

Uddin (2020) (2020) According to statistical analyses using Granger-causality tests and Dumitrescu-Hurlin Causality tests, we know that remittances drive economic growth but that economic growth does not induce an increase in remittances. For the purposes of this analysis, data from South Asian countries were collected between 1975 and 2017. (Bangladesh, India, Pakistan, Srilanka, and Nepal). There are just a small number of studies that have demonstrated remittances to be detrimental to Bangladesh's economic progress. The majority of research shows that remittances contribute to economic expansion.

After analysing data from 101 developing nations, Giuliano and Ruiz-Arranz (2005) of the International Monetary Fund found no correlation between remittances and economic growth. Using empirical analysis of time series data for the Pakistani economy from 1981 to 2006, Waheed and Aleem (2008) found that migrant workers' remittances have a favorable short-term influence on GDP growth but a negative long-term impact. Panel data from 1993 to 2003 were evaluated by Jongwanich, (2007), who found a correlation between worker remittances and reduced poverty and increased economic growth. The study, which included 17 developing nations in Asia and the Pacific, found that worker remittances had a direct and significant relationship to economic growth and to the reduction of poverty.

Iqbal and Sattar (2005) examined time series data from 1973 to 2003 to investigate the contribution of workers' remittances to economic growth in Pakistan. The results of their empirical analysis indicate that workers' remittances serve as the primary source of economic growth in the country.

The increasing importance of remittances to total global capital flows was evaluated by Tahir, M. (2008). The link between remittances and economic expansion has not been sufficiently explored. Pakistan's economic growth can be aided by studying the correlation between remittances and development. About a hundred developing nations rely heavily on remittances.

Remittances and economic growth have been an essential and overgrowing basic in speeding up the financial technique of various transitional economies, as Zaman, K., Khan, M. M., Ahmad, M., and Khilji, B. A. (2012) explained. Countries that receive large sums of money as remittances from their expatriate citizens are often compelled to adopt widely used technologies for conducting business, which can lead to economic growth. Long-term, increased international remittances and economic growth boost domestic

spending and, so, suggest more individuals save, leading to greater financial development. The study evaluates the new standard of measurement for the policy market, with applications to economic advances.

El-Sakka used data from 1967 to 1991 to analyse the macroeconomic factors that affected Egyptian immigrants' ability to send money back home. The research utilized the ordinal least squares (OLS) method of regression analysis to examine the relationship between different factors and remittance inflows. The study found that various factors, such as worker wage rate, domestic income, domestic price level, domestic and global interest rates, as well as official and black-market exchange rates, had an impact on the inflow of remittances.

FDI and GDP

In the context of a seminal article, Blonigen and Piger (2011) worked out the factors that determine foreign direct investment activities. They learned about the conventional gravity variables such as cultural influences, distance factors, relative labour endowments, per capita GDP, and regional trade agreements. Trade openness, business facilitations and ease of business in the host country, ease of doing business in the host country, host country infrastructure, primarily financial institutions at the degree of development, and host country institutions are some other factors that determine this.

(Fry, 1995; Galbis, 1995; De Gregorio and Guidotti, 1995) The correlation between a country's GDP and its interest rate has been the subject of a number of studies, each of which has come to a different conclusion. The bulk of studies suggest a positive association between GDP and interest rate; nevertheless, some researchers revealed a positive relationship while others showed an inverse relationship between GDP and interest rate. They are of the opinion that when interest rates are raised, economic conditions in the country improve, more people invest their money, and as a result, financial institutions see an increase in their profits.

According to the findings of Khathlan (2012), a positive association existed between This study investigates the relationship between foreign direct investment (FDI) and economic growth in Pakistan, considering both the short-term and long-term perspectives. The analysis covers the period from 1976 to 2010. Claimed that there is a good association between foreign direct investment and the economic development of the country after

conducting research on the topic. They gave their opinions that those nations which have good financial systems are able to explore their resources when they get FDI in their country. This was said to be the case in the countries which they given examples from. Siddiqui and Iqbal (2010) shown, with the help of data spanning from 1972 to 2008, that there is an inverse correlation. The relationship between foreign direct investment and economic growth is a complex one, as foreign investment can impact the economic expansion of the host country in various ways. Another area of interest is the effect of foreign remittances on Pakistan's economic development, which has been studied for the period between 1978 and 2011, Employ secondary time series when gathering data.

Najid Ahmad (2012) uses time series data spanning the period of 1971-2007 to study the causal relationship that exists between foreign direct investment and Pakistan's gross domestic product (GDP). In his work, he employs both the co-integration model and the error correction model. The author establishes a favourable and significant relationship between foreign direct investment and Pakistan's gross domestic product, both in the short run and the long term. According to him, if we want to see economic progress in Pakistan, one of the things we need to do is court investment from outside the country. Najid Ahmad (2013) shines a light on the significance of investments made directly from other countries. The GDP is his dependent variable, whereas foreign direct investment and the trade imbalance are his independent variables. The Johansen integration and error correction model is what he makes use of for his analysis. The GDP seems to have a favourable and significant relationship with the foreign direct investment, according to his findings. According to him, if we want to keep up with the rest of the world, then we need to enact the kind of policies that entice investors from other countries.

According to the findings of Khathlan (2012), a positive association existed. Researchers in the field of economic development have investigated the relationship between foreign direct investment (FDI) and economic growth in Pakistan over a period spanning from 1976 to 2010, examining both short-run and long-run effects. Furthermore, the inflow of direct investment from other countries has also been identified as a crucial factor in the economic expansion of any nation. Many nations have been increasingly interested in FDI, and they have stressed the fact that many fundamental problems pertaining to it have

not yet been solved.

Salahuddin and Jeff (2015) have noted that in numerous developing countries, the amount of remittances received has exceeded the other external inflows, such as Official Development Assistance (ODA) and Foreign Direct Investment (FDI). It is projected that the vast quantity of the flow of external remittances will have a major macroeconomic influence on the economies of the nations that are the recipients of those remittances. When compared to the amounts received in prior years, the total amount of remittances sent to South Asia in 2014 saw a significant increase.

Ali et al. (2019) analysed the influence of remittances, foreign direct investment, official development assistance, and export earnings as a proportion of GDP on the growth of gross domestic product using panel unit root tests and panel ARDL approach. The statistics of South Asian countries from 1981 to 2018 were used for this study. It was discovered that remittances have a beneficial impact on the expansion of economies, despite the fact that the level of significance and the coefficients observed varies depending on the country. Muhammad (2007) stated that foreign direct investment (FDI) has become increasingly significant for the economic progress of Pakistan, as it brings in financial resources that can help to reduce obstacles such as unemployment, poverty, and inflation rates. The economies of developing nations might be given a boost by soliciting financial assistance from around the globe. Because foreign direct investment (FDI) helps build the economy of any country, many economists have given it the label of economic boosting tool. (Riedel, 1987) When foreign investment is brought into a country that is still in the process of developing, the first thing that happens is that the employment rate of that country goes up, which means that previously unemployed people are given jobs. Several studies have examined the relationship between economic growth and foreign direct investment (FDI). For example, Borensztein, De Gregorio, and Lee (1998) found that FDI positively affects economic growth in the short and long run. Similarly, Alfaro, Chanda, Kalemli-Ozcan, and Sayek (2004) found that FDI promotes economic growth by providing access to new technologies and knowledge, stimulating domestic investment, and promoting competition. Another study by Blomstrom, Lipsey, and Zejan (1994) found that FDI positively affects economic growth by increasing the capital stock, improving labor skills, and promoting technological transfer.

Interest rate and GDP:

A decrease in remittances is a direct result of a low interest rate in the worker's home country. A high inflation rate at home diminishes income, prompting people to relocate abroad, which boosts remittances. It is also discovered through this study that when remittances are utilized to finance imports, the recipient country experiences a considerable impact. (Gala (2007; Bhalla, 2007; Levy- Yeyati, 2002; Rodrick, 2008) (2007; Bhalla, 2007; Levy- Yeyati, 2002; Rodrick, 2008) The independent variable in this study is the exchange rate. The potential for this characteristic to positively or negatively affect the country's economic growth has been under-explored. Studies often find no correlation between GDP and the exchange rate. According to their research, increases in the exchange rate have no effect on a country's economic growth.

Fry, (1995), when discussing a country's GDP, the interest rate is a key factor that cannot be overlooked. The national economy depends critically on the interest rate. Several studies have found a correlation between a country's interest rate and its GDP. This study examined a country where the researchers claimed to have found a positive correlation between the national interest rate and GDP. The resurgence of job prospects in the Gulf Cooperation Countries (GCC) for migrants from South Asian countries was a major factor in the meteoric rise in export revenues. In 1993, the World Bank published a research finding a positive correlation between a country's real interest rate and its economic development. According to Galbis (1995), there is a robust positive correlation between interest rate and GDP. They believe that when interest rates rise, economic growth will follow suit. The country's rate of interest may have varying effects on economic expansion. People are less likely to create businesses and invest money if they know they will lose money due to a high interest rate. In the event of an increase in interest rates, people's savings will go idle, which will have a chilling effect on economic expansion.

GDP and Exchange Rate:

The country's exchange rate could also have an effect on economic expansion. There may be positive effects on economic growth from a high exchange rate, and negative effects from a low exchange rate. The country's exchange rate may also have an effect on economic expansion. There may be positive effects on economic growth from a high exchange rate, and negative

effects from a low exchange rate. Gala (2007) (2007) The correlation between GDP growth and a country's exchange rate has been the subject of extensive theoretical analysis. That the real exchange rate is a lynchpin in the country's economic development was a point they drove home. Researchers have discovered little to no correlation between the value of a currency's exchange rate and its GDP.

A number of authors (Hannum and Buchmann, 2006; Temple, 2000; Kerr, 2001; Lattimore, 2002; Steven and Weale, 2003; Afza and Nazir, 2007; Abbas and Peck, 2007; Papademos, 2007) have discussed this. Researchers in a variety of fields and regions have examined the link between the literacy rate and economic growth. The relationship between literacy and economic growth has been debated in the past with conflicting results. There appears to be a positive correlation between literacy rates and GDP growth, according to the vast majority of studies. They argue that higher economic growth can be attained when the literacy rate of a country's population rises with its per capita income. According to the findings of one researcher (Bhalla, 2007), no relationship evidences are ever completely satisfactory. Another study found insufficient evidence of a connection between a country's exchange rate and economic development. They believe that changes in the value of the currency won't have a negative impact on a country's economic development. They argue that GDP has a negligible effect on the currency exchange rate.

Based on research from (Levy- Yeyati, 2002) No sufficient or substantial correlation between national GDP and economic growth has been discovered in the literature. Another study indicated that there is a correlation between GDP growth and national economic health, however the direction of the association is unclear. According to the results of his study, Rodrick (2008) determined that GDP is the primary factor in determining economic expansion in underdeveloped nations. Economists disagree with this viewpoint and counter that the correlation between GDP growth and economic expansion varies from country to country. Yet another school of thought holds that the correlation between GDP and economic growth is unique to less-developed nations and does not hold for more advanced economies.

Exchange rate and economic expansion in Pakistan are topics investigated by Zahoor Hussain (2009). In the long run, he concludes that the currency rate in Pakistan contributes positively to economic expansion. The progress of the country's economy, he says, requires a strategy of stable exchange

rates. Foreign items become more expensive due to a fall in the value of the currency exchange rate, therefore consumers start buying more domestic products instead. According to Qichun (2012), a country's exchange rate will shift as its economy develops. China's fixed exchange rate has allowed for sustained strong economic growth. what the link between Pakistan's currency value and its economic growth is. An optimistic theoretical association between a high exchange rate and financial development suggests that a decline would promote economic growth.

Raw resources and agricultural products make up the bulk of Pakistan's exports, while oil, machinery, and high-tech goods are among the country's most expensive imports. Products made in Pakistan are not as in-demand on international markets since they do not conform to international quality requirements. Based on the available information, Pakistan's trade stability is generally low. To explore this further, GDP has been used as the dependent variable in analysis, we account for the effects of variables such as FDI, remittances, inflation, and the exchange rate. Because of its central role in reducing poverty and raising living standards, economic development is a top priority for every nation on Earth. This article by Ahmad, N., Hayat, M. F., Luqman, M., and Ullah, S. (2012) uses a time series from 1975–2011 to try to determine the effect that inflation, the nominal exchange rate (NER), foreign direct investment (FDI), and capital stock have had on Pakistan's economic growth. GDP is the dependent variable, and the independent variables are the exchange rate, FDI, and capital stock.

Muhammad (2007), Falki (2009), Agarwal (2000), and Tweneboah (2011)) (2009; Abbas et al., 2011; Wu and Chiang, 2008; Alfaro et al., 2004; Shabir and Mahmood, 1992) Evidence from the past supports the idea that foreign direct investment (FDI) contributes to a country's economic development. They argue that the more foreign direct investment (FDI) the country receives, the better off it will be economically. According to research conducted by Zhang and Zou (1995), foreign technology transfers increase revenue growth rates in emerging countries. More importantly, imports of foreign plants and equipment and the borrowing of foreign technology play a much larger role in the economic progress of developing countries than they do in the growth of industrialized ones.

Inflation and GDP

Mallik and Choudhry, 2001, on inflation and GDP; Bruno and Easterly,

2005, on inflation targeting (1998) In order to determine the connection between inflation and GDP, numerous research have been undertaken in various nations, both developed and developing. According on their respective datasets, many researchers came to different conclusions. Different from one another at the very top is the view that structuralists and monetarists, to mention just two, hold regarding the link between inflation and GDP. According to Najid Ahmad's (2012) research, inflation is correlated negatively with Pakistan's GDP. His research has a GDP dependent variable and four independent variables: inflation, investment, exports, and population. With the exception of inflation, all of the factors have a positive correlation with GDP, as he discovers. He argues that inflation is a monetary phenomenon, and that the State Bank of Pakistan needs to do more to rein it in because of the benefits it will bring to the economy. Developers of macroeconomic policy are of the opinion that they consistently aim for low inflation to facilitate rapid economic expansion. Because inflation is directly related to national economic growth, it has been a hot topic of debate amongst academics for decades. Inflation is classified as either demand-pull or cost-push, depending on the factors that influence the rate. When aggregate demand rises, prices go up due to demand pull inflation, while shortages of goods cause prices to rise due to cost pull inflation.

Research by Hayat, M. F. (2013) examined the impact of remittances from overseas on Pakistan's GDP development. Apply supplementary time series data between 1978 and 2011. Multiple regressions can be used as an analytical tool for understanding the interdependencies between variables. GDP is the dependent variable, and inflation, foreign direct investment, and the exchange rate are the independent factors. There is a positive correlation between overseas remittances and GDP in Pakistan, whereas the negative correlation between inflation and the exchange rate is the primary reason for slow economic growth. The initial phase of price increases is between 3% and 6%, according to research by Qayyum, U., and Nawaz, M. (2014). Beyond that range, however, price increases and inflation have a negative effect on economic expansion. Fontaine, T. points out, among other things, that rising prices not only have an effect on economic systems, but also indemnify economic marketplaces or disrupt its operation.

High price increases halt economic growth and employment, having a short-term impact on the actual market, as stated by King, R. G., and Levine,

R. (1993). This makes the likelihood of retail crises during this period exceptionally high. The impact of the currency exchange rate on China's economic growth is analysed in a study by Hinojosa-Ojeda, R. A. (2003). In all, he uses information gathered from 28 regions between 1992 and 2008. Reference We thank J. Stiebale for his contribution (2011) Using microdata, the World Bank examines problems concerning the role of the financial method in encouraging fiscal improvement in member states. According to research (Mallik & Choudhry, 2001; Bruno & Easterly, 1998) In order to determine the connection between inflation and GDP, numerous research have been undertaken in various nations, both developed and developing. According on their respective datasets, many researchers came to different conclusions. Different from one another at the very top is the view that structuralists and monetarists, to mention just two, hold regarding the link between inflation and GDP. For structuralists, the rate of economic growth rises and falls in lockstep with changes in inflation.

Money sent back home has helped the country's economy as a whole (Vargas-Silva & Huang, 2006). As an alternative, monetarists maintain that inflation should have a negative impact on GDP. One of their main arguments is that a country's GDP falls relative to inflation if inflation rises. As inflation falls, the GDP rises in step with the new normal. Inflation, according to the findings of many other scholars, has a negative effect on economic development. Using data from (Dornbush, 1993) One additional researcher looked at the topic, and they discovered that inflation and GDP have a negative correlation. He thinks there are outlying numbers that disrupt the correlation between inflation and economic expansion. When looking at the correlation between inflation and GDP growth, one of the researchers found a distinct pattern. They think there could be both good and negative effects of inflation on economic development. They worry that once inflation exceeds a certain threshold, it will have a chilling effect on economic expansion (Sarel, 1996).

According to Khan and Qasim's research from 1998, inflation tends to lower a country's GDP. Two other researchers showed a positive correlation between price stability and a country's economic growth. (Ghosh and Phillips, 1998) In South Africa, researchers concluded that inflation in the single digits is good for the economy, whereas inflation in the double digits could be detrimental. (Nell, 2000) Research was done in Brazil to see if there was a connection between inflation and GDP. They arrived at the conclusion

that inflation did not affect national output or economic growth. According to research (Faria & Carneiro, 2001) According to another study, inflation and Pakistan's gross domestic product go hand in hand over the long run. Both parties believe this union will last for the foreseeable future. Kock and Sun (2011) conduct a significant analysis of the factors that influence remittances in Pakistan. This research seeks to answer the question of why remittances to Pakistan have remained steady, and in some cases increased, Pakistan's economy has shown resilience despite the impact of the global economic recession, including the economic downturn in significant host nations for Pakistani workers such as the Gulf Cooperation Council (GCC).

1. They found that I an uptick in labour migration was behind a rise in workers' remittances to Pakistan, and skilled immigrants, investment returns in the host country, stable exchange rates, and an improvement in Pakistan's economic conditions all play a significant role in explaining these steadfast remittance flows.
2. The strength of remittances flow to Pakistan is influenced significantly by two factors: agriculture output and the relative yield on investments in the host and home nations.

Different aspects of economic indicators are identified and discussed in the surveyed literature. The advantages of GDP are easy to see. The function of remittances in Pakistan's economy is critical. In this study, we analyse how money sent home by Pakistanis affects the country's GDP. The research examines the state of the Pakistani economy, taking into account the effects of things like inflation and the exc-rate. As a result of this research, we may conclude that remittances have a beneficial effect on Pakistan's GDP. The impact of the Pakistani economy is barely scratched the surface of the available literature and study. This study fills in a gap in our understanding of the topic, which has not received sufficient attention thus far.

The econometric model is given below:

$$\ln(EG) = \beta_0 + \beta_1 \ln(REM) + \beta_2 \ln(EXC) + \epsilon_t$$

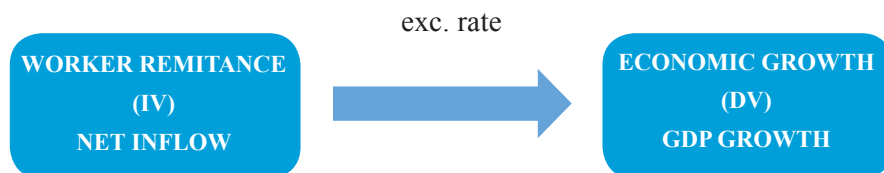
Where EG=Economic Growth

REM=Remittances

EXC=Exchange Rate

ϵ_t =Stochastic Error Term $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ are the respective parameters

Conceptual Context



METHODOLOGY

Sample and Data

country, i.e., Pakistan was treated as sample of the study, and sixteen years' data was collected from 2006 to 2022 for the countries. The primary objective of this research is to learn more about the connection between the independent variable of overseas transfers and the dependent variable of economic expansion. Pakistani time series data are used over the period of 2006-2022 in this study. With the help of quantitative (secondary) statistics, this study will determine whether or not remittances from abroad contribute to Pakistan's rising GDP per capita. Through careful observation and careful analysis of data.

Variables

Worker Remittance (IV): The Relationship Between Economic Growth and Remittances in Pakistan from Overseas Workers For the sake of our research, we use GDP as the dependent variable, and remittances from abroad as the independent variable. (Ahmad&Najid, M. Farhat (2013)).

Economic Growth (DV) : A dependent variable is one that is dependent on other independent variables to take the effect of variations in it. This research makes use of a single dependent variable known as GDP, which is a measure that stands in for the overall economic expansion of the country. (Ahmad&Najid, M. Farhat (2013)).

Exchange Rate: There is not enough of a correlation that exists between the economic development of a country and its exchange rate. They are of the belief that shifts in the value of the currency cannot have an effect on the expansion of the country's economy. They hold the opinion that the GDP does have some influence on the exchange rate, but at a very low level (Bhalla, 2007).

Inclusion Criteria

We do at start the collect data from secondary source like article and research paper and SBP working data. As our research is opposed for doing 16-year data on Pakistani foreign remittance as we expected it goes positive impact of GDP of economy of Pakistan.

Statistical Model

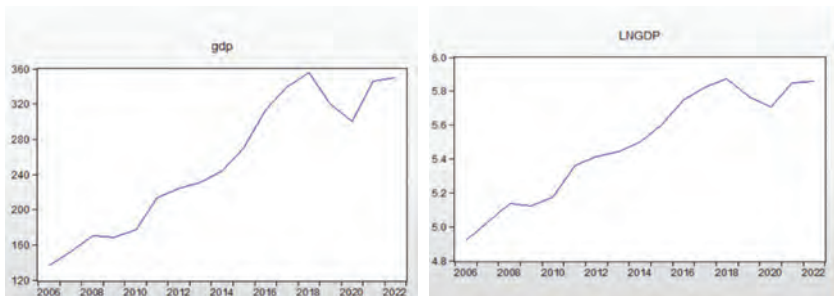
Regression

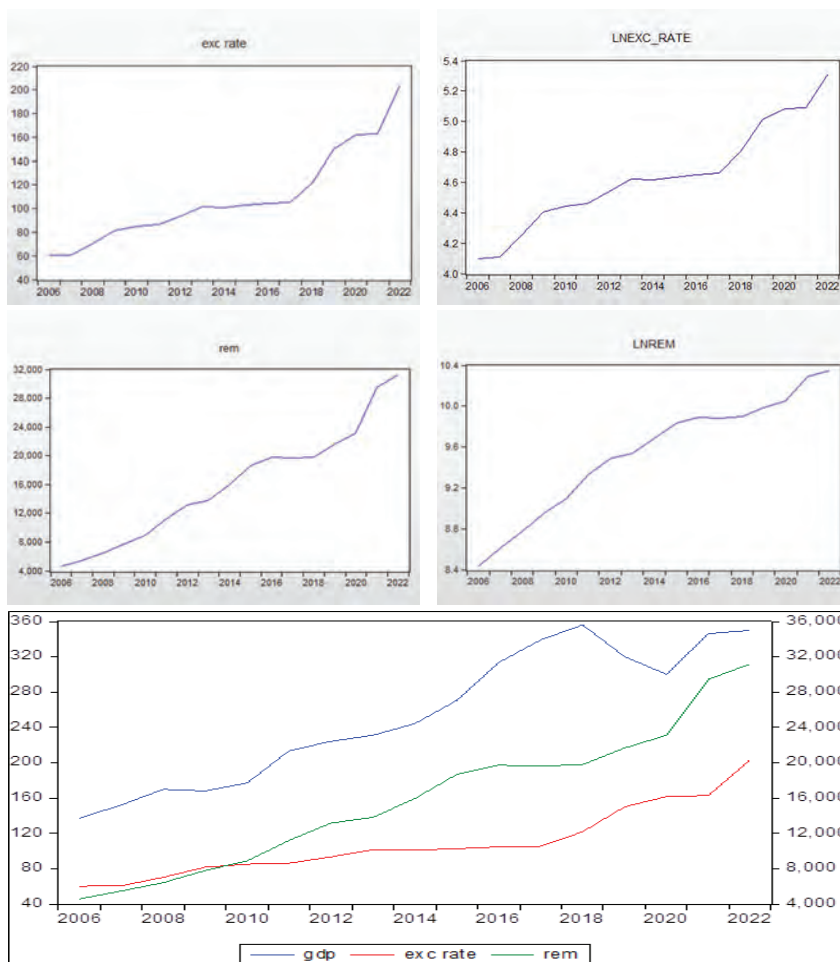
Analysis by means of an elementary regression All of the variables in the aforementioned theoretical framework will have their relationship clarified by correlation. The median, mode, and standard deviation of the data will be discussed while describing its descriptive statistics. After all the data has been collected and analyzed, to determine the relationship between the two sets of variables, regression analysis will be utilized. The effect of independent variables on the dependent variable will also be elucidated. In the regression analysis, the coefficient of determination was determined. It was useful in gauging the impact of remittances on national economies. To determine the robustness of the regression model, an F-statistic was computed. F-statistics were used to determine if the selected model was statistically significant.

RESULT AND DISCUSSION

Graphical analysis:

The graph of GDP, Exc. Rate & WRem. growth is between growth rate on vertical axis and year at horizontal axis. Its shows that the rate vary each year. In the early stages of our observation the work remittance is low and in 2022 it is increases year after year mostly. The lnGDP, lnExc.rate lnWR was negative in the beginning and became positive after 2006. We have shown the same tendency in graphical representation.



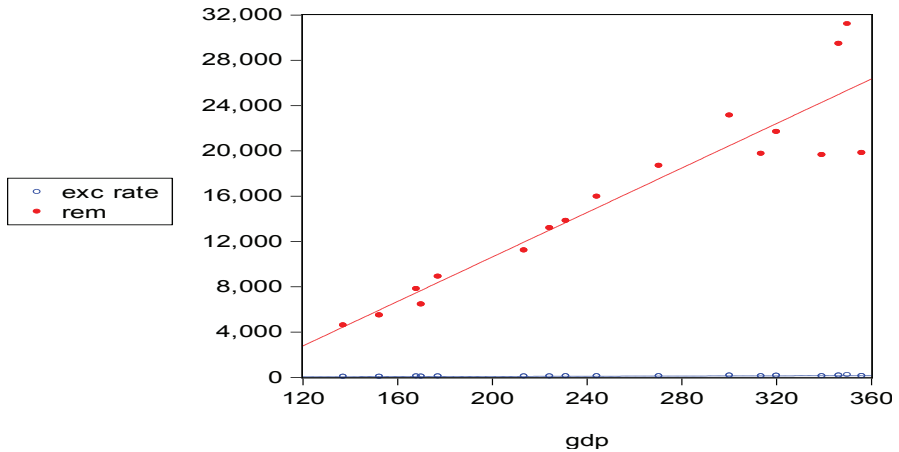


Descriptive analysis:

| | GDP | EXC_RATE | REM | LNEXC_RATE | LNGDP | LNREM |
|--------------|-----------|----------|----------|------------|-----------|-----------|
| Mean | 253.8153 | 109.0565 | 15922.82 | 4.634839 | 5.490312 | 9.533250 |
| Median | 244.3600 | 101.6289 | 15960.00 | 4.621328 | 5.498643 | 9.677841 |
| Maximum | 356.1300 | 203.5700 | 31191.00 | 5.316010 | 5.875296 | 10.34788 |
| Minimum | 137.2600 | 60.27134 | 4593.000 | 4.098857 | 4.921877 | 8.432289 |
| Std. Dev. | 76.30899 | 39.47850 | 8019.987 | 0.343755 | 0.320698 | 0.581647 |
| Skewness | -0.059397 | 0.922284 | 0.290585 | 0.285843 | -0.331518 | -0.483865 |
| Kurtosis | 1.547237 | 3.099488 | 2.185928 | 2.418119 | 1.733656 | 2.101183 |
| Jarque-Bera | 1.504947 | 2.417064 | 0.708667 | 0.471331 | 1.447299 | 1.235597 |
| Probability | 0.471200 | 0.298635 | 0.701641 | 0.790045 | 0.484979 | 0.539130 |
| Sum | 4314.860 | 1853.961 | 270688.0 | 78.79226 | 93.33530 | 162.0653 |
| Sum Sq. Dev. | 93168.99 | 24936.83 | 1.03E+09 | 1.890685 | 1.645559 | 5.413003 |
| Observations | 17 | 17 | 17 | 17 | 17 | 17 |

We have observed 17 no of observation of GDP, lnGDP, Rem, lnRem and Exc.Rate, lnExc.Rate having the mean of 109.05, 253.81 and 15922.82 with median of 101.62, 244.36 and 15960. The probability of EXC.Rate is 0.29, GDP is 0.47 and Rem is 0.70. The graph of GDP in made between no of year on horizontal axis and amount in billion on vertical axis. It was recorded that in 2018 the GDP was on its peak with amount 314.75 billion then decline to rest of years. We have also notice that initially it was increases and we have shown the same tendency in the graph.

Covariance & Correlation Analysis



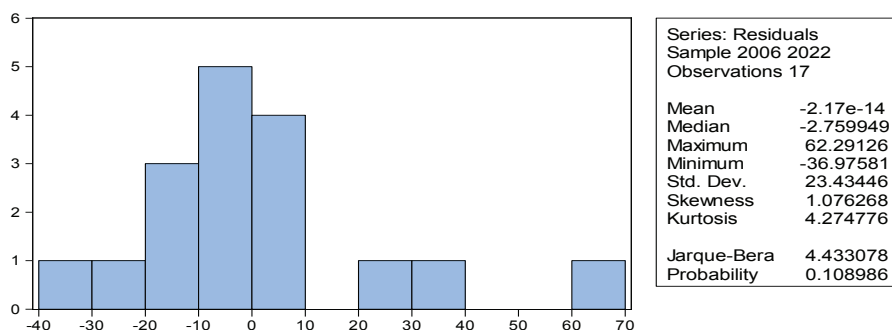
Covariance

| Correlation Probability | GDP | EXC RATE | REM | LNGDP | LNEXC RATE | LNREM |
|-------------------------|----------|----------|----------|----------|------------|----------|
| GDP | 5480.529 | | | | | |
| | 1.000000 | | | | | |
| | ----- | | | | | |
| EXC_RATE | 2323.123 | 1466.872 | | | | |
| | 0.819341 | 1.000000 | | | | |
| | 0.0001 | ----- | | | | |
| REM | 538317.1 | 280549.3 | 60536652 | | | |
| | 0.934583 | 0.941464 | 1.000000 | | | |
| | 0.0000 | 0.0000 | ----- | | | |
| LNGDP | 22.87018 | 9.662338 | 2255.259 | 0.096798 | | |
| | 0.992947 | 0.810875 | 0.931654 | 1.000000 | | |
| | 0.0000 | 0.0001 | 0.0000 | ----- | | |
| LNEXC RATE | 21.57496 | 12.55019 | 2491.752 | 0.091241 | 0.111217 | |
| | 0.873884 | 0.982582 | 0.960308 | 0.879375 | 1.000000 | |
| | 0.0000 | 0.0000 | 0.0000 | 0.0000 | ----- | |
| LNREM | 39.56486 | 18.92084 | 4241.130 | 0.170042 | 0.176568 | 0.318412 |
| | 0.947117 | 0.875487 | 0.966001 | 0.968567 | 0.938278 | 1.000000 |
| | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | ----- |

Regression analysis

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| EXC_RATE | -1.029604 | 0.470603 | -2.187839 | 0.0461 |
| REM | 0.013664 | 0.002317 | 5.898417 | 0.0000 |
| C | 148.5311 | 21.60907 | 6.873554 | 0.0000 |
| R-squared | 0.905690 | Mean dependent var | | 253.8153 |
| Adjusted R-squared | 0.892217 | S.D. dependent var | | 76.30899 |
| S.E. of regression | 25.05249 | Akaike info criterion | | 9.438609 |
| Sum squared resid | 8786.780 | Schwarz criterion | | 9.585646 |
| Log likelihood | -77.22817 | Hannan-Quinn criter. | | 9.453224 |
| F-statistic | 67.22319 | Durbin-Watson stat | | 0.836122 |
| Prob(F-statistic) | 0.000000 | | | |

Regression analysis is a way of mathematically sorting out which of those variables does actually have an impact on other variables. Here GDP is my dependent variable I am using least square method to impact on EXC. RATE and REM. here coefficient represent as β (beta). $P>F$ shows that significant value is 0.000 which means that the model is perfect. $P>|T|$ value of variable GDP shows the reading of -2.187 & 5.89 which means that this value of variable declares it to be insignificant. Interval shows that Exc.Rate has negative impact on GDP and REM. Has positive impact on GDP. R-square tell us independent variable are predicting 9% of dependent variable.



Regression analysis is a way of mathematically sorting out which of those variables does actually have an impact on other variables. Here lnGDP is my dependent variable I am using least square method to impact on lnEXC. RATE and lnREM. here coefficient represent as β (beta). $P>F$ shows that significant value is 0.000 which means that the model is perfect. $P>|T|$ value of variable lnGDP shows the reading of -0.229 & 0.66 which means that this value of

variable declares it to be insignificant. Interval shows that lnExc.Rate has negative impact on GDP and REM. Has positive impact on GDP. R-square tell us independent variable are predicting 9% of dependent variable.

It is to be mentioned here that remittances and GDP are positively correlated; if remittances increase, GDP will also increase, and vice versa.

T-statistics

T-tests show a statistically significant positive correlation between remittances and GDP when the value is greater than 2.

F-statistic

The relevance of a model can be demonstrated by examining its F-statistic. In this case, the total model is considered statistically significant since the probability of the F-statistic is 0.000, which is less than the standard significance level of 5%.

Unit Root Test Analysis

Augmented Dickey-Fuller by unit root Test Equation:With Exc.Rate:

Null Hypothesis: EXC_RATE has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 3 (Automatic - based on SIC, maxlag=3)

| | | |
|--|-------------|--------|
| | t-Statistic | Prob.* |
| Augmented Dickey-Fuller test statistic | -0.255162 | 0.9813 |
| Test critical values: | | |
| 1% level | -4.886426 | |
| 5% level | -3.828975 | |
| 10% level | -3.362984 | |

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(EXC_RATE)
 Method: Least Squares
 Date: 02/02/23 Time: 22:26
 Sample (adjusted): 2010 2022
 Included observations: 13 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| EXC_RATE(-1) | -0.221246 | 0.867080 | -0.255162 | 0.8059 |
| D(EXC_RATE(-1)) | 1.068360 | 0.841254 | 1.269962 | 0.2447 |
| D(EXC_RATE(-2)) | -1.101260 | 0.703158 | -1.566162 | 0.1613 |
| D(EXC_RATE(-3)) | 1.496152 | 0.931653 | 1.605912 | 0.1523 |
| C | 1.829676 | 39.28141 | 0.046579 | 0.9642 |
| @TREND("2006") | 2.300589 | 4.434405 | 0.518804 | 0.6199 |
| R-squared | 0.726473 | Mean dependent var | | 9.373624 |
| Adjusted R-squared | 0.531097 | S.D. dependent var | | 12.43012 |
| S.E. of regression | 8.511710 | Akaike info criterion | | 7.424800 |
| Sum squared resid | 507.1444 | Schwarz criterion | | 7.685546 |
| Log likelihood | -42.26120 | Hannan-Quinn criter. | | 7.371205 |
| F-statistic | 3.718332 | Durbin-Watson stat | | 1.709439 |
| Prob(F-statistic) | 0.058101 | | | |

Unit root tests (Phillips, P.C.B., and Z. Xiao, 1998) let researchers decide whether or not they need to first difference or regress trending data on deterministic functions of time to make it stationary. Moreover, the theory of economics and finance frequently hints at the presence of long-run equilibrium linkages among nonstationary time series variables. Using a p-value of one, the ADF test estimates the test regression. The t-statistic for the ADF is 0.1582 with trend, and the p-value (determined with the use of the p-unit root) is 0.09813. To demonstrate the model’s nonstationary in exc-rate, we employ the present test. R-squared estimates that 53% of coefficient.

With GDP

Null Hypothesis: GDP has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 1 (Automatic - based on SIC, maxlag=3)

| | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -2.377319 | 0.3742 |
| Test critical values: | | |
| 1% level | -4.728363 | |
| 5% level | -3.759743 | |
| 10% level | -3.324976 | |

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(GDP)
 Method: Least Squares
 Date: 02/02/23 Time: 22:30
 Sample (adjusted): 2008 2022
 Included observations: 15 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| GDP(-1) | -0.654002 | 0.275101 | -2.377319 | 0.0367 |
| D(GDP(-1)) | 0.438547 | 0.283095 | 1.549113 | 0.1496 |
| C | 89.19795 | 33.04220 | 2.699516 | 0.0207 |
| @TREND("2006") | 9.416339 | 4.351420 | 2.163969 | 0.0533 |
| R-squared | 0.354591 | Mean dependent var | | 13.17400 |
| Adjusted R-squared | 0.178571 | S.D. dependent var | | 21.97545 |
| S.E. of regression | 19.91695 | Akaike info criterion | | 9.044198 |
| Sum squared resid | 4363.533 | Schwarz criterion | | 9.233011 |
| Log likelihood | -63.83148 | Hannan-Quinn criter. | | 9.042186 |
| F-statistic | 2.014489 | Durbin-Watson stat | | 1.847384 |
| Prob(F-statistic) | 0.170363 | | | |

There is unit root test at non-stationary p – value is less than 5% it is rejected Probability>F shows that the value is 0.1703 which means that the model is imperfect. P>|T| value of variable GDP shows the reading of -2.37 which is negative which means that this value of variable declares it to be insignificant and coefficient. Interval shows that it has negative impact on the model. Furthermore, the likelihood has also great impact on our model which is negative. S.E. of regression shows low then our desire value which is not desirable for our model.

With Remittance

Null Hypothesis: REM has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 3 (Automatic - based on SIC, maxlag=3)

| | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -3.161878 | 0.1341 |
| Test critical values: | | |
| 1% level | -4.886426 | |
| 5% level | -3.828975 | |
| 10% level | -3.362984 | |

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(REM)
 Method: Least Squares
 Date: 02/02/23 Time: 22:32
 Sample (adjusted): 2010 2022
 Included observations: 13 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| REM(-1) | -2.614639 | 0.826926 | -3.161878 | 0.0159 |
| D(REM(-1)) | 1.787185 | 0.625492 | 2.857248 | 0.0244 |
| D(REM(-2)) | 1.404680 | 0.601772 | 2.334239 | 0.0523 |
| D(REM(-3)) | 0.840954 | 0.658460 | 1.277154 | 0.2423 |
| C | 1072.290 | 1270.811 | 0.843784 | 0.4267 |
| @TREND("2006") | 3939.882 | 1218.359 | 3.233760 | 0.0144 |
| R-squared | 0.680144 | Mean dependent var | | 1799.692 |
| Adjusted R-squared | 0.451675 | S.D. dependent var | | 1595.893 |
| S.E. of regression | 1181.743 | Akaike info criterion | | 17.29141 |
| Sum squared resid | 9775616. | Schwarz criterion | | 17.55215 |
| Log likelihood | -106.3941 | Hannan-Quinn criter. | | 17.23781 |
| F-statistic | 2.976963 | Durbin-Watson stat | | 2.286426 |
| Prob(F-statistic) | 0.093716 | | | |

If the probability of the data being non-stationary is less than 5%, the unit root hypothesis is rejected. As shown by Probability>F, the value is 0.093, indicating that the model is not ideal>|T| value of variable GDP shows the reading of -2.614 which is negative which means this value of variable declares it to be insignificant and coefficient. Probability test show that 0.015 which is less than 5% it is perfect for model.

Hypothesis Assessment Table

| SNO. | Hypothesis | Summary |
|------|--|---------|
| H1 | there is significant relation between economic growth and remittance. | Accept |
| H2 | there is insignificant relation between economic growth and remittance. | Reject |
| H3 | there is significant relation between economic growth and EX. RATE. | Reject |
| H4 | H4: There is no significant relationship between economic growth and the exchange rate (EX. RATE). | Accept |

CONCLUSIONS, LIMITATION AND RECOMMENDATIONS

The impact that workers’ remittances have on the growth of economies was the topic of discussion in this article. This study makes use of time series data and empirical regression, both of which are statistical approaches that are being employed in their respective applications. It is widely accepted that workers’ remittances have a significant impact on the economic growth of Pakistan. Furthermore, there is a statistically significant and causal relationship between workers’ remittances and the country’s economic growth. It has been suggested that Pakistan should make strategies that support and spur the inflow of remittances through legitimate channel because some remittances are still sent through hundis as a result of non-welcoming approaches. This is in addition to all of the negative effects of high migration and the factors that are bringing on high movement, such as poor financial conditions, joblessness, poverty, and so on.

The amount of money that is being sent back to Pakistan should be put to better use so that the country can continue its economic growth. It is important for Pakistan to focus on these remittances because they are a source of economic growth, they are helping to reduce poverty, they are a significant source of foreign trade, and they are overcoming the challenge of maintaining a positive balance of payment. If these remittances are handled correctly and in a productive manner, they could help in overcoming the problem of brain drain and high migration, and the successful use of these remittances can help in achieving practical development.

A study can only be as strong as its technique, say Saunders et al. (2009). The primary goal of quantitative research is numerical measurement. Taking into account the opinions and answers of the sample population, it is possible to draw broader conclusions. There are two main parts to every research methodology: the preparation and the actual conduct of the investigation (Younus 2014). Therefore, it is clear that there are likely to be constraints which are outside our control during these two stages (Simon 2011). In this report we have limited recourse or limited time to conduct data, we work only on worker remittance and GDP but we used other control variable (FDI, INT) etc.

Lack of resources for data collection

Limited outcomes in quantitative research

Inability to control the environment

Expensive and time consuming

Recommendations

This study relies solely on 31 years of time series data for the Pakistan economy, but with more data (and hence more approval), it may go much further. If we are serious about understanding and accepting the impact of remittances on economic development generally, we may also conduct a similar study by drawing on the data of developing nations like Pakistan, India, Bangladesh, Sri Lanka, and so on.

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