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Understanding the Dynamics of Electoral Reforms in India: Problems and Prospects

Rajbir Singh Dalal & Surendra Singh Bhati

ABSTRACT

The transition from a colonial regime to a full-fledged democratic republic was one of the most spectacular achievements in the Indian political system. The heart of this achievement is citizens' right to vote along with provisions for fair and free elections. India stands as a role model for many emerging democracies around the world, being the world's largest democracy with a remarkable success story among third world. India adopted Parliamentary form of government after independence. Elections are the practical and most visible form of democracy and expression of public opinion. Free and fair elections are the soul of a sound, vibrant and well-functioning democracy, as it gives not only adequate opportunities to the citizens to choose their representatives but also provides legitimacy to the rulers. Thus, the quality of democracy prevailing depends upon the quality of electoral process Hence; Elections are a necessary and crucial instrument to make democracy successful. To make elections free of flaws in this dynamic scenario, it is essential to reform the electoral process from time to time. People's faith and trust are essential to realizing the true potential of Indian democracy. It has been a growing concern in India about several aspects of our electoral system and to deal with these concerns numerous steps have been taken and recommended by various commissions, committees, Judgments, Governments, and Election Commission of India (ECI) Some steps like use of EPIC, EVMs, VVPAT, electoral lists with photo of electors, permanent earmarking of. Polling Booths, appointment of general and finance observers, ample use of ICT etc. were successful but still a lot more to be done to make the electoral system fair and fearless. This paper examines the necessity of electoral reforms, discusses emerging challenges and issues related to the electoral process in India. And provide suggestions and a way forward for the same.

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Keywords: Electoral Reforms, Democratic Value, Democracy, Money, Muscle-Mafia Nexus, Corruption, Electoral Bonds, Morality.

Introduction

An election is a moral horror, as bad as a battle except for the blood, a mud bath for every soul concerned in it. - George Bernard Shaw

India is the world's most vibrant and dynamic democracy with 900 million voters belonging to a multicultural identity thus it's bound to be challenging. Therefore, free and fair elections are essential for a politically stable and healthy democracy. Elections are indispensable to any democratic political system. Electoral reforms refer to the introduction of best practices in ensuring better responsible parliamentary democracy, removal of structural flaws, clean politics, maintain citizens' trust, true representation, and so on. The process of electoral reforms is ongoing. No system of the election can ever be ideal; therefore, every democratic nation has to keep searching for the mechanism to make elections free and fair to the maximum. Likewise in India, eminent lawyers, social reformers, and political experts have repeatedly proposed a number of improvements. Reforms have been suggested by different stakeholders including political parties for a long time. Some of these have already been included in the People's Representation Act, which has been amended multiple times. However, much more work remains to be done if India is to have free and fair elections. The government should implement some of the measures offered by distinguished members, organizations, commissions and committees to ensure a clean voting process in the country.

Need of the Electoral Reforms

The elections at present are not being held in the desired and perfect manner as expected in the Constitution due to enormous use and nexus of money, muscles, and mafia power, criminalization of politics, poll violence, booth capturing, communalism, casteism, non-serious and independent candidates, and so on. Electoral reforms have been an issue of fierce debate in recent times. By introducing reforms, we can secure India's Unity, sovereignty and integrity. This will make democracy work in its true potential and efficiency. It also revamps the present systems to improve and increase the effectiveness of the same. The present system needs reforms urgently to ensure sound democracy at least in a functional form if not in its perfect form. The need for electoral reforms has also been felt, keeping in view and aspirations of today's youth, is to prohibit the criminalization of politics, discourage the use of muscle and money power, stop the misuse of government machinery, increase citizen trust, strengthen the election commission, make it

independent, and use technology in electoral procedure. Elections, hence, are a necessary and crucial instrument to accommodate the demands of reforms. Elections have emerged as an instrument of political awakening. But free and fair elections are not sufficient for democracy. There is an urgent requirement of large-scale electoral reforms to remove poll-related malpractices and to cleanse the system. Its vision is to ensure the full and fair participation of all Indian electors in the election process. It should uphold the constitutional values i.e., equality, fairness, justice and rule of law, and Constitutional morality.

Electoral Reforms in India

A Parliamentary Committee was formed for the first time in 1970 to suggest amendments to the Electoral system from all aspects. But its recommendation could not be implemented due to the dissolution of the Lok Sabha in December 1970. In 1971, under the chairmanship of Jagannath Rao, a Joint Parliamentary Committee was formed for the same purpose. In coming years, various Committees such as Tarkunde Committee (1974), Dinesh Goswami Committee (1990), V.K. Krishna Iyer Committee (1994), and the Indrajit Gupta Committee (1998) suggested various issues relating to electoral reforms. Along with these, ECI also has submitted its recommendations on electoral reforms in 1977, 1982, 1990, 1992, 2004, 2015, and 2020. Even political parties through all parties' meetings have also suggested electoral reforms. The 15th Law Commission's 170th Report recommended the measures necessary in the direction of electoral reforms. The Government of India also initiated various measures such as lowering the voting age from 21 to 18 years through the Constitutional Amendment Act in 1989.

Issues and Challenges

The electoral process in India is facing several serious issues in this dynamic scenario. Over the years various malpractices gained new and modern forms. The tendency of winning elections at any cost is uprooting the very idea of democracy. The major issues before the Indian electoral process are Money power, Muscle power, criminalization of politics, poll violence, booth capturing, paid news, lack of moral values, sharp decline in statesmanship qualities, lack of adherence to Model Code of Conduct, tilting of ECI in favour of Central Government leadership etc. All these abuses have made Indian democracy just a procedural from the substantive one and lead to eroding of the faith of the people in free and fair elections on one hand and emergence of crisis of legitimacy on the other. The major issues and challenges are as under:

Money Power

The spirit of democracy is not a mechanical thing to be adjusted by the abolition of forms. It requires a change of heart. Democracy is something that gives the weak the same chance as the strong. - Mahatma Gandhi

Money plays a destructive role in the elections of India. It adversely impacts the very idea of a free and fair election and leads to overhaul corruption in the electoral system. The 17th Lok Sabha election was the world's most expensive election ever and anywhere. As per the Centre for Media Study around 50,000 crore rupees or 8 billion dollars which were almost twice the 2014 elections (30,000 Crore Rupees) were spent on it. Individual contestants spent more than Rs.40 crore on at least 75 to 85 seats, which is more than 50 times the ECI mandates expenditure limit (Rs.70 lakh) per candidate in a constituency. Around 100 crores were spent in each Lok Sabha constituency. Effectively, an approximate Rs.700 per vote was spent, BJP spent about 45 percent of the total amount in the 17th Lok Sabha election. The election has become a new area of enterprise, and politicians put money in the election like an investment to get various returns in the future. The net assets of 1914 MLAs of 10 States have more than Rs.10 crore each and most of the MPs are millionaires.

Moreover, their assets have multiplied many times (up to 8) during the last 5 years whereas the per capita income is gradually increasing. To contest the election is out of reach for the common man. Consequently, the adverse impact in form of corruption, crime, and criminalization of politics can be seen. The elections were not as expensive as in 1952 as they have become nowadays. There is a lack of transparency in party funds and donations received and the expenses incurred by politicians on election campaigning. Party accounts are not audited by any regular audit body. It leads to the generation of black money in the economic system. A contesting candidate in each constituency has to spend millions of moneys on transport, advertisement, publicity, rallies, liquor supply, and other essential items of an election campaign. The adoption of planning and mixed economy with a large amount of control, regulation, licenses, permits, and quotas before LPG reforms provided enormous opportunities for political corruption. The political parties are funded by companies and corporates and then they use this money to influence voters in their favor. Foreign funding in the election is also concerning as it may destabilize the Indian political system. The tendency of "NOTE KE BADLE VOTE" has become a set trend in the election system of India. As a result, violence during elections has also increased although these instances do not take place very openly yet happen in many places. Generally, the candidates are given tickets by the political

parties on the consideration of wealth they possess in other words we can say today's vote is not a means of public opinion but It is being purchased.

Muscle Power

There is a deadly nexus between politicians, business houses, media, and bureaucrats. It is the reality of today's Indian political system. The growing use of muscle power in elections has become one of the biggest concerning issues. This nexus among politicians, bureaucrats and mafia has been duly recognized by N. N. Vohra Committee in its Report of 1998. These malignant diseases such as poll violence, booth capturing, Rigging, violence, intimidation, victimization, etc are prevalent in many states of the country like recently in West Bengal, Bihar, Western Uttar Pradesh, Maharashtra, etc. and this cancerous disease is slowly spreading to the south like in Andhra Pradesh, Kerala, etc. The use of muscle power is rampant in the form of heavy monetary demands to candidates, imposing bans on filing nominations, ban on election campaigns, etc. Many candidates are capitalizing on the deteriorating law and order to their advantage to win elections. Election-related violence occurs due to rampant and unmindful use of muscle power.

Criminalization of Politics

In India, political criminalization is a genuine issue. The august legislative bodies are becoming the dens of criminals. According to the latest Report (2021) of Association for Democratic Rights, in 17th Lok Sabha over 30% MPs are from criminals' background and in some State Legislatures this number is upto 50 % of the total strength of the House irrespective of the Party lines and it is happening even after the clear-cut decision of the Hon'ble Supreme court of India regarding rejection of membership on conviction and ban on their contesting elections. Thus, the involvement of convicts in politics in India is a barrier to democracy which threatens its democratic Structure in multiple ways. Constitution of India aims to provide political justice to the people of India when criminal -cum- politicians become part of the law-making process of the world's largest democracy then to provide socio-economic and political justice is a hollow commitment. Political parties gain the influence of criminals to win the elections and in return provide them a safe haven with political patronage and protection. They not only threaten bureaucracy, Press and judiciary but also put at stake the sovereignty, unity and national security. When lawmakers became lawbreakers then they have the potential to destabilize the whole political, economic and social system.

Paid News

Paid News is the latest (2014 onwards) and most prime issue in the Indian election mechanism. "Any news or evaluation seems in any media, either

print or digital, for a fee in cash or kind as payment is paid news,” pursuant to the Press Council of India. The trend of “paid news” travels beyond the on the farther side of individual journalists and media companies. It is seen as widespread, structured and extremely systemized, and institutionalized. It hits the very essence of Indian democracy and has a casting effect over the floating voters. In most of the elections, flood of paid news can be observed. Total 1120 cases of paid news were reported during the 17th Lok Sabha election (2019). It not only misguides and dupes the people at large, but also tarnish the nation's reputation on international platform. Sometimes it leads to clashes among different sections and segments of the society.

Politicization of the Police

Another important issue in Indian democracy is the politicization of the police. Political leaders particularly of the ruling party generally abuses police services to deal with personal and partisan issues and intimidate the opposition. The gross misuse of State Police and paramilitary troops can be seen in recent West Bengal, Maharashtra, Tamandu elections (2021) and U P and Punjab elections (2022) where from Prime Minister to Union Home Minister and Chief Ministers did not hesitate to hit below the belt and grossly abused the respective police forces. Politicians have significant scope and authority from transfer or by threatening to transfer to making enticing offers of alternative assignments to lucrative posting or post retirement rehabilitation. There have been countless cases where police were supposed to act impartially and quickly in the face of the law but instead acted in the exact opposite manner. The politicization of the police has resulted into its poor performance and it acts as neutral brokers of laws and violator of MCC during elections. Police partisanship can encourage ruling parties to misuse executive authority and can potentially jeopardize the election procedure. It has also been pointed out by Parkash Singh Committee (2006) and subsequent Hon’ble Supreme court of India's decision in this regard.

Lack of Moral Values in Politics

The basic evil that polluted and diluted the electoral process and motivated new participants to a large number of evils is the erosion of political morality and decline of ethics from public life. Indian leaders have altered and deformed the democratic system, values and norms to suit their whims and fancies, believing that the Indian people can be easily moulded and controlled. In India, party dynamics have resulted into the creation of worthless politics in which there is hardly any scope for ethics and values. It is dominated by naked opportunism. The Gandhian value of serving the nation has vanished entirely from modern politics and democratic norms and institutions have been deliberately dismantled throughout the last few years. Recently we have seen the political decline in West Bengal, Assam,

Tamandu, Kerala, U.P. and Punjab elections. It has created an environment of chaos and opportunism in which politics lacks of ethics and insensitive to people's need and ambitions. If the same system sustains without any reform for a long period, then it won't be possible to build a strong nation with corrupt and cunning ruling elites (Thakur, 2018). Further, the people will not be happy rather both politicians and political parties will lose their credibility which may lead to crisis of legitimacy. They must realize that democracy is not a gift to India but achieved after a long struggle for independence, Politicians who are crafty and crooked must realize that their final worth will be determined by history so. It must be written in golden terms.

Misuse of Government Machinery

Misuse of government machinery is the major challenge before electoral reforms. During elections, government machinery becomes the propaganda machinery of the ruling party. Election campaigns and opposition party's monitoring were carried out using government machinery by the ruling party or ruling coalition. Misuse of government machinery in the forms of publication of political ads at the expense of the government and the public exchequer showcasing their accomplishments, payments from ministerial discretionary funds, and the use of government vehicles for canvassing. Misuse of government machinery leads to the misappropriation of public funds.

Communalism and Casteism

The politics of communalism, caste and religious fundamentalism pose a serious threat to democracy. Caste is a significant base of social hierarchy in India. Indian politics is caste-ridden and caste has been politicized. From J P Narayan to Prof Rajni Kothari all have recognised and accepted the role and importance of caste in Indian politics. With the passage of time, this factor is becoming more and more important in Indian politics. Caste decides the types of organizations and functioning of political parties, pressure groups, and all subsystems and their working. Distinct caste groups have their allegiance behind different political parties and their ideologies. Religious polarization posed a threat to the Indian Political spirit of pluralism, parliamentarians, federalism and diverges the issues of development. In recent times hate speech has emerged as a rallying point to gain electoral support and it has been very frequently used during elections irrespective of level of leadership and political parties. Unfortunately, there is a trend to play upon caste and religious feelings and field candidates in elections with a sharp eye on caste calculations and communal groupings.

Electoral Reforms

A number of steps have been taken for electoral reforms in the last 7 decades which are as under:

- **Lowering of Voting Age:** By the 61st Constitutional Amendment Act, 1988 Parliament reduced the minimum age of voting from 21 to 18 years due to which about 5 crore voters were added in electoral list at that time which. Improved youths' participation in politics significantly.
- **Deputation to Election Commission:** ECI can take services of any personnel from State or Central Government for election purposes and all individuals involved in the preparation, revision, and correction of electoral rolls are regarded to be on deputation to the ECI. The appointment of general and finance observers, vigilance teams in every district and micro-observers on every polling booth have contributed a lot in making elections free and fair to a great extent. They will be supervised, controlled, directed and regulated by the ECI during this period for all intent and purposes.
- **ECI As a Multimembers Body:** To minimise the pressure of government over the EC, to check the arbitrary functioning of the Chief Election Commissioner (CEC) and to make the ECI more free and fair , the Government of India added two more Election Commissioners in it with CEC in 1993. Since then this body is working as a plural body with principle of seniority in appointment of CEC except a few exceptions. However, the issue of powers of election commissioners with respect to the CEC is still undecided.
- **Increase in the number of proposers and the security deposit:** The number of proposers in nomination papers for elections to the Rajya Sabha and State Legislative Councils has been increased up to 10% of the electors in the constituency or ten such electors, whichever is fewer, primarily to discourage frivolous candidates. To deter non-serious applicants, the security deposit has also been increased.
- **Restriction on contesting from more than 2 constituencies:** A candidate can contest only from maximum two constituencies before that there was not limitation which resulted into vacation of rest of seats in case of winning and subsequent by elections therein.
- **Death of a contesting candidate:** Earlier the election was countermanded on the death of a contesting candidate. No election will be annulled in the future due to the death of a contending candidate. If, on the other hand, the dead candidate was nominated by a recognized national or state party, the party concerned will be given the opportunity to nominate another candidate within seven days of the Election Commission issuing a notification to that effect to the party concerned. It has checked the incidents of murder or killing of an independent

candidate by some heavy weight candidate who otherwise is losing the election contest.

- **Disqualification on conviction for violating the National Honours Act, 1971:** The individual will be barred from contesting elections for Parliament and State Legislatures for six years as a result of this.
- **Prohibition on sale of liquor:** During the 48 hours concluding with the hour set for the conclusion of polls, no liquor or other intoxicants shall be sold, provided, or distributed in any store, dining establishment, or other venues, whether private or public, inside a voting area
- **The time limit for bye-elections:** Any House of Parliament or State Legislature's bye-elections will be held within six months following the vacancy in that House, a special election will be held.
- **Use of EPIC and Electrical lists with Photo of Electors:** During the tenure of T. N. Seshan, the then CEC (1993 onward), it was made necessary that all electors should have Elector Photo Identify Cards (EPIC) and electoral lists with photo of electors updated and duly issued by the ECI to rule out the frequency of tendered or bogus polling as well as multiple votes at different places.
- **Restriction on Exit Polls:** Before the 2019 Lok Sabha elections, the ECI released a statement saying that the exit poll findings may only be broadcast after the election's final phase. This was done to prevent potential voters from being misled or biased in any way.
- **Voting through Postal Ballot:** The Election Commission agreed in 2013 to broaden the scope of postal ballot voting in the nation. Previously, postal ballots were only available to Indian diplomats and defence personnel under certain circumstances. Service voters, special voters, wives of service voters and special voters, voters sentenced to preventive detention, voters on election duty, and Notified voters are the six groups of voters who can now utilize the postal ballot.
- **Ceiling on Election Expenditure:** There is currently no restriction on how much a political party may spend on an election or a candidate. However, the Commission has set a spending limit for individual candidates. It costs between Rs. 50 and Rs. 70 lakhs to contest a Lok Sabha seat (depending on the state they are from) and between Rs. 20 and Rs. 28 lakhs to contest an Assembly election. The candidates have to submit its account details to ECI within one month after declaration of results.
- **Use of Electronic Voting Machines (EVMs) and ICT:** Technology innovation has rapidly revolutionized democracies in the last few

decades. During the Kerala Legislative Assembly general elections in May 1982, EVMs were first used in India in fifty polling booths in the Parur Assembly. It was created by MB Haneef in 1980. As EVMs replaced the ballot box system as it is easy to use, Cost-effective, Economical, Environment friendly, Easy to carry and transfer it saves time, it's very difficult to hack as it doesn't have external communication, through its bogus voting can be avoided. But in recent years there have been numerous allegations by political parties, activists, academics, and press reports of election irregularities involving Indian EVMs but there is no proof that EVMs have been hacked in any of the past elections. The use of ICT including use of videography during polling, reporting of polling took place at different intervals to ARO, RO and ECI from every polling station have curbed bogus polling remarkably. In a democracy, there is nothing more crucial than the credibility of the electoral process.

- **VVPAT:** The Voter Verifiable Paper Audit Trail (VVPAT) is a separate technology device that is connected to the EVMs and permits voters to confirm that their votes were cast correctly. It allows voters to verify if their vote has gone to intended candidate or not. It is visible for 7 seconds on screen and was introduced first of all in Momsen Assembly Constituency in Nagaland in 2013, following the Supreme Court's decision in the People's Union for Civil Liberties vs. Union of India case. It was extended to 7 MP constituencies in 2014 and in entire Constituencies in 2019 General election. It enabled the ECI to meet out the 'requirement of open, transparent and fair elections. To maintain and retain, people's faith in democracy, elections should not only be fair and free but seem to be so.
- **Model Code of Conduct:** When the Election Commission created, in conjunction with political groups, a model code of conduct in 1968, it was designed to control the behaviour of political groups and contenders for a successful and calm election campaign. In 1971, during the fifth general elections, the commission issued its first code. Its goal is to supply a balanced operating platform for all political groups, make the campaigning ethical and healthful, avoid party disputes and disagreements, and maintain calmness and order.
- It is illegal to bring firearms to or near a voting station. This is punished by up to two years in jail.
- Employees of organizations are entitled to a paid holiday on election days, and any breach of this is subject to punishment.
- Campaigning time has been cut in half

- Political parties must disclose any contributions over Rs.20000 to the EC in order to receive an income tax deduction.
- Candidates must declare criminal histories, assets, and other information, and inaccurate information will be disqualified. The use of false information in an affidavit is now a felony punishable by up to six months in jail. To qualify for an income tax benefit, any contribution exceeding Rs.20000 must be recorded to the EC.
- The system must encourage honest leaders and discourage corrupt politicians because to uphold the true spirit of the Indian democracy, It is needed to ensure inclusive and moral elections

Conclusion and Suggestions

Democracy must be the foundation of society and for this all-essential effort must be made including the value system of Indian folks. The burden of ensuring democracy's existence cannot be placed solely on state institutions rather citizens have an equal role to play. The people are the most powerful entity in democracy. If they do not vote for criminals, dishonest, and corrupt politicians, everything will run well and democracy will shine brightly amid the previously corrupt and criminalized political system. The scope and nature of election reforms will necessitate further discussion and political action. The electoral reforms may be aided and guided by the ECI and the Supreme Court. The Election Commission's functions should be transparent, fair and independent. Fundamental political reform is desperately needed, including an electoral reform referendum, far increased cooperation across party lines, and improvements to political system to make it considerably more transparent and responsible. In the electoral system, honesty should not be a deterrent but rather a reward. The immediate necessity for full legalization of politics is to eliminate the patronage supplied to criminals by politicians and political parties. The administration must have a strong political resolve to decriminalize the entire political system by adopting tough measures and enacting the necessary legislation. The criminal- mafia-political nexus must be broken as soon as possible to retain and maintain public faith in politics, politicians, and democracy itself. The stronger the people's devotion to democratic institutions, the freer and fairer will be the elections. The current political system in India has numerous flaws and caste politics has grown in popularity in our country. Several members of one political party have been suspended due to charges of corruption. For the country to hold free and fair elections, certain conditions must be met

Simultaneous elections can save a lot of time and resources but its side effects cannot be overlooked as the elections on one hand keep check over the ruling party/parties and on the other, it provides employment opportunities to a

number of people in one form or the other. The number of political parties particularly which have an insignificant experience must be limited by enhancing their registration fee etc. Similarly, the trend and number of independent candidates in general elections should be restricted to avoid the wastage of votes. There must be internal democracy and transparency in the working of all q political parties. At present, hardly there is democracy in any political parties may be national or regional, Rightist or Leftist. Electoral Bonds need to be covered under RTI Act. Further to ensure transparency and accountability, the Political parties recognised by the ECI should be declared as public Authorities under RTI Act. The elections related issues and criminal cases of MPs and MLAs should be dealt on fast-tracking.

To address the issue of criminalization of politics, effective Legislative changes can be introduced. The media must play a proactive role in bringing out the dark faces of criminal. There must be an independent body or commission to decide the salaries and perks of elected representatives. Government should accept the ECI's Proposal to legally authorize it to cancel the elections, where there is credible evidence of the misuse of funds. The Aadhar card must be linked to the voter ID card in order to prevent duplicate and forged voting. More and more use of ICT in election process including Online Nomination of Candidates like that of done by the ECI in covid -19 time should be their Technology can improve administrative efficacy, lower long-term expenses, and boost political transparency in the electoral process. The confidentiality of the voter's choice of a candidate must be preserved and the electoral machinery must be honest, vigilant, proactive and unbiased. The media should play a nonpartisan role. Need to make politicians and voters law-abiding citizens. The Model Code of Conduct should be applied with rigor and hold those who violate it. Civil societies, NGOs, voters, etc should play an active role. If voters stop taking freebies to vote and stop voting for the criminal candidate, the system will gradually start to change. The introduction of international media in India would do away with the issue of paid news as the competition would increase with the entry of global players. Ethics in politics is the soccer of all these problems.

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Cognitive Style and Mental Health of Sportspersons: An Influence on Academic Achievement

- Manohar Lal and Sanjay Sharma

ABSTRACT

The aim of the current investigation was to determine the correlation of cognitive style and mental health with academic achievement of sportspersons in relation to gender. Cognitive style inventory of Jha, P.K. and Mental health battery of Singh and Gupta was utilized to evaluate the cognitive style and mental health of 300 sportspersons. The academic achievement was measured from the result declared by concerned university. Data were analyzed by using product moment method of correlation and t test. The results revealed that cognitive style has shown insignificant relationship with academic achievement in sportsperson, insignificant differences were also found in cognitive style, mental health and academic achievement between both genders. In mental health, female sportsperson shows significant relationship in overall adjustment, and emotional stability, overall adjustment and autonomy have shown significant relationship with academic achievement in male sportsperson. Significant difference was found only in socioeconomic status and intelligence between male and female sportspersons.

Keywords: Systematic style, Intuitive style, Mental health, Academic achievement and sportspersons.

Introduction

Sports play a very crucial role in human development. Sports inculcate a sense of fairness, respect, discipline, leadership qualities and team spirit, which are essential for the development of human character. Sports also provides a platform for the participants to interact with players belonging to different races, colours, cultures and belief sand thereby promote harmony

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between regions and nations. Physical activity promotes psychological health and wellbeing in the society. Sports acts as a strong antidote for stress, tension, anxiety and depression. Sports are also the treatment for low self-confidence and low self-esteem. Sports and physical activity are one of the most cost-effective forms of preventive medicine which has the power to drastically cut health care cost. This is because physical activity leads to healthier, stronger and more active population. As sports and physical activity result in a more health-conscious nation, there is a significant reduction in life-threatening disease in the nation. Some of these diseases are cardiovascular disease, cancer, diabetes, osteoporosis, obesity and mental health disorders (Frank et al. 2014).

Advanced professional education has become an important component in our higher education system, and its development goes to larger and larger in the last two decades. The main purpose of advanced professional education is to enable the educated people to acquire permitted ability working in our society. It is an urgent requirement to produce more high-level educated people at the present time. To meet the requirement educators must figure out suitable teaching strategies according to the features of students (Hanna, 2000; pp.66-95). The research on personality difference of students always attracts many people in the education. The main differences appear in the aspects of basic knowledge, learning motivation, learning ability, cognitive style and so on. In recent years, psychologists have paid a lot of attention to the content of cognitive styles, which became a trend of the contemporary study of individual differences and personality problems.

The phrase ‘Cognitive Style’ consists of two words cognitive and style. The word cognitive owes its origin to the Latin word ‘cognocere’ which means ‘to apprehend’. Cognitive styles refer to preferences for information processing. In others words, cognitive style specifies that how information is gathered and facilitated. Cognition is a generic term used to designate all processes involved in knowing. It is the procedure by which the tactile info is changed, diminished, explained, put away, recovered and utilized. Main stages in the process of cognition are sensing, attending, perceiving, comprehending, understanding and remembering explored the connection between field’s reliance/autonomy and achievement in language learning in students of English at Teacher Training University Yaghubi (2006). Yaghubi presumed that field free students are better in learning and appreciation. As conceived cognitive style as stable individual preferences in the mode of perceptual organization and conceptualization by the external environment, whereas pointed that cognitive style alludes to the favoured ways that various people have for preparing and arranging and for reacting to ecological stimuli (Jessie, 1983).

The idea of mental health has taken "Gestalt" perspective on the person. It joins the ideas of personality attributes and conduct across the board. It might likewise be perceived as the social quality of the individual. An intellectually solid individual shows a homogeneous association of alluring perspectives, sound qualities, and the noble self-idea and a logical view of the world overall. A few analysts like Hurlock, (1972) and Ericson, (1936) have communicated comparable perspectives. Throughout the long term, a proceeding with matter of discussion has been there on the subject of how best to characterize mental health. Mental health is ambiguous as it is not only difficult to agree on its general application, but even in a single context, it may be used in many different ways. The noun mental health has one meaning that the psychological that the mental condition of somebody who is working at an acceptable degree of passionate and conduct change (Schwartz et al. 1968). Human conduct is dictated by both physical and mental components. In recent years, clinical psychologists as well as educationalists have begun concentrating on the investigation of emotional well-being. Emotional well-being hints those practices, discernments and sentiments that decide an individual's general degree of individual adequacy, achievement, bliss, and greatness of the working person (Kornhauser, 1965, p.3).

As Raglin (2001) studied the Mental Health Model (MHM) of sport performance. The model postulates that as an athlete's mental health either worsens or improves performance should fall or rise accordingly and there is now considerable support for this view. Studies have shown that between 70 and 85% of successful and unsuccessful athletes can be identified using general psychological measures of personality structure and mood state, a level superior to chance but insufficient for the purpose of selecting athletes. The rate of emerging of mental problems for female athletes is fairly high; the level of psychological health is inferior to the ones of the peers at the same age in the nation wide, the symptoms of each factor is relatively obvious Chowdhary and Patel (2008). It is well suggested that the specific education of mental health should be conducted among the female athletes with 6-year training experience, the female athletes of collective sports events, and the female athletes with a poor family economic condition.

Theoretically, the concept of education in India is comprehensive, but practically major focus of modern Indian education is the academic achievement of the learner. Academic achievement alludes to the degree of achievement or capability accomplished in some particular zones concerning educational or scholastic work. Concise Dictionary of Education (1982) explained academic achievement as "successful accomplishment or performances; in particular subjects, areas, or courses usually by reasons of skill, hard work and interest typically summarized in various types of

grades, marks, scores, or descriptive commentary". Generally, academic achievement is the scores obtained in the examinations. Academic achievement plays a very important role in the attainment of the idea of harmonious development of the child. In this rapidly changing world and with the growing advancement in science and technology, the place of education has become so vital that every parent today sets high goals for his/her child (Fan et al, 2001). Therefore, the purpose of present study is to find out the relationship between mental health and academic achievement of sportspersons in relation to their gender.

Academic achievement is the core of wider term educational growth. Achievement in the school may be taken to mean any desirable learning that is observed in the students. Academic achievement refers to the degree of achievement or capability achieved in some particular regions concerning educational or scholastic work. Academic achievement is the core of wider term educational growth and perhaps no one would deny the importance of academic achievement in child's life. In recent years, academic achievement has come to occupy the central position. Sound development in academic front can be well matched with pillars on which entire future structure of personality stands. The importance of academic achievement can be judged when we realize that happy life, which we wish for every child, would be impossible unless s/he had some skills and intellectual and the scholastic arts. Academic achievement has to be considered as an important factor in the educational life of adolescents. It encourages working hard and learning more.

The assessment of academic achievement has long been a routine part of the educational process. Academic achievement is a multidimensional and multifaceted phenomenon. There are innumerable factors which affect academic achievement viz. intelligence, personality, motivation, school environment, heredity, home environment, learning, experience of school, interests, aptitudes, family background, socio-economic status of the parents, and many more. As Mokhtarian (2003) showed a critical connection between harmony of secondary school students and educators and cognitive style (field reliance/freedom) and academic performances of students. Samavati (2001) studied the relationship between cognitive styles (merged, disparate, absorptive, and versatile) and locus of control (inward and outside). There were important contrasts between various significant groups concerning to cognitive styles.

Methodology

For the current investigation, the investigators applied purpose random sampling procedure to collect the data. As per the nature of the study 300 sportsperson (150 male and 150 female) of Lovely Professional University

Phagwara, Punjab University Chandigarh, and Guru Nanak Dev University Amritsar have been selected who have participated at-least at inter-college level to understand the relationship of cognitive style and mental health with academic achievements of sportspersons. The data were collected from various colleges/departments which were under Lovely Professional University Phagwara, Punjab University Chandigarh and Guru Nanak Dev University Amritsar. Cognitive style inventory (CSI) developed by Praveen Kumar Jha (2001) was utilized to evaluate the cognitive style of sports performance.

Mental health battery developed by Singh and Gupta (2000) was utilized to evaluate the mental health of sports performance. The academic achievements of the students were measured from the last semester result declared by concerned university. To find out the correlation of cognitive style and mental health with academic achievements, product moment coefficient of correlation method was applied and to find out the difference in score between the male and female sports persons 't' test was used.

Result and Discussion

Table-I: Coefficient of correlation of cognitive styles with academic achievement of female sportspersons (N=150)

Variable correlated with academic achievement	Coefficient of correlation 'r'
Systematic cognitive Style	-0.02
Intuitive Style	-0.09

Table-I depicts the negative and insignificant relationship of academic achievement with systematic cognitive style ($r=-.02$) and intuitive style ($r=-.09$) at .05 level of significance. It implies that systematic style and intuitive style are negatively related to the academic achievement of female sportspersons which show that cognitive style does not significantly influence the academic achievement of female sportspersons

Table-II: Coefficient of correlation of cognitive styles with academic achievement of male sportspersons (N=150)

Variable correlated with academic achievement	Coefficient of correlation 'r'
Systematic Style	-0.05
Intuitive Style	-0.09

Table-II depicts the negative and insignificant relationship of academic achievement with systematic cognitive style (-.05) and intuitive style (-.09) at .05 level of confidence. It implies that systematic cognitive style and intuitive style are negatively correlated to academic achievement of male sportspersons

Table-III: Comparison of cognitive style and academic achievement between male and female sportspersons.

Variable	Male Sportspersons (n=150)			Female Sportspersons (n=150)			t value
	Mean	S.D.	SEM	Mean	S.D.	S.E.M.	
Systematic Style	74.17	9.17	0.75	72.63	10.95	0.89	1.33
Intuitive Style	66.3	9.96	0.81	64.2	9.77	0.80	1.84
Academic Achievement	63.47	10.39	0.85	65.16	9.73	0.79	1.45

Table-III depicts the means, standard deviations and values of SEM of systematic style, intuitive style and academic achievement of male and female sportsperson. The results depict that the calculated 't' value of systematic style is (t=1.33), intuitive style is (t=1.84) and academic achievement is (t=1.45), which are less than the tabulated t value (t=1.96). Hence, there exists an insignificant difference between male and female sportspersons in the variables of cognitive style and academic achievement.

Table-IV: Relationship between mental health and academic achievement of female sportspersons (N=150)

Sr No	Variables correlated with academic achievements	Coefficient of correlation 'r'
1	Socio-economic status	0.10
2	Emotional stability	-0.05
3	Overall adjustment	-0.17*
4	Autonomy	-0.10
5	Security-insecurity	0.09
6	Self-concept	-.09
7	Intelligence	-.12

*Significant at .05 level (r= 0.16), & ** Significant at .01 level (r=0.21)

Table-IV depicts the significant and negative correlation of academic achievement with overall adjustment ($r=-0.19$, $p < .05$) among the female sportspersons. Negative insignificant correlations of academic achievement were also existed with emotional stability ($r=-0.05$), autonomy ($r=-.10$), self-concept ($r=-0.09$) and intelligence ($r=-0.12$). However, academic achievement has shown a positive and insignificant relationship with socio-economic status ($r=0.10$) and security-insecurity ($r=0.09$) among female sportspersons.

Table No- V: Relationship between mental health and academic achievement of male sportspersons (N=150)

Sr No	Variables correlated with academic achievements	Coefficient of correlation 'r'
1	Socio-economic status	-0.14
2	Emotional stability	0.28**
3	Overall adjustment	0.19*
4	Autonomy	0.16*
5	Security-insecurity	0.01
6	Self-concept	0.13
7	Intelligence	-.06

*Significant at .05 level ($r= 0.16$), & ** Significant at .01 level ($r=0.21$)

Table-V depicts the significant and positive correlation of academic achievement with emotional stability ($r=0.28$, $p < .01$), overall adjustment ($r=0.19$, $p < .05$) and autonomy ($r=0.16$, $p < .05$) among the male sportspersons. Positive insignificant correlations of academic achievement were also existed with security-insecurity ($r=.01$) and self-concept ($r=.13$). However, academic achievement has shown a negative and insignificant relationship with socio-economic status ($r=-0.14$) and intelligence ($r=-0.06$) among male sportspersons.

Table No-VI: Comparison of mental health between male and female sportspersons.

Variable	Male sportspersons (N=150)			Female sportspersons (N=150)			t value
	Mean	S.D	S.E.M	Mean	S.D	S.E.M	
Socio-economic status	10.45	1.75	0.14	9.87	2.01	.16	2.69**

Emotional Stability	9.03	2.11	0.17	8.81	1.97	0.16	0.90
Overall Adjustment	24.03	3.74	0.30	23.39	4.70	0.38	1.32
Autonomy	9.89	1.65	0.13	10.11	2.27	0.18	0.96
Security-insecurity	8.89	1.92	0.16	8.51	1.88	0.15	1.70
Self-concept	9.17	1.62	0.13	9.28	1.82	0.14	0.53
Intelligence	19.49	3.05	0.25	18.47	3.57	0.29	2.66**

*Significant at .05 level ($t=1.97$) & ** Significant at .01 level ($t=2.59$)

Table-VI depicts the means, standard deviations and values of SEM of socio-economic status, emotional stability, overall adjustment, autonomy, security-insecurity, Self-concept, intelligence of male and female sportspersons. The mean value of socio-economic status and intelligence of male sportsperson was found to be 10.45 & 19.49, and for female sportsperson it was computed to be 9.87 and 18.47, respectively. The t value testing the significance of mean difference between the male and female sportspersons came out to be 2.69 and 2.66 at .01 level of significance, for df 298 which is higher than the tabulated t value 2.59 at .01 level. Hence, it may be interpreted that male sportsperson have significantly high socio-economic status & more intelligent as compared to female sportspersons. Further, it has been found that male sportspersons have depicted higher mean value for emotional stability, overall adjustment and security-insecurity in comparison to female sportspersons and similarly, the female sportspersons have shown little bit higher mean value for autonomy and self-concept as compared to male sportspersons. But none of such mean differences were found to be significant. So, it may be interpreted that in case of emotional stability, overall adjustment, autonomy, security-insecurity, self- concept, there exist no significant difference among male and female sportspersons.

Discussion

The objectives of the study were to find out the relationship of cognitive style and mental health with the academic achievement of sports persons in relation to their gender. After analysis, it has been found from table-I and II that cognitive style i.e., systematic style and intuitive style have an insignificant relationship with academic achievement of female and male sportspersons. The results reported by Hemant et al (2018) are not in line results of the present study. They found that cognitive style has shown a significant relationship with academic achievement of school students.

Sharma et al. (2000) concluded that educational aspiration was higher in female athlete whereas academic achievements was higher in female non-athletes. Similarly Bean et al. (2003) observed that intellectual ability and achievement motivation were associated positively with academic success. The academic achievement of students was different under high average and low academic stress condition was concluded by (Kaur 2000; pp. 27-29). In their study Sud and Prabha (2003) confirmed that academic performance was significantly and negatively related to self-oriented perfectionism, procrastination, test anxiety worries and emotionality. Zhang and Fang (2007) come to end that each one of the two cognitive style develops have a special value in clarifying individual contrast in human performance. Rehman et al, (2011) were found a significant correlation between self-perceived verbal / linguistic, logical / mathematical, interpersonal, intrapersonal, naturalistic intelligence and students' academic achievement. Polat, (2018) clearly stated from the findings of his study that including sports activities outside school do have a positive impact on academic achievement.

It has been found from table-III that male sportspersons have shown better systematic style and intuitive style than female sportsperson. It has been also found that their academic achievement is less than female sports persons. However, insignificant difference was found between male and female sportspersons in the variables of cognitive style and academic achievement.

It has been clear from table -IV and V that, in case of female sportspersons, overall adjustment has significantly and negatively influenced the academic achievement. Other variables of mental health i.e., emotional stability, autonomy, self-concept and intelligence have negatively and insignificantly contributed to academic achievement. However, socio-economic status and security-insecurity has positively contributed to the academic achievement of female sportspersons of inter college. These findings were not in agreement with the findings of the investigation done by Asgari et al. (2008), while they upheld the findings of the exploration completed by Shairi (2004) and others. In case of male sportsperson, it has been found that emotional stability, overall adjustment and autonomy have significantly and positively influenced the academic achievement. Other variables of mental health i.e., security-insecurity and self-concept have positively, but insignificantly contributed to academic achievement among male sportspersons. However, socio-economic status and intelligence variables of mental health have negatively influenced the academic achievement male sportspersons of inter-college level. Ettner et al. (1997), Marcotte & Wilcox-Gaok, (2001) have also suggested that the association between mental health and GPA may be relevant to improving understanding of the broader issue of how mental health affects productivity more generally.

Finding from table -VI indicates that male sportspersons have significantly high socio-economic status and more intelligent as compared to female sportspersons. Van et al. (2018) have reported that girls with poor social support experience mental health problems more frequently than boys and those with strong social support. However, insignificant differences were found between male and female sportspersons in emotional stability, overall adjustment, autonomy, security-insecurity and self- concept variables of mental health.

Conclusions

The systematic and intuitive style has shown an insignificant relationship with academic achievement of female and male sportspersons. There exists an insignificant difference between male and female sportspersons in the variables of cognitive style and academic achievement. It has been found that overall adjustment variable of mental health has shown significant and negative relationship with academic achievement among female sportspersons. However, other variables; socio-economic status, emotional stability, autonomy, security-insecurity, self-concept and intelligence have shown insignificant relationship with academic achievement. In case of male sportspersons; emotional stability, overall adjustment and autonomy have shown significant and positive relationship with academic achievement. However, other variables; socio-economic status, security-insecurity, self-concept and intelligence have shown insignificant relationship with academic achievement. The significant difference was found only in socioeconomic status and intelligence variables of mental health between male and female sportspersons.

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Moderating Role of Gender in the Contribution of Work-Family Balance and Relationship Quality to Job Commitment among Academic Staff in Nigerian Universities

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ABSTRACT

Recently, job commitment of Nigeria universities' academia is becoming a matter of public concern since it is critical to the performance of staff and quality of education provided. Examining factors that could impact job commitment is therefore a worthwhile undertaking. Hence, this paper investigated the moderating role of gender in the contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities using a survey research design. A sample of 382 academic staff was chosen from the population of public universities in South-West, Nigeria through the proportional stratified random sampling technique. Instruments used for data collection were the Demographic Data Inventory (DDI), Teachers' Job Commitment Questionnaire (TJCQ), Work-Family Balance Scale (WFBS), and Relationship Quality Scale (RQS). Four hypotheses were formulated and tested by means of multiple regression analysis and the Bootstrapping Test at the .05 level of significance. Results revealed a significant combined contribution of work-family balance and relationship quality to job commitment ($F_{(2, 379)} = 5.770, p < .05$), significant individual contributions of work-family balance ($\beta = .183, t = 9.836, p < .05$) and relationship quality ($\beta = .152, t = 8.105, p < .05$) to job commitment, significant moderating role of gender in the contribution of work-family balance to job commitment (coeff = $-.037$; SE = $.006$; BootLLCI = $-.048$; BootULCI = $-.027$), and non-significant moderating role of

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gender in the contribution of relationship quality to job commitment (coeff = -.001; SE = .001; BootLLCI = -.004; BootULCI = .001) It was subsequently recommended, among other things, that university authorities should create working environment that promotes optimal work-family balance and interpersonal relationships among academic staff in order to increase job commitment.

Keywords: Job commitment, Work-family balance, Relationship quality, Gender, Academic Staff.

Introduction

It is one of the major objectives of every organization to enhance efficient and effective productivity through job commitment of employees. In recent times, the issue of job commitment of Nigeria universities' academia is becoming a matter of public concern. Universities as institutions of learning designed to produce high level manpower for various sectors of the economy depend largely on the quality of their academic staff who are expected to carry out its various academic functions with commendable degree of job commitment. Some members of the academia appear to take the job as secondary as could be seen in the amount of time they spend at work, the lackadaisical way and manner they prepare for their classes, the quality of lectures they deliver, the way they attend to their students' needs, and the late submission of results of courses examined. Some lecturers do not attend lectures punctually, have little or no time for research, and can hardly be seen to be contributing any meaningful service to the community. Also, the incessant strikes embarked upon by lecturers which often disrupt academic calendar do make the public doubt the job commitment of many universities academic staff. Other keen observers would probably link the problem to the apparent shortage of personnel in the system which sometimes make the system to assign the job meant for five individuals to a single individual due to the prolonged neglect which the education sector especially the university systems has witnessed from successive governments after independence (Ifinedo, 2003). As rightly pointed out by Hull (2015), without well qualified and committed faculty staff, no academic institution can ensure sustainability and quality over the long run. Higher educational institutions are therefore more dependent on the intellectual and creative abilities and commitment of their academic staff than most other organizations.

The crucial role of employee job commitment in any organization makes it imperative to investigate the contribution and influence of certain socio-demographic factors. This study therefore considers work-family balance and relationship quality as potential determinants of job commitment and also incorporate gender into the design in order to see whether there are significant differences between male and female employees in the relationship between these variables and job commitment. Work-family balance is about maintaining a state of equilibrium through reconciling

competing demands between work and home. This has assumed increased relevance for employees in recent years due in large part to demographic and workplace changes such as rising number of women in the work force, an ageing population, longer working hours and more sophisticated communications technology enabling near constant contact with the workplace (Kyreea, 2014).

In response to these changes and the conflict they generate among the multiple roles that individuals occupy, organizations are increasingly pressured to implement work practices intended to facilitate employees' efforts to fulfil both their employment-related and personal responsibilities (Rogier & Padgett, 2004). Although several factors may influence job commitment, the overwhelming influence of work-family balance is conspicuous. The home remains an important factor in the life of employees as it is the primary group where an organization's employees come from and return to after the day's work. The family should ideally be a place of comfort, an abode of peace, a source of joy and dependable place of support to employees. Unhappiness at home is naturally transferred to the place of work and this more often than not hinders the commitment and functioning of the individual since it is difficult to discard home or family issues bordering the mind of the worker while at work. Besides, individuals have family responsibilities that are as important as their job responsibilities and there may always be the need to strike a harmonious balance between the job and home. Hence, work-family balance may prove to be a potential factor in job commitment of academia.

Relationship quality has been indicated as a factor in employee job commitment (Lewis & Smithson, 2001). It is likely that individuals who can neither relate well with others nor listen to or tolerate other peoples' opinions but resort to isolating themselves from others or even keeping malice with them will not only feel uncomfortable themselves but that will likely impair their commitment to the job. (Parker & Allen, 2002) Married employees have several roles and responsibilities to play as husbands and wives, fathers and mothers, etc. within their family settings. Domestic chores and responsibilities of male and female workers differ and may affect them differently. Yet, academic work involves male and female staff whose job responsibilities are the same. Studies carried out in foreign countries have pointed to the moderating effect of gender. For example, Aftab and Khatoon (2015) show that male academia experience better work-family balance than female academia in Pakistan educational institutions. Hull (2015) also suggests that gender may be an important demographic characteristic to be considered in work-family balance and job commitment of employees. There is a need to ascertain the external validity of these studies by replicating them

in Nigeria. Hence, the researcher considers gender as a moderating variable in this study.

Hypotheses

1. There is no significant combined contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities.
2. There is no significant individual contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities.
3. Gender will not significantly moderate the contribution of work-family balance to job commitment among academic staff in Nigerian universities.
4. Gender will not significantly moderate the contribution of relationship quality to job commitment among academic staff in Nigerian universities.

Methods

3.1 Design, Population, Sample, and Sampling Technique

The survey research design was adopted in this study. The population comprises 8,538 academic staff of public universities in South-West, Nigeria. The sample size was determined through the application of the Taro Yamane's formula which is given below:

$$n = \frac{N}{1 + N(e)^2}$$

where n is the sample size, N is the population size, and e is the error margin (alpha value).

$$\begin{aligned} n &= \frac{8,538}{1 + 8,538(0.05)^2} \\ &= 382 \end{aligned}$$

Thus, a sample of 382 academic staff was chosen through the proportional stratified random sampling technique. This involved a division of the population into six strata, being the six States making up South-West, Nigeria, namely, Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo States. Universities and participants were then chosen from each stratum using proportional and simple random sampling techniques.

3.2 Instruments

The instruments used for data collection in this investigation included Satisfaction with Life Scale (SWLS), Work-Family Balance Scale (WFBS), and Creative Involvement Scale (CIS). Further information on each of these instruments is given below.

1. Demographic Data Inventory (DDI)
2. Teachers' Job Commitment Questionnaire (TJCQ)
3. Work-Family Balance Scale (WFBS)
4. Relationship Quality Scale (RQS)

Further information on each of these instruments is given below:

3.2.1 Demographic Data Inventory (DDI)

The Demographic Data Inventory (DDI) was developed by this researcher to measure the demographic characteristics of the respondents which included gender.

3.2.2 The Teachers' Job Commitment Questionnaire (TJCQ)

Job commitment was measured using the 7-item Professional Commitment Sub-Scale of the Teachers' Job Commitment Questionnaire (TJCQ) developed by Kadyschuk (1997). The original scale was designed to measure teachers' job commitment on three parameters which are job commitment, professional commitment and union commitment. Although, the author mixed the items in the final scale, he provided the component analysis of the items and the sub-scales as appendixes to the study. Thus, items 2, 5, 6, 15, 16, 19 and 20 of the original scale were designed to measure professional commitment. Each of the items was scored on a scale from 5-Yes Yes, 4-Yes, 3-Yes / No, 2- No, 1- No No. It asks the participant to reflect on his or her perceptions of what their job means to them, and where he or she wants to be. This is a very similar measurement to the Carson and Bedeian Career Commitment Measure. Sample items on the scale are: "If I had all the money, I needed without working, I would probably still continue in teaching" and "I am disappointed that I ever entered teaching".

The whole scale has a Cronbach's alpha reliability coefficient of .85 while the Professional Commitment Sub-Scale has a reliability coefficient of .83 as reported by Kadyshuk (1997). This affective measure leaves little ambiguity, and has easily understood instructions. This is a readily accepted survey on a professional level, and holds good reliability and validity. Furthermore, for the purpose of this study, using the test re-test reliability approach, the Professional Commitment Sub-Scale was administered twice (with two

weeks interval) on a normative sample selected outside the actual research setting. The two sets of scores generated were correlated using Pearson r which yielded a reliability coefficient of .81.

3.2.3 Work-Family Balance Scale (WFBS)

The Work-Family Balance Scale developed by Boles and McMurrian (1996) was adopted for measuring work-family balance in this study. It is a 5-item self-report scale designed to assess workers' all work-related activities which workers do as part of their paid employment and how these relate to their family life. Responses are required on a 7-point Likert Scale format ranging from Strongly Disagree (1) to Strongly Agree (7). Sample items on the scale are: "I have to put off doing things at work because of demands on my time at home" and "Things I want to do at work don't get done because of the demands of my family or spouse/partner".

The WFBS has a test-retest with a one-month interval reliability index of .79 and Cronbach's alpha internal consistency reliability of .83 (Boles & McMurrian, 1996). For the purpose of re-establishing the reliability of the scale in the local setting, it was trial tested in a pilot study using a sample of academic staff in a Nigerian university which is not included in the study sample. Using the test-retest reliability approach, the WFBS was administered on two occasions within a 2-week interval on 25 academic staff members. The two sets of scores obtained were then correlated by means of Pearson r which yielded a reliability coefficient of .77. Moreover, the internal consistency reliability and construct validity of the WFBS was established with a Principal Component Analysis.

3.2.4. Relationship Quality Scale (RQS)

The Relationship Quality Scale (RQS) was adapted by this researcher from the Interpersonal Conflict at Work Scale (ICWS) designed by Spector and Jex (1998). It is a 37-item scale assessing interpersonal relationships among workers, and has a very simple rating system. The original scale consists of four situational questions which are rated as 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Quite Often, and 5 = Very Often. These are very affective, emotionally driven questions which are designed to reflect conflict between the subject and another individual. However, the present scale adds six emotionally driven questions which are designed to reflect cordiality between the subject and another individual. Sample items on the RQS are: "My relationship is close to ideal" and "My needs for companionship (doing things together, enjoying each other's company, etc.) could be fulfilled in alternative relationships (e.g., by another dating partner, friends, family)".

According to Spector and Jex (1998) the original instrument has .74 index of Internal consistency reliability (coefficient alpha) while most of the validity evidence was provided with a meta-analysis, relating this scale to one another and to several other variables. However, the present scale (Relationship Quality Scale) was subjected to a pilot study involving a normative staff, that is, university academic staff in a university which is not part of the original sample for the study. Using the test-retest reliability approach, the WFBS was administered twice in three weeks on the normative sample and the scores generated were correlated using Pearson r which yielded .86 coefficient of stability. Moreover, when the data were subjected to Principal Component Analysis, it yielded .92 index of internal consistency. The analysis also confirmed the construct validity of the instrument.

3.3 Method of Data Analysis

The data collected were scored, collated and analysed using appropriate statistics. Specifically, the first and second hypotheses were tested by means of Multiple Regression Analysis, while the third and fourth hypotheses were analysed using the Bootstrapping Test (Hayes, 2013). Hypotheses were tested for significance at .05 alpha level.

4. Results

Hypothesis One

H01: There is no significant combined contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities.

Table 1: Combined Contribution of Work-Family Balance and Relationship Quality to Job Commitment

	Sum of Squares	<i>df</i>	Mean Square	F	Sig.
Regression	528.406	2	264.203	15.770	.000
Residual	6349.471	379	16.753		
Total	6877.877	381			
Model Summary: R = .319, R ² = .102, <i>Adj.</i> R ² = .095, Std. Error = 3.98304					
Dependent Variable: Job Commitment					
Predictors: (Constant), Work-Family Balance, Relationship Quality					

Table 1 revealed significant results ($F_{(2, 379)} = 5.770, p < .05$). This indicated a significant combined contribution of work-family balance and relationship quality to the prediction of job commitment among academic staff in public

universities in South-West, Nigeria. Table 1 further indicated that work-family balance and relationship quality together accounted for 9.5% of the variance in job commitment (Adj. $R^2 = .095$).

Hypothesis Two

Ho2: There is no significant individual contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities.

Table 2: Individual Contribution of Work-Family Balance and Relationship Quality to Job Commitment

	B	Std Error	β	t	Sig.
(Constant)	10.649	3.844		12.597	.000
Work-Family Balance	.108	.019	.183	9.836	.000
Relationship Quality	.076	.046	.152	8.105	.000

Dependent Variable: Job Commitment

Results in Table 2 were significant leading to the conclusion that there were significant individual contributions of work-family balance and relationship quality to the prediction of job commitment among academic staff in public universities in South-West, Nigeria. Specifically, work-family balance ($\beta = .183$, $t = 9.836$, $p < .05$) was a more potent predictor of job commitment than relationship quality ($\beta = .152$, $t = 8.105$, $p < .05$). Table 2 further showed that job commitment could be predicted from work-family balance and relationship quality by means of the regression equation:

$$\text{Job Commitment} = (.108 \times \text{Work-Family Balance}) + (.076 \times \text{Relationship Quality}) + 10.649$$

Hypothesis Three

Ho3: Gender will not significantly moderate the contribution of work-family balance to job commitment among academic staff in Nigerian universities.

Table 3: Model Summary and Coefficients for the Moderating Effect of Gender between Work-Family Balance and Job Commitment

Antecedent		Consequent								
		Gender				Job commitment				
		coeff	Se	t	p	coeff	se	t	p	
Gender		-	-	-	-	<i>b</i>	-.128	.011	-11.284	.000
Work-Family	<i>a</i>	.237	.021	11.852	.000	<i>c</i>	-.062	.011	-5.726	.000

Balance										
Constant	<i>i</i>	24.967	1.250	19.971	.000	<i>I</i>	12.639	.598	21.130	.000
Model Summary		R = .343; R-sq = .092; F (1, 380) = 120.464; <i>p</i> = .000					R = .369; R-sq = .136; F (2, 379) = 61.673; <i>p</i> = .000			
		Indirect effect of Work-Family Balance on Job Commitment								
		Effect		Boot SE			BootLLCI		BootULCI	
Gender		-.037		.006			-.048		-.027	

Table 3 indicated a significant negative effect of gender on job commitment of academic staff of public universities in South-West, Nigeria ($b = -.128$; $t = -11.284$; $p < .05$). Also indicated was a significant moderating role of gender in the contribution of work-family balance to job commitment (coeff = $-.037$; SE = $.006$; BootLLCI = $-.048$; BootULCI = $-.027$) since both are negative and therefore exclude zero.

Hypothesis Four

Ho4: Gender will not significantly moderate the contribution of relationship quality to job commitment among academic staff in Nigerian universities.

Table 4: Model Summary and Coefficients for the Moderating Effect of Gender between Relationship Quality and Job Commitment

		Consequent								
Antecedent		Gender					Job commitment			
		Coeff	SE	T	<i>p</i>		Coeff	se	t	<i>p</i>
Gender		-	-	-	-	<i>b</i>	-.010	.008	-1.213	.225
Relationship Quality	<i>a</i>	.137	.037	3.742	.000	<i>c</i>	-.097	.011	-9.019	.000
Constant	<i>i</i>	83.129	1.883	44.146	.000	<i>i</i>	10.244	.853	12.008	.000
Model Summary		R = .100; R-sq = .010; F (1, 380) = 14.006; <i>p</i> = .000					R = .241; R-sq = .058; F (2, 379) = 42.928; <i>p</i> = .000			
		Indirect Effect of Relationship Quality on Job Commitment								
		Effect		Boot SE			BootLLCI		BootULCI	
Gender		-.001		.001			-.004		.001	

Table 4 indicated a non-significant negative effect of gender on job commitment of academic staff of public universities in South-West, Nigeria ($b = -.010$; $t = -1.213$; $p > .05$). Also indicated was a non-significant

moderating role of gender in the contribution of relationship quality to job commitment (coeff = $-.001$; SE = $.001$; BootLLCI = $-.004$; BootULCI = $.001$) since one is negative while the other is positive which implies a possible value of zero (no effect).

Conclusion

The examination of the moderating role of gender in the contribution of work-family balance and relationship quality to job commitment among academic staff in Nigerian universities was prompted by the need to job commitment and ultimately employee performance in Nigeria universities, particularly those in the South-West geo-political zone of the country. Employers have consistently complained about half-baked graduates being churned out annually by Nigerian universities. This could be an indication of low job commitment of the academic staff of these institutions. An examination of the factors influencing job commitment among university academic staff could therefore go a long way in proffering solution to the problem. This study established significant combined and individual contributions of work-family balance and relationship quality to the prediction of job commitment among academic staff in public universities in South-West, Nigeria and a significant moderating role of gender in the contribution of work-family balance to job commitment but a non-significant moderating role of gender in the contribution of relationship quality to job commitment among academic staff in public universities in South-West, Nigeria.

Recommendations made in this paper include the following:

1. University authorities should create working environment that promotes optimal work-family balance and interpersonal relationships among the human elements of the university system in order to increase job commitment among academic staff.
2. Universities should disseminate information to their staff through conferences and seminars on how to enhance their work-family balance and relationship quality within and without the various campuses.
3. University personnel and staff welfare departments should facilitate regular trainings for academic staff on how to achieve work-family balance and promote relationship quality, for example, through the establishment of social clubs on campus to which academic staff may belong in order to improve their job commitment.

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Spatial Analysis of School Locations and Decision Making in the Mountains Using GIS Based Data Model: A Case Study of Uttarakhand

Rajlakshmi Datta and Rajeev Shankhwar

ABSTRACT

Mountain regions have some unique features and constraints like accessibility issues, frequent natural hazards both atmospheric and terrestrial, limited suitable location for development of physical infrastructure due to nature of terrains, ecological fragility, tectonic activeness and many more that make them different from plain regions, poses challenges to policy planners and demands separate policy planning measures. The main objective of this research is to build a proper GIS-based data-model that can be used for school location analyses and planning, where all categories from pre-primary to intermediate, government and non-government schools with select characteristics would be available for problem-solving and decision-making in school education and to integrate them with some census variables like density of population, drinking water availability, power supply, availability of primary health centres, availability of community health centres to help in better policy planning in school education like identifying gaps, identifying locations for new schools, identifying vulnerable locations in the study area. The study has been carried out at the Bhatwari Block of Uttarkashi district in the state of Uttarakhand, India.

Keywords : School location analyses, GIS, GPS, Census, Decision support system, Mountain state.

Introduction

The unique features of the Himalayan Mountain regions like frequent terrestrial and atmospheric natural hazards, remoteness, dispersed settlements, problems of accessibility, tectonic activeness, ecological

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fragility and many more make such regions very different from the plain regions and hence poses challenges for policy planners. Education being one of the most important pillars of development, therefore needs special attention to help the mountain community access education, especially school education for the children from every corner of the region. Hence locational distribution of schools and distribution of some specific census variables if linked together implying that if spatial data and non-spatial data are integrated and maps are produced using GIS, it can help policy planners in better policy planning to identify the gaps, identify optimum locations to open new schools and also identify the schools in vulnerable locations.

The application of GIS in school mapping as a term as has been used in educational planning; covers an extensive range of educational planning and management issues and relates to allocation of resources, efficiency in the delivery of services and improving the efficiency of learning. As a tool, school mapping is used to reveal the relationships between the distribution of schools and the distribution of some specific attributes (Baker, 2005, Agarwal & Gupta, 2016). GIS database provides a comprehensive framework and organization of spatial as well as non-spatial data and has become a focused tool to help planning and decision making. Mapping of schools along with the information on the administrative boundary and the biophysical layers such as major road network and major settlements provides the ground reality in terms of geographic coverage (Olubadewo et al 2013) that further helps in policy planning in school education.

As per the Planning Commission (presently NITI Aayog), Government of India, Right to Education (RTE) is a fundamental right of every child. The RTE Act defines the limits of neighbourhood schools as 1 km walking distance from the habitation of a child at the primary level (class 1 to 5) and within 3km walking distance for upper primary level (class 6 to 8). School mapping that is school location analyses using maps helps to provide a centralized pictorial view of the region for the planning process (Bisht and Gairola 2014) and a Himalayan state like Uttarakhand is no exception.

Uttarakhand which is only two decades old was carved out from Uttar Pradesh in 2000 November with the major demands from the hilly regions of the state that development process was not reaching the hilly regions of the then undivided Uttar Pradesh state. The community living in the high altitudes had a long-term demand for a separate state for their well-being (Dhanyaand Datta, 2017). Thus, this new state has a huge responsibility towards its people in providing better education, one of the most important indicators of well-being according to the Human Development Index of the UNDP. Shah and Bell (2011) in their study based on spatial and non-spatial baseline data, demonstrates the improvement in measuring the distance to school

by analyzing the existing inequalities in access and distribution of existing schools, which is useful in identifying the new school sites in rural areas particularly, in scattered settlements. According to a study (Al-Hanbali et al. 2005) school mapping is the art and science of building geospatial databases with relational databases of educational, demographic, social and economic information for schools and educational directorates to support educational planners and decision makers. Another study of Attfield et al (2002) points out that web GIS works as the visualization tool and also help in planning and decision making. It could be used in the infrastructure development and up-gradation of schools by combining several indicators. Many times, it helps the officials when they require support for making the decisions like: is there a requirement of a new school? What should be the location of new school? Is there a proper space for each student in the existing school? A study Agarwal and Gupta (2016) in Jasra block of India first prepares a literacy map, then a school location map, a school catchment map, school population covered map, school gender ratio map, school student-teacher ratio map, school category map, school toilet student ratio map which can help in decision support system.

Khobragade & Kale (2017) give people an idea to choose best school around the area within the range, which is helpful for society to increase the education standard as well as to make appropriate choices accordingly. The concept and development of school mapping was also emphasized in another study (Hite 2008). A case study can be found in the paper (Galabawa et al., 2002) that discussed the impact of school mapping in Tanzania and studied it is after-effects on the education. Another work on school mapping (Govinda 1999) was carried out in the Indian context that helps the decision maker in identifying the new school locations. In their study M. Al-Khuzai & Marwah et al, (2018) show that there are several factors that affect determination of the best location for schools .The factors can be classified as environmental, economic , technical and political and social demands. For determination of the best location on ArcGIS 10.1, they showed an analytic hierarchy process.

Objectives

The present study has been carried out with the following objectives.(i)To collect the GPS coordinates of schools [pre-primary, primary, upper primary, secondary, senior secondary/intermediate) and prepare thematic maps to help in educational decision support system (ii) To integrate select variables [density of population, drinking water, power supply, availability of primary health centres, availability of community health centres] of census 2011 data with school location to help in policy initiative as far as optimum location is concerned.(iii)To identify major gaps in school location , identify optimum locations for schools based on field survey and thematic maps.

Study Area

The district of Uttarkashi which comes in Garhwal Himalayas of the state is the origin of two major rivers of India, the Bhagirathi, and the Yamuna. In this district of Uttarkashi, Bhatwari is the largest block and the route to *Gangotri* and *Gomukh* (the origin of the river Ganges or Bhagirathi). Besides agriculture, the livelihood as ‘*pundits*’ [priests in local language] of *Gangotri shrine* and allied occupation like tourism related livelihood covers the majority of the people of the area. Habitations have settled on both sides of the *Gangotri* main route in Bhatwari block.

As per National Institute of Disaster Management, being on earthquake-prone zone and being damaged by frequent natural disasters, the block has shown some major changes in infrastructure like roads, bridges, banks, agricultural land, animal sheds etc over the years. But even then, as per the census 2011 data, it covers around 25 percent of the total geographical area of the district of Uttarkashi and accommodates around 21 percent of the total households of the district. Since with settlement of human population, for education, schools- both government and private have developed over the years, but census statistics show that the block does not have the maximum share of a number of schools in the district of Uttarkashi though it has the largest area and number of households. Census 2011 statistics reveal that the share is around 18 percent only. This indicates that there is a clear mismatch in population and number of schools in the study area. Moreover, since the human settlement is dispersed in the block, with some villages far off from main district road, it was felt that there is a huge need to study how and where the schools are located and whether the location of schools are optimum in terms of accessibility and other basic amenities. It was also felt that there is a huge need to study the location gaps of various types and categories of schools based on density of population. No study was found to address this issue exclusively in the study area.

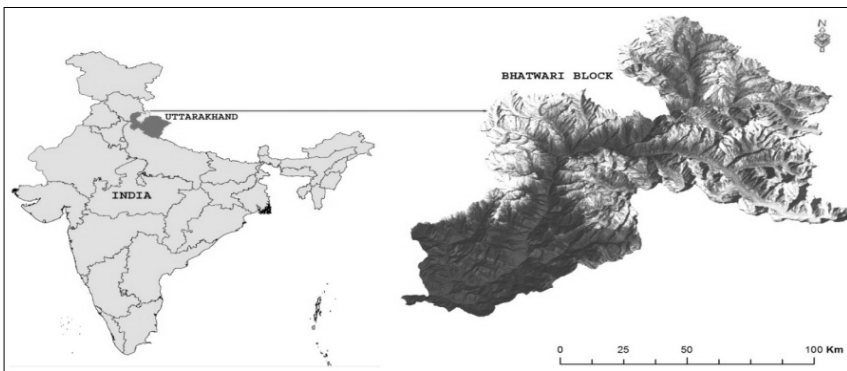


Figure 1: The Study area, Bhatwari Block

As per State Government records, the district of Uttarkashi where Bhatwari block is located was created on February 24, 1960, out of the then parganas [subdivision of a district in India] of Rawain and Uttarkashi of Rawain tehsil (an administrative area) of erstwhile Tehri Garhwal district [during the period of undivided state]. It sprawls in the rugged terrain of the mystic Himalayas over an area of 8016 sq.km. The district is named after its headquarters town Uttarkashi, an ancient place with rich cultural heritage and as the name suggests, this place is the 'Kashi' (the Hindu religious hub of northern India) of the north ('uttara') as against the 'Kashi' of the plains (Varanasi). Both the *Kashis* of the plains as well as of north is situated on the banks of Bhagirathi and Ganga respectively. The area, which is held sacred and known as Uttarkashi, lies between the rivers *Syalam Gad* also known as Varuna and *Kaldi Gad* also known as Asi. Bhatwari block lies between 78°21'8.458"E to 79°24'51.4"E longitude and 30°39'20.208"N to 31°27'22.123"N latitude. Bhatwari Block has a total population of 75,056 as per the last Census of Government of India. Out of the total population, 40,164 are males while 34,892 are females. In 2011 there were total 17,529 families residing in Bhatwari. As per Census 2011 out of the total population, 23.4 percent people live in urban areas while 76.6 percent lives in the rural areas. The average literacy rate in urban areas is 90.4 percent while that in the rural areas is 82.8 percent. The population of Children of age 0-6 years in Bhatwari Block is 8976 which is 12 percent of the total population. There are 4800 male children and 4176 female children between the ages of 0-6 years.

Materials and Methods

Collection of GPS Coordinates (Spatial Data)

School locations GPS Coordinates have been collected through an extensive field survey in Bhatwari block with around 4 to 5 meters GPS accuracy. For the study, school coordinates were further categorized into Pre-Primary, Primary, Upper Primary, Private, Secondary/ High School and Intermediate and converted into point shape file (ESRI, vector format).

Non-Spatial Data

Availability of health centres (PHCs, CHCs), basic amenities like drinking water, power supply, the density of population were extracted from census 2011.

Digital image processing

Cloud free LANDSAT-8 satellite image (path-row 146-39), dated 30-may-2018 was downloaded from USGS website (<https://earthexplorer.usgs.gov/>) and used as a base layer of all decision support maps. To generate block boundary, road network and village locations layers, Toposheet (53 N/1, 53 J/13, 53 J/5, 53 J/6, 53 J/9, 53 1/16, 53 J/10, 53 1/12) at 1:50000 scale was

acquired from survey of India, Dehradun. All toposheets were geo-referenced and then mosaic was done. Toposheets were used to geo-referenced Bhatwari block map acquired from Uttarkashi District Census 2011.

Decision support system mapping

To generate different queries-based map for the educational decision support system. School categories points shape file, road network and village locations layers were merged with non-spatial data and all data were generated in Universal Transverse Mercator (UTM) projection with WGS-84 Datum. To generate final decision support system maps, all queries were divided into five broad categories. I. Location of Pre-Primary, Primary, Upper Primary, Private, Secondary/ High School and Intermediate Schools 0-1 km, 1-2 km, 2-3 km, 3-4 km, 4-5 km from the main road II Availability of Drinking water, Power Supply in the villages where the schools are located. III Availability of Primary Health Centre, Community Health Centre from the place where schools are located. IV. School density against household density in Bhatwari Block V. Pre-Primary, Primary, Upper Primary, Private, Secondary/ High School and Intermediate against density of household in different locations of Bhatwari Block.

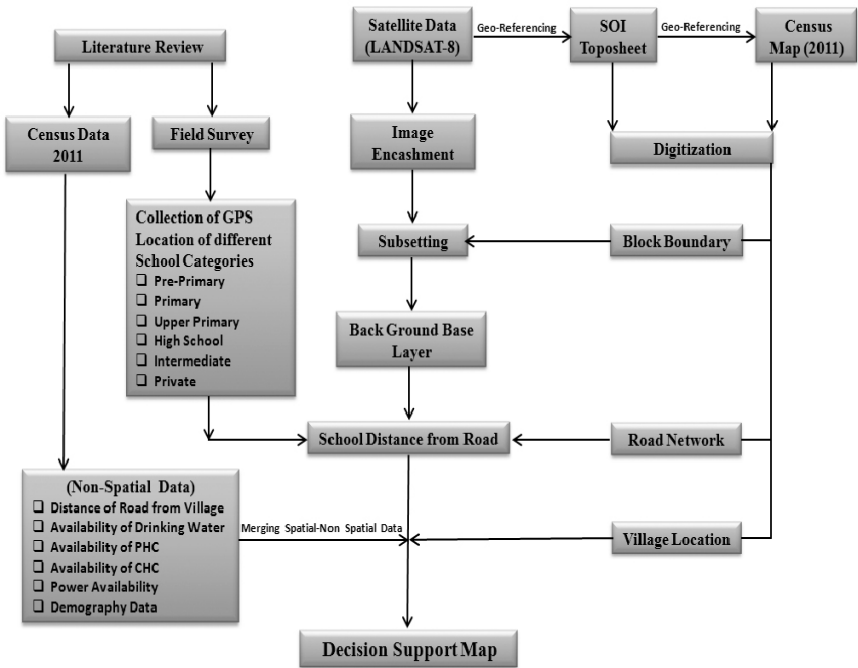


Figure 2: The Flowchart of Methodology

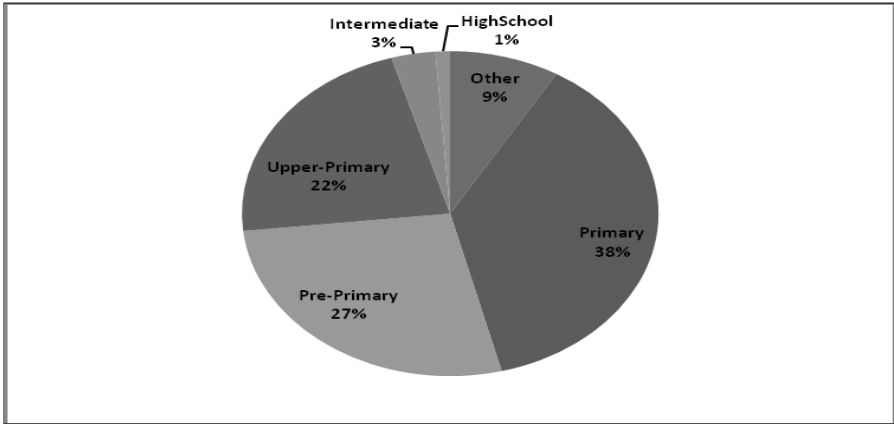


Figure 3: Percentage Distribution of schools in Bhatwari Block

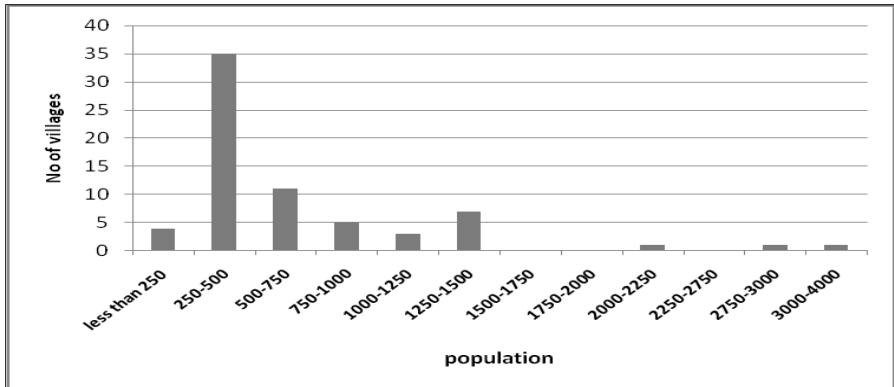


Figure 4: Distribution of villages where schools are located according to population

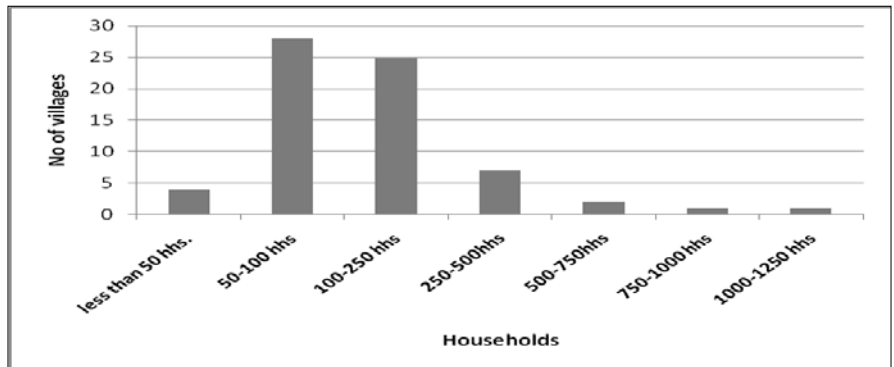


Figure 5: Distribution of the villages in which schools are located according to number of households

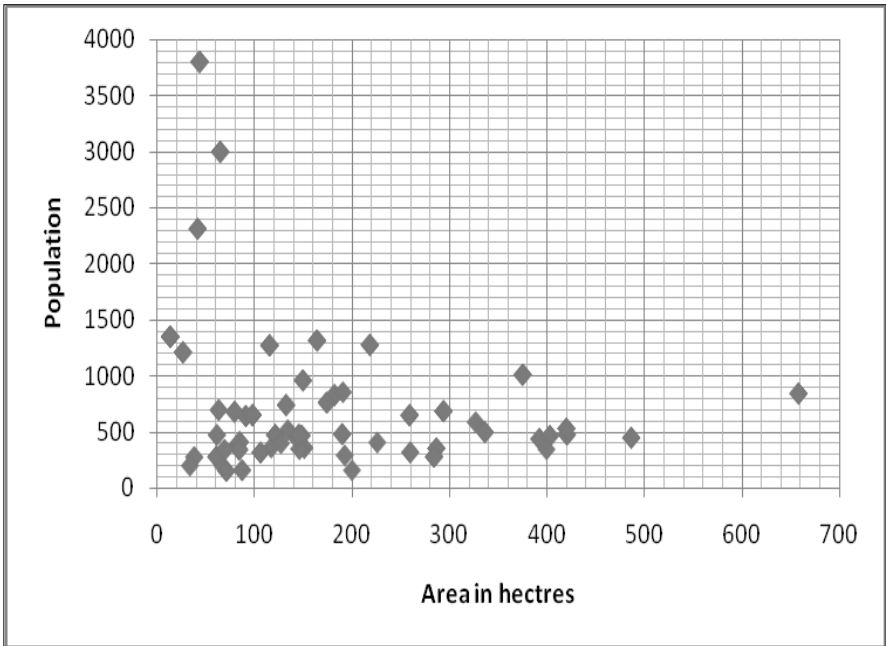


Figure 6: Scatter diagram showing the relation between areas of the villages [in hectares] where schools are located and population

Results and Conclusions

It is evident from Figure 3 that there is the predominance of pre-primary and primary schools in the study area. It is also observed that villages with lesser population range are more in numbers and is evident from Figure 4. Figure 5 shows the distribution of households, and it is observed that most of the villages have number of households in the range 50-100 or 100-250. There is high correlation between villages with the lesser area and smaller population size (Figure 6). This indicates there is a prevalence of small villages having a small population size. This has a significant impact on the decision at policy level for new schools in the area.

Map (merged with spatial and non-spatial data) of pre-primary schools as shown in Figure 7 show that pre-primary schools are located almost throughout the block with some areas which are near to Uttarkashi, the district headquarter, having high density of pre-primary schools. In this category i.e., pre-primary schools, *anganwaris* [rural mother and child care centres in India] are included. It is clear from the map that these pre-primary

schools are not only situated in villages besides the main district road but also off the main road. As far as categorization of location is concerned, as evident (Figure 7) that most of the pre-primary schools are situated between 0-1 km distance from the main roadside

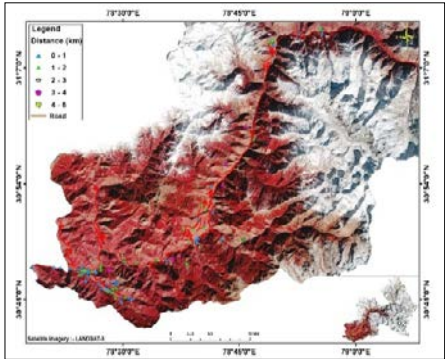


Figure 7: Location of Pre-Primary Schools 0-1 km, 1-2 km, 2-3 km, 3-4 km, 4-5 km from road

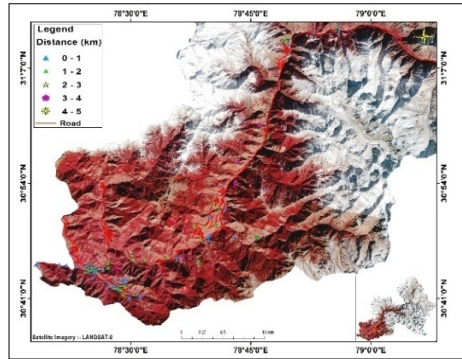


Figure 8: Location of Government Primary schools 0-1 km, 1-2 kms, 2-3 km, 3-4 km, 4-5 km from road.

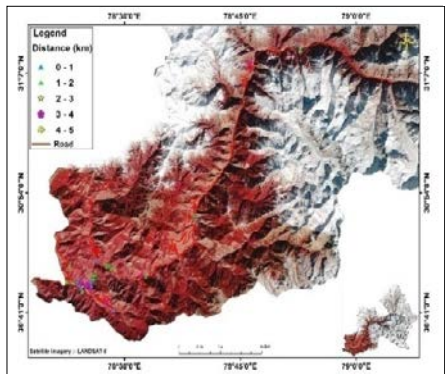


Figure 9: Location of Private Schools 0-1 km, 1-2 kms, 2-3 km, 3-4 km and 4-5 km from main road.

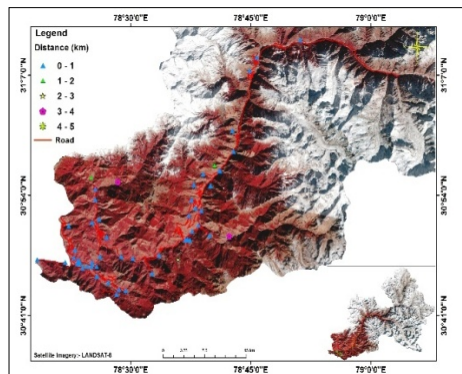


Figure 10: Location of Government Upper Primary School 0-1 km, 1-2 kms, 2-3 km, 3-4 km, 4-5 km from main road

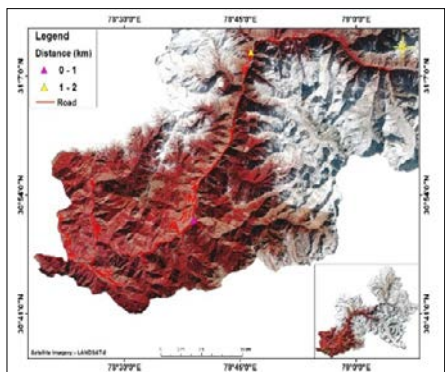


Figure 11: Location of Government High schools within 0-1 km and 1-2 km from main road.

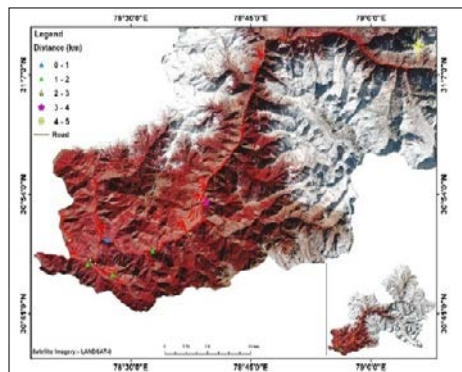


Figure 12: Location of Intermediate School with 0-1 km, 1-2 km, 2-3 km, 3-4 km, 4-5 km of main district road and 1-2 km from main road.

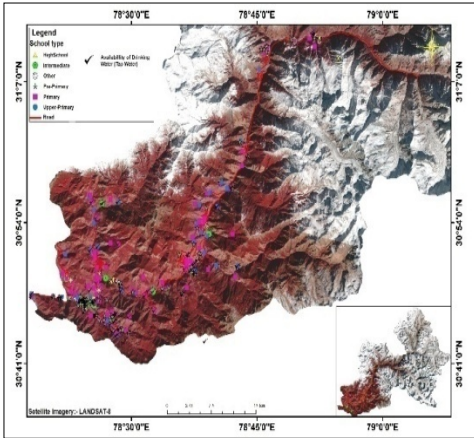


Figure 13: Availability of Drinking water in the villages where the schools are located

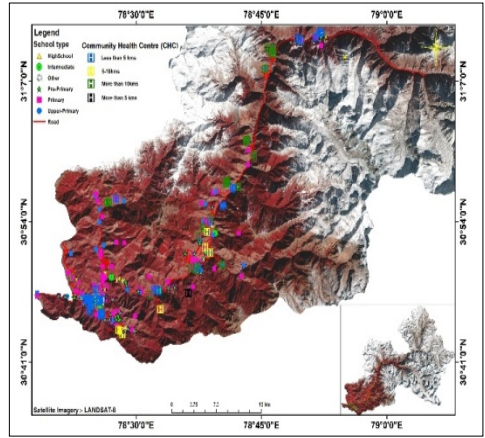


Figure 14: Availability of Community Health Centre from the place where schools are located

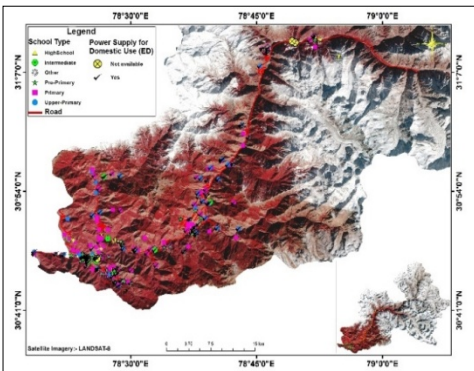


Figure 15: Availability of Power Supply in the villages where Schools are located

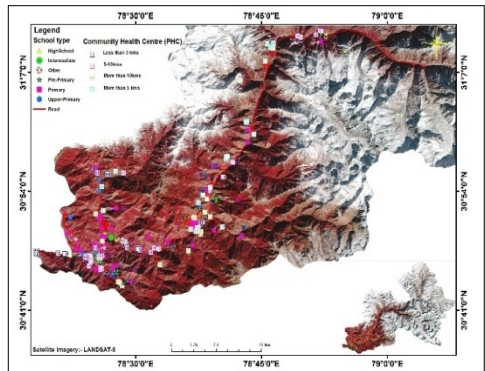


Figure 16: Availability of Primary Health Centre where Schools are located

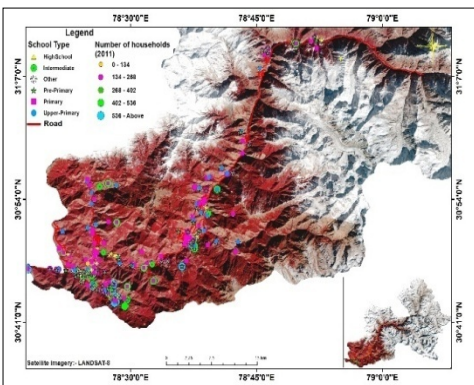


Figure 17: School density against household density in Bhatwari Block

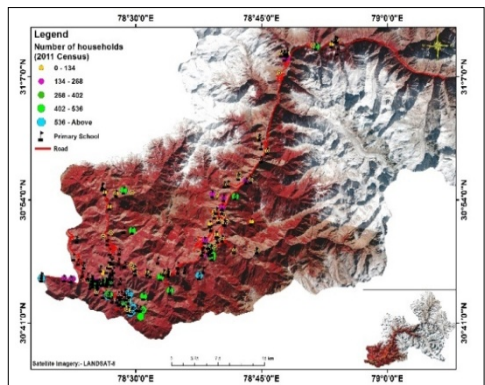


Figure 18: Primary Schools against density of household in different locations of Bhatwari Block

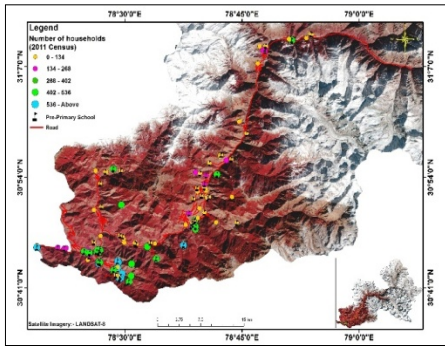


Figure 19: Pre-Primary School against household density in Bhatwari block

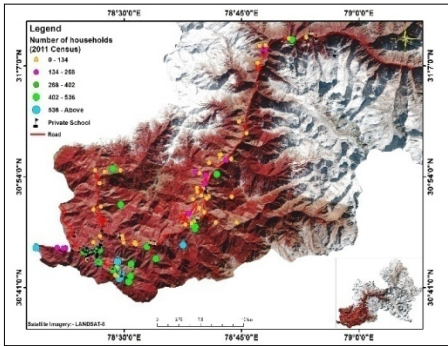


Figure 20: Private Schools in the villages against density of household

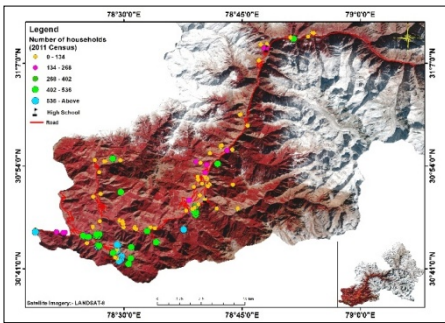


Figure 21: High School against density of household in villages of Bhatwari

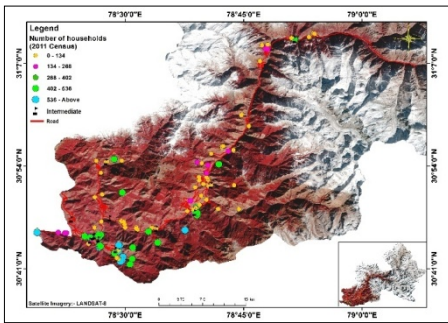


Figure 22: Intermediate Schools against density of household in villages of Bhatwari.

As one moves in higher altitude in the block, the density of concentration of pre-primary school gradually decreases. Figure 8 depicts that primary schools [Government] which are distributed throughout the block of Bhatwari and are situated near the roadside villages as well as villages which are off the road and are not easily accessible. The densities of clusters of primary schools are much more than that of pre-primary schools in the block. As far as the distance from main district road is concerned, some schools are even in the range of 4-5 km but larger part of primary schools are within 0-1 km as evident from the map. The schools which are beyond 4-5 km are large because of the fact that settlements have grown up in those areas which are far off from the main district road. Some of the villages and human settlements are at very high altitudes as was observed during the field survey and evident from the figures. Population in higher altitudes are sparse and dispersed.

The locations of private schools in Bhatwari block show that private schools are mostly situated in or within 1-2 kms of the district headquarter and very near to Uttarkashi town. Only a few dispersed private schools can be found uphill as observed in Figure 9. The private schools which are situated in or

around Uttarkashi town are mostly in the range of either 1 km or 1-2 kms. During field survey, it was observed that the private schools situated in Bhatwari block were mostly either *Saraswati Shishu Mandir* [a nongovernmental educational organization run school] or schools under the aegis of a religious organization e.g Dayara Christian Academy, Bhatwari, Vivekananda Foundation, Ganeshpur, Maharishi Vidya Mandir etc. An important observation noted during field survey was that there is a persistent demand for private English medium schools in the region among the community living there but due to very fewer schools, parents prefer to migrate to the nearest sub urban area for the education of children. Hence there is a great scope for private schools in the study area as the mountain community in the area migrates to semi urban and urban areas largely because of education of their children and their livelihood.

The density of Government upper primary schools are comparatively less and quite dispersed. As one moves upwards towards Gangotri route, the density falls drastically. However as evident from Figure 10, except for a couple of offshoots, most of those schools are in the range of 1-2 km from the main road. Location of Government High Schools [Figure 11] shows very few numbers of schools in the block. However one of the possible reasons may be that through a policy of the state government a few years back, upper primary schools have been merged with secondary schools and intermediate schools. The location of intermediate schools as shown in Figure 12 shows that intermediate schools are located mostly near the main district road, the Gangotri route. The offshoots of schools, as shown in category 3-4 km are either in higher altitude or on the other side of the river Bhagirathi.

Availability of drinking water in the village where schools are located shows that except for a couple of villages, drinking tap water are available in all the villages as evident from Figure 13. These tap waters are from natural sources of water i.e mostly the springs (or the *dhara* as they are called in local language). Figure 14 indicates that significant numbers of the CHCs (Community Health Centers) are more than 10 km from the villages where the schools are located. A few are only in the range of 5 km from the village where schools are located. Availability of power supply [Figure 15] for domestic use is there in all villages except *Jadao* and *Nelang* as reported during the time of field survey. Figure 16 shows the availability of Primary Community Health Centers (PHCs) in the villages where schools are located and the figure indicates that most of the PHCs are located either at a distance of less than 5 kms but more than 1 km or between 5-10 km. However, in villages very near to *Gangotri* the distance of PHCs are more than 10 km.

On integrating the variable of the household population from census 2011 and school location coordinates, Figure 17 was produced. It is found from the figure that largely pre-primary schools are located in villages with household density between 134-266. Also, primary schools are seen in villages with the density of household within 134. During field survey it was observed that the number of household in each village was not very large and hence the lack of schools after primary level and the gap in schools of all categories were observed in villages in higher altitudes like Harshil, Darshali etc. During the field survey the students in the community who were in the villages situated in higher altitudes or off the main Gangotri route reported that they have to leave their villages due to the far distance of secondary and intermediate schools and they have to take rooms on rent and stay at the district headquarter for their study which increases the cost of their education.

Only Government primary schools against the density of household in different locations of Bhatwari block shows clearly in Figure 18 that primary schools are located in villages with household density within 216 and between 216-433. High schools which are very less in numbers lie in those villages where the density of household lie between 0-140 or 140-196 as evident from Figure 20. Intermediate schools lie in villages where the density of household is largely between 200-400, as illustrated in Figure 21.

It is clearly evident from the study that there is lesser scope for school education after primary level in the study area with pre dominance of pre primary and primary schools. As far as secondary, senior secondary schools are concerned, most schools are concentrated near the district headquarter Uttarkashi or are situated in such locations where 4-5 villages have to access the same school. Thus in villages at high altitudes, location of secondary and senior secondary schools acts as a constraint as evident from the maps and from discussion with the community. It was also evident from discussion with some village heads [*pradhans*] that one of the significant causes of out migration is lack of education facilities in the area.

As far as the availability of the selected amenities are concerned, most of the health care centers are more than 10 km or at least more than 5 km from the village where schools are located. Drinking water is available in all the school locations but data regarding water quality were not available from census data. Power supply for domestic use is not a major problem in the block in the villages where schools are located as almost all the villages have the power supply. However it was also observed during the survey that the government schools in some villages had very few students. On enquiry it was found that out migration from the villages are so high that in most villages the number of households and population as obtained from census

are in present situation overestimates, as many households are locked for years.

Schools may be expanded in some identified locations as evident in the study from the gaps in schools in terms of geographical location. A few schools may be merged to help in retaining the education standards with a minimum number of teachers and students. For optimum location it is evident that schools which are near the main road will have an advantage in transportation system and therefore students from a few villages can study in one school. However for pre primary and primary level, schools need to be located in each of the villages in conformity with RTE provision of neighbourhood schools and the study area fulfills the criterion significantly. Optimum location of schools can be identified as those locations which have easy accessibility like near to the main road to Gangotri, lesser effect of terrestrial natural hazards and covers denser settlements. However given the nature of settlements in the region for more inclusive school education there is need for secondary and senior secondary schools near villages even with less density of population at high altitudes as evident in the study. This may control out migration for education to some extent. To conclude this study on location analyses of schools has clearly identified the gaps in schools, the constraints, the optimum locations for secondary and higher secondary schools along with availability of some basic amenities which will be helpful to the policy planners as a base study for further development of schools in the region.

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What's Up and What's Down: The Use of Whatsapp and its Influence on Family, Friends and Relations

-Richard Rego

ABSTRACT

Human beings are defined by their social relationships, which play a vital role in social affiliations such as family and friends' groups. The advent of social media, like the messaging application WhatsApp, has redefined these social relationships. Scholars have debated the effects of using WhatsApp on human interactions in their social affiliations. This research examined how the use of WhatsApp application affected social relationships among friends and family members. This research article employs quantitative methods to examine the dynamics between the use of WhatsApp application and its implications on social relationships, and discusses the findings within the Uses and Gratifications Theory framework. The research throws up some useful insights into the users' reasons for using WhatsApp and how it affected their relationships with families and friends. A significant percentage of WhatsApp users reported a positive change in their relationships.

Keywords: WhatsApp, Facebook, social media, friends and family relationships, Uses and Gratifications Theory

Introduction

The year 2019 marked a decade of the instant messaging (IM) application (App, for short) WhatsApp. From its small beginnings in 2009 as an alternative to the text-based mobile SMS, to its role as the third most downloaded social networking application (99firms 2019) ten years later, the social networking Application has positioned itself as an integral part of human life and communication. This technological mediation has influenced the way human beings encounter each other, and has affected human relations in ways unknown hitherto.

In January 2021, WhatsApp announced a new privacy policy and the way it intended to use the user data from 08 February 2021. If the users did not

accept the changed policy, the users' accounts would be suspended. The updated policy posted on its blog and then shared on its Twitter handle, created confusion and sharp reactions among the WhatsApp users. Though in its successive posts and tweets, the IM App tried to clarify that the users' privacy was not compromised with and that the company would not 'No one will have their account suspended or deleted on Feb 8 and we'll be moving back our business plans until after May' (WhatsApp, 2021), millions of users had already left IM App and had started using alternate IM Apps like Signal and Telegram, which promised better privacy.

Prior to that, the IM App had two billion monthly active users (Statista, 2021) and was second only to the Facebook users, which had 2.7 billion monthly active users (Iqbal, 2021). WhatsApp users across the world sent 100 billion messages everyday (i.e. equalling 69 million messages every minute), and spent 2 billion minutes communicating on voice and video calls per day (Iqbal, 2021). India is the biggest market for this smartphone App, with an estimated 340 million users at the end of January 2019 (Statista, 2019). In India, 82 percent of all Indian internet users use WhatsApp, signifying the prevalence and an extensive use of the mobile App (Iqbal, 2021). The inroads WhatsApp has made in the human communication landscape is underlined by the fact that an average user of this App checks it more than 23 times a day (99 firms, 2019).

The IM App was also used to make about 1.4 billion voice and video calls on the New Year's Eve on 2021 (Malhotra, 2021), which points to its popularity. These user statistics and the reactions following the updated policy in January 2021 by the IM App are a few of the indicators to the role the IM App WhatsApp has played in people's lives.

Such a degree of integration of technologies in the ecology of human communication system has given rise to varied debates. While some see it as threatening 'the sanctity of our personal relationship', others see newer avenues opening up in this integration for 'connection with more people, a route to new opportunities and to stronger relationships and more diverse connection' (Baym, 2015, p.1).

The use of smartphones and smartphone-based Apps point to newer discourses in human communication. The communication behavior is part of a larger communication landscape of computer-mediated communication (CMC). Scholars, as will be seen in the review of literature, have focused attention on this socio-communication phenomenon. Within the larger context of CMC, smartphones have opened up our emotional horizons to mobile-mediated communication (MMC). MMC has integrated within itself certain CMC technologies and applications such Facebook, Twitter, and Messenger. Besides, as Xu and others (2019) point out, MMC has some added features

because of the Smartphone-specific applications like Snapchat, Instagram, and WhatsApp. This distinct nature of MMC is succinctly summed up by Nouwens, Friggio, and Mackay (2017, p. 730). The mediated communication landscape has expanded significantly over the past decade, from a handful of distinct forms of communication (phone calls, email, texts) to hundreds of communication apps.' Today, with smartphones combined with internet mediating much of the human communication, smartphone based applications have altered the way people consume information, spend their time, contact people, relate to their friends and family, and the way they live.

In the backdrop of the omnipresence of WhatsApp application, and the interest it has generated both among its users and scholars, this research investigates if and how this mediatory phenomenon has influenced the users' relationships with their friends and families.

Review of Literature

Communication phenomenon attained mass proportions with the intervention of mediated technologies, especially computer aided technologies which have been a topic of constant interrogation among many scholars (Klapper, 1960; McQuail, Blumler & Brown, 1972; Rubin, 1981; Bryant & Zillman, 1984; Chamberlain, 1994; McIlwraith, 1998; Leung & Wei, 2000; Rubin & Step, 2000; Dimmick, Chen, & Li, 2004). In their seminal study on uses and gratifications, Katz, Gurevitch and Haas (1973) listed cognitive, affective, personal integrative, social integrative, and tension release needs as gratifications sought by users of mass media, while a later study by Rainie and Wellman (2012) showed how relationships among individuals and communities of people are transformed by social networking.

Since the advent of internet-based communication technologies, and with it the evolution of SN applications, scholars have examined the newer communication landscapes at the turn of the century and in the early part of the 21st century (Kargaonkar & Wolin, 1999, LaRose & Eastin, 2004, Ellison, Steinfield, & Lampe, 2007; Burke, Marlow, & Lento, 2009; Correa, Hinsley, & de Zuniga, 2010, Dunne, Lawlor, & Rowley, 2010, Kushin & Yamamoto, 2010, Liu, Cheung, & Lee, 2010).

Internet & Smartphone

Nancy Baym (2015) underscored that the way we encounter other humans has been transformed by digital technologies. She asserted that the internet has enabled us to have a more specialised but intermittent contacts with more people (ibid.). Walther's (1996) research on the trends of media histories showed that the media-assisted communication sometimes even surpassed

the levels of interpersonal communication. Citing this study, Baym (2015) concluded to be online is a way of looking attractive.

In the last decade, internet-based applications have come to reside in mobile phones, making distant communication accessible at our finger-tips.

Studies like Akinlosotu (2016), Aharony and Gazit (2016) and Gazit and Aharony (2018), which examined the uses of WhatsApp among students and families, revealed that social as well as psychological factors played a significant role in such network. These studies highlighted the age, openness, the level of groups' importance, the groups' importance, as well as gratifications like cognitive, affective, social integrative, and tension release needs played a significant role in the participation of WhatsApp communication.

In the use of social media or new communication technologies like smart phones, users derive gratifications like social recognition and affection, need to deal with negative feelings and a need for recognition. Findings have shown the gratifications sought by users varied from fashion, inclusion, escape, entertainment, to cognitive needs Leung, 2013; 2001; Leung & Wei, 2000). A study of Facebook groups by Namsu Park, Kerk Kee & Sebastian Valenzuela (2009) revealed similar reasons for use. Wang, Tchernev & Solloway (2012) examined the dynamics of social media communication, especially the Facebook, and found that the use of social media is driven by emotional, cognitive, social and habitual needs, though not all of them satisfied.

Leung's (2001) study on college students' use of ICQ (I Seek You) chatting application revealed similar gratifications sought by the users. The study concluded that the instrumental reasons for the use of ICQ included 'relaxation, entertainment and fashion' and among the intrinsic reasons for the use of the application were 'inclusion, affection, sociability and escape' (496).

WhatsApp

Karapanos, Teixeira & Gouveia (2016) studied the comparative need fulfilment of two of the most used SN applications-Facebook and WhatsApp. They found in WhatsApp's restricted environment, its users 'experienced a sense of heightened sense of presence in the communication, due to their building of anticipation as they waited for the other party's response... The application's other features like *smileys*, images, and voice memos added to the ability of users 'to express their emotions and experiences through.

The encounter of mobile phones with the internet and social networks, or the 'triple revolution' as termed by Rainee and Wellman (2012) has brought about transformation in the rise of networking, empowered individuals'

capacity through the Internet, and connected people through the 'always-on' mobiles devices. The encounter has also helped expand the, otherwise, loose circle of 'networked individualism' as termed by the authors.

These studies apart, there has been a paucity of literature on the role and influence of WhatsApp in social relations among friends and in families, especially given the magnitude of the number of active users connected through the application. The App has had significant influence on the way human beings relate and communicate, but studies dealing with its affordances, and especially the way the use of WhatsApp affects social relationships and human bonds, are far from sufficient.

Research Question

- 1) What reasons motivate people's engagement with WhatsApp?
- 2) What are the factors affecting their use of the application?
- 3) How does the use of WhatsApp affect the users' relationship with their friends and families?

Theoretical Framework

Within the framework of uses and gratifications (U&G) theory, this research examines the reasons why respondents use WhatsApp, and how does it affect their social relations. The U&G theory lists a varied set of gratifications derived by users of any media, based on which this research examines the motivations for which they use WhatsApp, and how it affects their social relationships.

Method

Employing sample survey and a structured questionnaire, data was collected for eliciting information on the WhatsApp users, the extent of WhatsApp use and reasons for its use. Since the population of the study was the entire State of Karnataka, multistage sampling procedures have been adopted. The individual respondents were, however, selected purposively.

The questionnaire was constructed to elicit responses on the respondents' demographics, their use of WhatsApp, and its effects on the relationship with their family and friends circle.

Officially, the 30 districts of Karnataka are organised into four administrative divisions: Kalaburgi division in the North East and Belagavi in the North-West; and Bengaluru division in the South-East and Mysuru in the South-West of Karnataka (Rego, 2017), fifteen of the 30 districts were selected through purposive sampling from these four divisions: Bidar, Raichur and Kalaburgi from Kalaburgi Division, Bengaluru Urban, Bengaluru Rural,

Ramanagara, and Davanagere from Bengaluru, Vijayapura, Uttara Kannada, Dharward, Haveri from Belagavi, and Mysuru, Hassana, Dakshina Kannada, and Mandya from Mysuru division.

The sample was selected to represent the geographical, social, infrastructural-economic, and educational diversities of Karnataka. The southern part of Karnataka has progressed much more on economic and educational indicators compared to the northern. Bengaluru, in the South, is well-known for its information technology industry, and other economic and industrial development. Similarly, Mangaluru in the South-West Coastal region is home to many a well-known school, college, and university of the state and the country. A consistent high percentage of results in examinations and pass percentages as determined by the authorised education boards at the national and state levels, and regular inflow of national and international students to these parts of Karnataka bear testimony to this claim (Rego, 2017) as against the Eastern or the Northern parts of Karnataka. The individual respondents were selected through purposive sampling. While young respondents were selected from schools and colleges, and a proportionate number of adults were contacted through these young respondents, teachers, and social workers in touch with communities. The survey questionnaire was administered to the participants in person, and in Kannada language (medium of instruction in most cases, predominantly in rural areas) and in English.

Sample description

Among the 923 respondents, 222 respondents were from Kalaburgi, 315 from Bengaluru, 111 from Belagavi, and 275 from Mysuru divisions. Larger populations and better development parameters, including communications infrastructure, justify the over-sampling of districts from Bengaluru and Mysuru divisions.

Traditional developmental indicators show that 374 respondents hail from urban Karnataka, whereas 549 ($M=59.47$) from rural and semi-urban settings. Of these, 490 ($M=53.1$) respondents were men and 433 ($M=46.9$) women. Of the entire sample, 415 males ($M=44.96$; $M=84.69$ of the male segment), and 379 women ($M=41.06$ of the total, and $M=87.52$ of all women) used WhatsApp.

Hereon, the analysis deals with only the WhatsApp using sample ($N=794$)ⁱ since the study pertains to the use of WhatsApp and its influence.

Analysis

Among the users of WhatsApp, there is a significant relationship between their age and the use of WhatsApp as revealed by *t*-test with $p < .05$ ($N=794$;

$\bar{x}=27.745;SD=11.742;t=66.583; df=793; p=.000$)ⁱⁱ. The heavy users typically tend to be younger compared to seniors.

Duration & Employment

Table 1 shows that relatively a sizeable number of employed (N=101; 37.1%) and the combined category of retired/unemployed (N=17; M=37.77) spent 30-60 minutes/day on WhatsApp, against 62 (M=14.65) students who formed the biggest block of users to spend more than three hours/day; a small number of employed (N=21; M=6.85) spent over three hours a day. Table 2 relates user-demographics with the time they spend on WhatsApp. While sex and education of the users did not affect their time-duration on WhatsApp, their employment status did affect the duration of their use of application. The relationship between the two is significant at $p \leq .05$ ($\chi^2=29.729; df=12; p=.003$).

Reasons for use

Descriptive statisticsⁱⁱⁱ indicate the gratifications users seek in using WhatsApp: 429 (M=54.03) respondents use it to connect with friends, 337 (M=42.44) to get information updates, and a significantly small number (N=134, M=16.87) use the application to connect with their families. A small number (N=89; M=11.20) use it to pass time, a still smaller number (N=31; M=3.90) use it because others also use it, and the smallest number (N=22; M=2.77) use it for unspecified reasons.

As shown in Table 3, sex and education of the users were tested against their reasons for the use of WhatsApp: while 56 (M=41.8) men used it to get updates (connect with) about their families, 78 (M=58.2) women used it for the same reason. Sex of the users is significant relative to the use of WhatsApp to connect with their families, at $p < .05$ ($\chi^2=7.091; df=1; p=.008$). Similarly, while 22 men (M=71) used it because 'others use' it, fewer women (N=9; M=29) use it for the reason. Relation between the two variables is significant at $p < .05$ (d) $\chi^2=4.522; df=1; p=.033$). Other variables did not have a significant relationship with sex variable.

Educational qualification was paired with their purpose of using the application (Table 3): 429 users used WhatsApp to connect with friends, most of whom were those with Under Graduate education N=182; M=42.4). The relationship is significant since $p < .05$ ($\chi^2=8.535; df=3; p=.036$). Likewise, 337 respondents used the Application for news and information. Of these 166 (M=49.3) are Under Graduates. The relationship between education level in seeking information is significant at $p < .05$ ($\chi^2=15.649; df=3; p=.001$).

In Table 4, employment status of the users was paired with their reasons for using WhatsApp. Of the 337 respondents using WhatsApp for news and information purposes, relatively a large number of students (N=184; M=54.6), followed by those students below PUC (N=124, M=36.8) used WhatsApp, while the least number of those who used it for the same purpose were the combined group of retired and unemployed (N=13; M=3.9) people. The relationship between the two variables is significant with $p < .05$ ($\chi^2=17.940$; $df=3$; $p=.000$). Similarly, a total of 134 users used the application to get family updates. Of these were Under Graduate (N=66, M=49.3) and users with less than PUC education (N=41, M=30.6), while 5 (M=3.7) users were in the retired/ unemployed category. The relationship is significant at $p < .007$ ($\chi^2=12.193$; $df=3$; $p=.007$).

WhatsApp Groups

Forming groups of people related/connected to similar interests is a common practice in social networking communications. While 519 (M=65.36) users were members of family groups on WhatsApp, 668 (M=84.12) were members of friends' groups, indicating a communication tendency in favour of friends^{iv}.

Effect on time

Descriptive statistics^v reveal if the use of WhatsApp had affected the time they spent with their families as well as friends; similarly, it also suggests if the use of WhatsApp has affected their relationship with families and friends, and in which direction. While 462 (M=58.2) users' time spent with families was not affected, 136 (M=17.12) felt it was positively affected (increased). Similarly, 345 (M=43.45) users' time with their friends was not affected, and 290 (M=36.52) users' time with their friends had increased.

Effects on relations

A majority (N=433; M=54.53) of the users said their relationship with their families had not been affected, and 308 (M=38.79) said their family relationship had been strengthened; a small number (N=53; M=6.67) said their relationship with their families was negatively affected. In comparison 398 (M=50.12) felt their relationship with their friends was positively affected, and only 48 (M=6.04) said their relationship with their friends was negatively affected^{vi}.

Demographics & Effect

Men's use of WhatsApp affected the time they spent with their families: 121 (M=61.73) reported that the time spent with their families had reduced, against this, 71 women (M=52.20) spent an increased time with their families, with almost similar number of men and women reporting a no-change (men:

N=229, M=49.56; women: N=233, M=50.43). The relationship between the two variables is significant at $p < .05$ ($\chi^2=9.483$; $df=2$; $p=.009$). But there was not significant relationship between sex and time spent with friends.

Geography and time

Geography variable was matched with the duration of their WhatsApp use to see the possible effects on their time and relationship with their families and friends. In both the rural and urban cases, more users said that their time had reduced due to their use of WhatsApp (Rural: N=113, M=25.11; Urban: N=83, M=24.12) than who reported an increase (Rural: N=90, M=20; Urban: N=46, M=13.37) in time. But the largest number, both among rural and urban users (Rural: N=247, M=54.88 and Urban: N=215, M=62.5) said their time with families was unaffected. The relation is significant with $p < .05$ ($\chi^2=7.018$; $df=2$; $p=.03$). Chi-square test suggests the time users spent with their friends was also affected by the use of the mobile application. While urban users showed little change as against the overall trend, rural users reported a positively significant change (N=205, M=45.55). The relationship is significant with $p < .05$ ($\chi^2=38.228$; $df=2$; $p=.000$).

Geography and relation

Use of WhatsApp as a variable did not indicate much influence on their relationship with friends and families on urban and rural users, except in one instance: geography seemed to have some influence on family relations of the users. 149 (M=43.31) urban and 159 (M=35.33) rural users reported an improvement in their relationship with family, and a larger percentage of rural users (N=450; M=58.88) were unaffected than the urban users (N=168; 48.83%). With $\chi^2=8.066$, $df=3$, $p=.018$, the relationship was significant.

Discussion

The primary purpose of this study was to investigate the effects of the use of the social networking application WhatsApp on the relationship of users with their families and friends. Drawing on the assumptions of the uses and gratifications theory and analysis from this survey data, this research also tried to examine the research questions why do respondents use WhatsApp and what gratifications do they seek in using the application.

The use of WhatsApp is a common phenomenon among most smartphone owners, though there are a few, who for varied reasons don't use the applications. During the process of data collection, it was noticed that some of those who did not use WhatsApp did not own a smartphone, which supports such networking applications. In some instances, especially in rural Karnataka, connectivity was poor. In a few cases, low literacy rate was a reason for not using the application, though some use Kannada language for

communication on WhatsApp. Sex, as an independent variable, did not have much influence on the respondents' use or non-use of the application.

Statistics show that age is a significant factor in the use of WhatsApp. Though the average age of respondents in this study was 27.745 years, meaning typically, people in their twenties (more likely, university students) tend to use WhatsApp more, and more often, it also need to be kept in mind that the student population was over-represented in this study; hence age as an independent variable needs to be reconsidered. People below higher secondary stage or those in the retired category are less likely to use the application, a finding in variance with Matassi, Boczkowski, and Mitechelstein (2019) in the Argentinian context.

Students are more likely to use the application, mainly because they tend to widen their circle of friends and acquaintances, and tend to create chat/join groups. This is true also of the employed. Those not working or retired use WhatsApp much less compared to the employed or those more active in life, possibly because they may not be in type of networking connections and requirements the other categories of respondents find themselves in.

As already pointed out, age of the user and the time they spend on the chat application is significant. These finding points to the active phases of life of the users are in. People tend to be comparatively more active in their twenties through forties in the communication landscape either because of their wide network of contacts and formal requirements.

WhatsApp is a major mediatory tool between friends' networks; people, especially youngsters, connect via the social networking applications, and WhatsApp has been a major tool of communication for a large number ($M=54.03$), whereas it is not used to connect families or get family updates. In rural India, where people stay together in families, people do not need mediated communication as much; instead, their communication tends to be primarily face-to-face.

A significant assertion in this study is the role of the sex variable in the type of gratifications they seek from WhatsApp use: more women ($M=58.1$) use it to connect with families than men ($M=41.8$). This is consistent with other studies which emphasise that women communicate more in degrees, if not differently, than do men (Jackson et al., 2001; Dindia, 2009). Another sex difference observed in WhatsApp use is social integrative gratification: More men ($M=71$) men used WhatsApp because 'others use' against women ($M=29$) women. Social status and recognition are important determinants in WhatsApp communication. And more men tend opt for status, to be seen, not to be left out of the crowd, and be seen like others, as discussed above.

WhatsApp groups are an integral part of social networking, as indicated by the findings. Majority of WhatsApp users are members of friends and family groups, but their affiliation to friends' groups outweighs their membership in family groups. These groups serve more to connect users with friends than with their families. Typically, people with under graduate level education tend to be more engaged in WhatsApp group communication. The main reason they communicate is to get news and information of a variety of kinds, a finding consistent with Papacharissi & Rubin (2000).

A significant majority of the users feel their use of WhatsApp has not affected either the time they spend with their friends and families. Since affordances of WhatsApp fit into the overall ecosystem of human communication, it is possible to feel that the use of the application has not negatively affected their time with friends and family, as also seen in the study by Chan, Yong and Harnizi (2020). In fact, the users to construct their mediated time with friends and families as actual time spent with them, though the study clearly distinguished their immediate time and relations from mediated ones. Against this finding, more people reported that the time they spend with their families has increased rather than reduced. Similarly, almost double the number feels that their time with friends has increased.

A major question asked by communication scholars in this mediated communication landscape is how are non-mediated relationships affected (Kietzmann et al., 2011; Baym, 2015). Many WhatsApp users reported that their relationships are not affected due to WhatsApp use. Instead, they feel that their WhatsApp use has strengthened their family relationships, against a very small number who feel the opposite. But the biggest affirmation of the effect of WhatsApp use was regarding their relationship with their friends: a majority of them felt their relationship with their friends had been positively affected.

There appears a variation in how users feel about their time spent across geographies: overall, the use of WhatsApp seems to negatively affect the time they spend with friends in-person in urban areas. But more rural users feel relationship with their families has improved than the fewer urban users who feel the same.

Use of WhatsApp does not aid men's investment in actual social time and relationship with families, especially in rural areas, compared to that of women's, that is, women feel their relationship with families have improved.

Gratifications

This study examined the gratifications users sought, and the effects of WhatsApp use on their relationships with family and friends. For this, it

investigated their usage pattern, reasons for using WhatsApp, and how it affected their relationships.

Considering Katz, Blumler & Gurevitch's (1974) typology of gratifications, this study points to certain gratifications the respondents seek, when tested against the employment status of the users: personal and social integrative gratifications as marked by their reasons for using WhatsApp, connecting with friends and getting updates from family. Similarly, it also points to the cognitive gratification in them seeking information and news, a gratification emphasised by Papacharissi & Rubin (2000) for users turning to Internet.

The study points to the affective and social integrative gratifications sought by the users in getting updates about their families (both affective and social integrative) and using the application because others use (social integrative), thus trying to integrate oneself with the current fads.

In using WhatsApp to connect with friends, the users gratify social integrative needs, and in using it for news and information, they gratify their cognitive needs.

This study investigates how seeking these gratifications affects primary relationships in society, with friends and family. It is concluded that the use of WhatsApp does not affect relationships in majorly negative way. Whatever effect it has on family relationship is more positive than negative. It points to a possibility of transformation of primary relationships from offline to online. Similar findings were noted regarding the time invested by users with their friends –time spent online merges with the time spent offline, and users feel that the time they spend with friends has increased.

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- i. Hereon, tables are only for the WhatsApp using sample (N=794)
- ii. Table not included.
- iii. Table not included.
- iv. Table not included.
- v. Table not included.
- vi. Table not included.

List of Tables

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Please insert Table no. 1 from his orginal paper

Table 2: Time spent on using WhatsApp * sex, education, employment

Time spent on using WhatsApp by sex, education, and employment

Sex			Total	Qualification					Employment				
Time	M	F		>PUC	UG	PG+	Others	Total	Employ	Study	Retired No job	Home make	Total
>30 Min.	77	58	135	43	58	29	5	135	63	52	8	12	135
30-60 Min	144	129	273	84	107	74	8	273	101	132	17	23	273
1-2 Hrs	86	88	174	37	85	46	6	174	50	102	10	12	174
2-3 Hrs	59	61	120	28	67	23	2	120	30	75	6	9	120
<3 Hrs	49	43	92	24	47	19	2	92	21	62	4	5	92
Total	415	379	794	216	364	191	23	794	265	423	45	61	794
x2=2.318; df=4; p=.677				x2=16.445; df=12; p=.172					x2=29.729; df=12; p=.003				

Table 3: Gratifications sought paired with Sex & Education

Purpose to -	M (%)	F(%)	<PUC (%)	UG (%)	PG+ (%)	Other (%)	Total (%)
a) Connect friends	229 (53.4)	200 (46.6)	119 (27.7)	182 (42.4)	107(24.9)	21 (4.9)	429 (100)
b) Info/ news	173 (51.3)	164 (48.7)	76 (22.6)	166(49.3)	88 (26.1)	7 (2.1)	337 (100)
c) Family updates	56 (41.8)	78 (58.2)	25 (18.7)	69 (51.5)	38 (28.4)	2 (1.5)	134 (100)
d) Since others use	22 (71)	9 (29)	14 (45.2)	13 (41.9)	4 (12.9)	0 (0.0)	31 (100)
e) Time-pass	49 (55.1)	40 (44.9)	20 (22.5)	43 (48.3)	26 (29.2)	0 (0.0)	89 (100)
f) Other reasons	13 (59.1)	9 (40.9)	3 (13.6)	12 (54.5)	7 (31.8)	0 (0.0)	22 (100)
a) $\chi^2=.463$; $df=1$; $p=.496$	b) $\chi^2=.204$; $df=1$; $p=.652$		a) $\chi^2=15.649$; $df=3$; $p=.001$			b) $\chi^2=8.535$; $df=3$; $p=.036$	
c) $\chi^2=7.091$; $df=1$; $p=.008$	d) $\chi^2=4.522$; $df=1$; $p=.033$		c) $\chi^2=7.789$; $df=3$; $p=.051$			d) $\chi^2=6.534$; $df=3$; $p=.088$	
e) $\chi^2=.313$; $df=1$; $p=.576$	f) $\chi^2=.422$; $df=1$; $p=.516$		e) $\chi^2=4.971$; $df=3$; $p=.174$			f) $\chi^2=3.127$; $df=3$; $p=.372$	

Table 4: Employment status * Gratifications sought use

Purpose	Employed (%)	Studying (%)	Retired/ Unemployed (%)	Home-makers (%)	Total (%)
a) Connect friends	141 (32.9)	240 (55.9)	21 (4.9)	27 (6.3)	429 (100)
b) Info / news	124 (36.8)	184 (54.6)	13 (3.9)	16 (4.7)	337 (100)
c) Family updates	41 (30.6)	66 (49.3)	5 (3.7)	22 (16.4)	134 (100)
d) Since others use	6 (19.4)	17 (54.8)	4 (12.9)	4 (12.9)	31 (100)
e) Time-pass	29 (32.6)	48 (53.9)	4 (4.5)	8 (9.0)	89 (100)
f) Other reasons	6 (27.3)	14 (63.6)	1 (4.5)	1 (4.5)	22 (100)
a) $\chi^2=4.646$; $df=3$; $p=.200$	b) $\chi^2=12.193$; $df=3$; $p=.007$	c) $\chi^2=17.940$; $df=3$; $p=.000$	d) $\chi^2=6.039$; $df=3$; $p=.11$	e) $\chi^2=.493$; $df=3$; $p=.920$	f) $\chi^2=1.049$; $df=3$; $p=.789$

Relationship of Public Prosecutor with Victim of Crime

Pankaj Deep Kaur & Chanderkana Negi Bisht

ABSTRACT

It is well established fact that the concept of crime is a changing phenomenon. The very definition and the concept of crime varies not only according to values of a particular ground and society or ideals, faith, customs, traditions, but also according to the form of government, political and economic structure of society and host of other factors. A victim is someone who has suffered because of someone else's action or because of unpleasant circumstances. He is a person who suffers from a destructive or injurious action by someone. Victim, as, an individual, suffers direct physical, emotional or economic harm. Today, s victim is not just a victim of crime but can also be a victim of the apathy of the criminal justice system. Victim is a person who has suffered any loss or injury caused by reason of the act or omission for which the accused person has been charged and the expression victim includes his or her guardian or legal heir¹. Victims are those innocent persons who suffer because of sins of other people. The crime victims today are afforded broad legal protections. These protections include: a right to be treated fairly and with the dignity, a right to be protected from the accused and a right to be present at court proceedings.

Keywords: Public Prosecutor, Relationship, Crime, Victim

Introduction

Article 14, 21, Directive Principles of State Policy mentioned in Article 39A, 41, 46 and 51C contains the provisions relating to victim's rights. The Code of Criminal Procedure identifies some rights for victims. For e.g., the Code grants a right to victim to choose his own private lawyer, but authority of lawyer is very limited. Section 357 (3), of Cr PC, the court has right to grant compensation for any loss or injury suffered by victim. But in *Harikrishan v/s Sukhbir Singh*, it was held that section 357 is rarely used by our courts. The victim has no role in the trial except giving evidence. In *Thakur Ram v/s State of Bihar*, it was held that a private party has no locus standi on a case

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which has been proceeded on a police report. Victim has no active participation during the investigation. Moreover, these protections are not self-executing; their enforcement requires the involvement and cooperation of the Public Prosecutor. Ours is a constitutional democracy. It is based on certain inviolable concepts, which extend to every field of law operating in the country. Every action of the state has to be based on the rule of law and the touchstone of constitutional principles. The prosecution forms a part of large criminal justice machinery and basis itself on the concept of “welfare State”, or “Protector State”. The Public Prosecutor has a vital role to play in criminal proceedings and his sincere working can achieve the objective of criminal administration of justice.

Prosecution System in India

Prosecution system in our country is supplemented by various criminal agencies and their units like the Central Bureau of Investigation (CBI) and Central Investigation Department (CID) etc. Prosecution very much depend upon the Public Prosecution. Public Prosecutors are entrusted with the responsibility of placing the best evidence before the court, which may or may not be against the accused. The defense counsel tries his level best to protect the accused from the clutches of law. Public Prosecutors play an important role in criminal trials. The American Prosecutors Research Institute has identified the following goals for a modern prosecution service:

- To prosecute the fair, impartial, and expeditious justice.
- To ensure safer communities.
- To promote integrity among the public prosecutors.

The Prosecution agency is that segment of the Criminal Justice System, which is responsible for prosecuting people who have been charged by the police. Under the federal scheme of the Indian Constitution, criminal procedure including prosecution system is an item in List 3 of the Seventh Schedule to the Constitution of India, under which both the Federal Parliament and the State Assemblies are entitled to legislate. Article 254 provides for resolution for inconsistency between laws made by parliament and laws made by legislators of the state. The Code of Criminal Procedure, 1973 is the Union law that provides for initiation and carrying forward of criminal proceedings. Under some sections, State Amendments have also been incorporated. Under Cr. P.C. it is the exclusive privilege of the Prosecutor to open the trial. In every trial before the court of Sessions, a Public Prosecutor (PP) shall conduct the prosecution. The Word “to conduct : means to lead, guide, manage”. It conveys the idea that the person who conducts the prosecution determines all important questions of policy involved during the trial and the attitude to be adopted by the prosecution

towards the material objectives raised by the accused with respect to evidence. It is rule of universal application that in a criminal trial while opening the case, Public Prosecutor can only state all that it is proposed or intended to prove in the case. In *Adan Haji v/s King* it was held that it is immaterial whether the trial pending in the court of sessions was instituted on police report or complaint, the prosecutions in the Sessions Court cannot be conducted by anyone other than the PP.

Public Prosecutor holds a crucial position in the criminal justice system. Since victims are given a backseat by reducing their status from a “party” to a “prime witness”. They rely heavily on the performance of the Public Prosecutor to win them justice. A Public Prosecutor holds an unrivalled position and a public element attached to his office. Public Prosecutor discharges his duties not as a representative of complainant but as a representative of state. The role of a Public Prosecutor has been clearly contra distinguished from the role of a private counsel representing the victim. When the matter is on deciding the measure or quantum of punishment, the Public Prosecutor argues based on facts, circumstances and the nature of the offence committed by the accused. His role is to ensure maximum accountability of punishment to the offender.

In our criminal justice system, the Public Prosecutor occupies a position of great importance. Given that crimes are treated as a wrong against society as a whole, his role in administration of justice is crucial, as he is just not a representative of the aggrieved person, but that of the state at large. He is the officer of the court and his primary duty is to assist the court in arriving at the truth by putting forth all the relevant material on behalf of Prosecution. The space carved out for the Public Prosecutor is clearly that of an independent officer who secures the cause of justice and fair play in criminal trial.

In *Tarun Tejpal* case, Public Prosecutor crosses the ‘*Lakshman Rekha*’. The Prosecutor as per the scheme of criminal justice in India does not represent the police in the court. The Public Prosecutors, though appointed by the government, has to act independently from the government as an agent of justice. The Public Prosecutor is support to assist the court in reaching the truth by placing the entire relevant material for consideration of the judge irrespective of the fact as to whether a particular piece of evidence goes in favor or against the accused. Section 301 of Code of Criminal Procedure, 1973, clarifies that when state undertakes a case, rights of complainant become subordinate to that of state. The victim has no right to audience. The counsel of victim may submit written arguments to the court but that too with the permission of court. Section 301 reads as under:

301 Appearances by Public Prosecutors:

1. The Public Prosecutor or Assistant Public Prosecutor in charge of a case may appear and plead without any written authority before any court in which that case is under inquiry, trial or appeal.
2. If in any such case any private person instructs a pleader to prosecute any person in any court, the Public Prosecutor or Assistant Public Prosecutor in charge of the case shall conduct the prosecution, and the pleader so instructed shall act therein under the directions of the Public prosecutor or Assistant Public Prosecutor, and may with the permission of court, submit written arguments after the evidence is closed in the case.

302 Permission to conduct Prosecution

1. Any Magistrate inquiring into or trying a case may permit the prosecution to be conducted by a person other than a police officer below the rank of Inspector; but no person, other than Advocate General or Government Advocate or a Public Prosecutor, shall be entitled to do so without such permission:

Provided that no police officer shall be permitted to conduct the prosecution if he has taken part in the investigation into the offence with respect to which the accused is being prosecuted.

2. Any person conducting the prosecution may do so personally or by a pleader.

At the same time, the realities of criminal prosecutions, as they are conducted today, cannot be ignored. There is no system of formal institutional training of Public Prosecutors who are recruited from open market. They are attached to their seniors for a short period for practical training. After this informal training, they are straight away put on duty of conducting cases. There is no denying that Public Prosecutors are often overworked. In certain places, there may be single Public Prosecutor conducting trials in over 2-3 courts. Thus, the possibility of them missing out on certain aspects of the case cannot be ignored or discounted. Another problem, which the Public Prosecutors must face, arises when High Court gives the direction to Sessions Court to decide the matter in a month. The Public Prosecutors have not been provided with the facility of Law Library. There is no subscription to any law journal or any good textbook for the Prosecutors. A victim –centric approach that allows for greater participation of the victim in the conduct of the trial can go a long way in plugging such gaps.

Padmashri, N.R. Madhwa Menon in his article, “Strengthening the Prosecution”, had quoted the objective of the prosecution proceedings, where he states that the Prosecution Proceeding’s object is to protect the innocent and give punishment to the guilty. Public Prosecutor is motivated neither by

any sense of revenge nor the commitment to get a conviction. Therefore, the Public Prosecutor, s main role is to place all the relevant evidence before the court, irrespective of whether it goes against or is likely to help the accused.

Suggestions

- Prosecutors should advocate for the rights of victims to have their views heard by judges on bail decisions, plea bargains, dismissals, sentencing and restitution.
- They should respond quickly, respectfully and compassionately to all victims.
- Refer victims to support services when necessary.
- Educate victims about the Criminal Justice System and how their individual cases will be handled.
- The victim must be given the right to appeal. At present, the right to appeal resides only with the state, which is the prosecution. A victim can only go for a revision of the order of the trial court where the victim or the family members cannot argue on facts and law but only on jurisdiction. Both on the counts of law and fact, the victim should be given this right.
- It should be mandatory for the Public Prosecutor to discuss the case with the prosecutor of the victim, where engaged, before opening the case in the criminal court.
- It should be mandatory that Public Prosecutor and the private counsel of the party have mutual discussions, common strategy and coordination in the court.

Further some, credence should be given the overall emphasis on victimology underlying the 2009 Amendment Bill, as reflected in its Statement of Objects and Reasons: Statement of Objects and Statement:

- The need to amend the Code of Criminal Procedure 1973 to ensure fair and speedy justice and to tone up criminal justice system has been felt for quite some time. The Law Commission has undertaken a comprehensive review of the Code of Criminal Procedure in its 154th Report and its recognition have been found very appropriate particularly those relating to provisions concerning- victimology.
- At present victims are worst sufferers in a crime and they don't have much role in court proceedings. They need to be given certain rights and compensation so that there is no distortion of criminal Justice System.”

In *Rattan Singh v/s State of Rajasthan*¹, Justice Iyer concluded that it is the weakness of our Jurisprudence that Victims of crime do not attract the attention of law. The reimbursement for victims is still disappeared opinion in our criminal justice system. The bench of Justice M.M. Shanthagondar and Deepak Gupta delivered a judgment in 2019² and ruled that a victim can engage a lawyer to represent him or her in a criminal trial, but the lawyer would have right to examine a witness or advance arguments in court. The bench said that the victims counsel has limited role in criminal trials. The private lawyer can highlight issues of importance to the prosecutor and in case the police council fails to accept the suggestions, he can give suggestions to the court.

Thus, we conclude that in Indian Criminal Justice Process, victims are mostly ignored. Indian laws need to work more on victims. Greater respect should be given to their rights. The system of prosecution process has to be changed. Prosecution should not just secure convictions in court, but it should be for insuring safer communities and justice to victims.

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Tarun Tejpal v/s State of Goa 2021

Impact of Hydro Power Projects in the Economic Upliftment of Project Affected People of Himachal Pradesh

Dinesh Singh

ABSTRACT

Availability of energy resources is the barometer to test the economic progress of a country. It is the foundation upon which engine of growth of a country rest upon. Among the many sources of energy hydropower is considered as one of the cleanest. Himachal Pradesh being rich in hydroelectricity can reap the dividend of hydro production in terms of economic well being of its people. It is more so when the countries across of the globe including India are facing the coal and energy shortages. Though the production of Hydropower has both brighter and gray areas. On the gray side, there are usually long gestation period, displacement of peoples, shifting of the sources of livelihood, submerging of arable and pastoral land etc. On the brighter side there is diversification of economic activities in the periphery of construction sites/dams, increase in employment, and increase in the inflow of money and overall upliftment in the living standard of the people.

Keywords: Hydro Power Projects, Economic Impact, Local Job Opportunities, Joint sector

Introduction

Energy is the key to test economic progress of a country. The substitution of energy for human power in the performance of agriculture, Industry and domestic services has contributed to the process of economic growth. The increased availability of energy services stimulates economic activity along with different stages of developmental process (Reddy, 2009). In recent years the hydro-power projects have become increasingly important as people are blowing whistle against the thermal power plants. Having the

bitter experience of nuclear explosions and the continuous threat of emission of radioactive substances thereby has proven enough to make a general opinion against them. The importance further lies with the fact, that other renewable resources of energy are either at infancy stage of their production, or are not proving commercially fit. There is the obvious problem with the thermal resources and other hydrocarbons as they are being used so fast that at the present rate of consumption, the world will run out of them well before the end of the present millennium (Padmanabhan 2004). Although the hydro projects are all important and have the multiple advantages in its favour but there are certainly the gray areas of it as well. There are large number of evacuations and displacements, loss of socio-cultural heritage and moreover change in local climatic conditions. There may also be multiple crop failure and instances of land sliding etc. adding the worry of the people.

1.2 Hydro Power

The history of hydro power generation goes back to September, 1882 when the first hydro electric plant located in Appleton, Wisconsin, in U.S.A. began its operation. It was built on the Fox River. The technique and the concept of hydropower generation has transgressed the national boundaries and spread today all over the world. Today it is considered as one of the best mode of power generation in the world. In India, which is today the world's 7th largest producer of hydroelectricity, has installed its first hydro power station in Sidrapong in Darjeeling with 2 x 65 kW capacity was commissioned on 10 November 1897 by Sir C.C. Stevens, the then Acting Lieutenant Governor of Bengal. It was followed by many of the projects in number and magnitude by Mysore, Chamba, Mandi and other parts. Hydropower implies clean and affordable energy and can contribute significantly to the electrification of areas without access to electricity. It is the main renewable electricity source at global level and contributes to sustainable development. Hydropower is able to supply clean and affordable energy in its most valuable form, electricity. It is an advanced and flexible source of renewable energy and can contribute significantly in the economic prosperity of the country. This can also be produced in small plants, which are able to supply communities not yet connected to national grids. Hydropower helps to reduce air pollution, which is especially a problem in the traditional use of firewood in open fires for cooking and boiling the water. Hydroelectricity refers the electric power generated from a flow of water. It is a process through which the mechanical energy of water is converted into electric energy. The generation of electricity can be easily regulated and controlled by opening or closing of control valves. Hydroelectric system vary over a wide range of scale, from those based on turbines in Small River up to those driven from massive

artificial lakes. The world has huge potential of hydro power, which if tapped fully may fulfill the demand for electricity upto a great extent.

1.3 Economic impact

An economic impact analysis in general may be defined as the net economic change in the incomes of residents of an area that results from the spending attributes to an event or as in present case due to the project installed and the influx of different peoples of various ranks supplemented with the compensation received by the affected people. According to business dictionary it is “Study of the economic effects of the ‘Shoks’ to the ‘system’ caused by climatic, environmental, physical, and other changes. This analysis attempts to simulate these impacts with mathematical equations (such as input-output models) that show linkages among various industries, economic factors, and external factors. The Economic impact analysis measures the economic activity occurring within a defined geographic region as a result of spending and wages paid by a particular industry, undertaking or any business venture. It may be measured by input-output model meaning thereby that how much resources you have injected and what are its overall impacts. The hydropower projects are expected to contribute in the economic upliftment of the people, residing in its periphery.

1.4 Hydropower Production in Himachal Pradesh

The nature has provided Himachal Pradesh enough water, which flows through its rivers. It provides passage to the five major perennial rivers, besides many rivulets. The rivers flowing through it are Beas, Sutlej, Ravi, Chenab and Yamuna. It has vast potential for the Hydro-Electric production which has been estimated approximately 27,436 MW, out of which 24,567 MW is assessed as harnessable, if taped; it would have met a major chunk of the power requirements of the country. The electricity here can't only be produced through major rivers but also in small rivulets. Himachal is extremely rich in hydro resources. The state has about 25 percent of the national potential in this respect. The state govt. has been giving highest priority to its development as it can not only meet for the growing need of the power for industry, agriculture and rural electrification but also become the biggest source of revenue generation by sale of electricity to neighboring states and national grid. Himachal Pradesh is having good record of rural electrification keeping in view the distant location of villages. (Mitoo 2008) Water resources occupy a central place in the state of Himachal Pradesh. In this state a sizable amount of water falls from the height and provides necessary benefits to generate electricity. For placing its economy on faster track of development it is essential to give proper attention to power sector development. Besides providing employment the project generates a lot of revenue to the state which is evident from the Nathpa Jhakri power Project,

installed on September 2003, and has earned crore of revenue for the state. It is a policy matter in Himachal Pradesh that the developers of the hydro power project shall make a provision of 1.5 percent of final cost of project towards local area development. In order to provide benefits to the project affected local people the government of the state of Himachal Pradesh has introduced the provision, to provide an additional free power at the rate of one percent of the generated energy.

Methodology

To measure the economic impact/upliftment of project affected people, various indicators were identified and selected, based upon past studies. The samples taken for the present study comprises of about 12 percent of the project affected people of six hydro-electric projects. The selection of the above was made on the basis of stratified random sampling method, whereby the hydro power projects were classified into three categories viz. Joint Sector (run by central and state govt.), State Sector (run by state govt.) and Private Sector (run by non Govt. entities). Among these, only the projects, which were with the generation capacity of above 100 MW, were taken into consideration. A random sampling technique was applied in all of the three categories of projects.

Table No 1Projects under Study

Name of the Project		Sample size
Parvati stage III (520MW)	Joint sector	95
Rampur hydro (412MW)	Joint sector	76
Sainj Hydro (100MW)	State Sector	48
SawraKudduHydro(110 MW)	State Sector	50
AllignDuhangan (192 MW)	Private Sector	52
Tidong Hydro (100MW)	Private Sector	48

Statistical Methods

Statistical tools are helpful to come to the conclusion from the information gathered. In the present study various statistical tools viz., Arithmetic mean, standard deviation and chi square test were applied to analyze data and to draw inferences form it.

Literature Review

J.D. Agarwal (2000) has studied that hydropower is one of the cleanest source of energy. Presently it contribute about one fifth of the power requirements of the country (India). One of the important problems in this sector is lag in the completion of the projects due to agitation and strikes etc. It causes the increase in the non performing assets of the nation. In this sector, regional and local interests on the part of government are resulting into inadequate attention to these projects. Further, the constraint in funds, environmental problems and de-forestation due to these projects is adding to the woes.

Modi (2014) has made an overall comparative study of the economic and social life of the Sardar Sarovar Dam affected people. Numerous shortcomings in the rehabilitation and resettlement policy have left them worse off than earlier. Most of the displaced are Bhils. Economic activities like cultivation, cattle rearing, fisheries and allied agricultural activities like horticulture etc. which were undertaken earlier by the settlers has ruined now. The country does not have people friendly and clear policy and vision towards rehabilitation and resettlement of dam uprooted people.

Gill (2006) has studied that a large number of dams has been built around the world in the last century; for many purposes, be it energy, irrigation and drinking water. It is good on the part of hydroelectricity, as it provides for non polluting source of energy. But the worse related to it, is the poor planning and implementation and reinstating population, which is evacuated due to it. We can only fill the void of evacuation by pecuniary help and at the most by providing a piece of land somewhere.

As per Reddy (2009) energy is considered as the barometer of economic well being of an economy. The modes of generating energy are although continuously changing with the passage of time. At the same time, it is urgently required to switch over to alternate source of energy, so as to meet the requirements of Kyoto Protocol and United Nations Framework Conventions on Climate Change.

Sharma (2009) has made a detailed study of Parvati Stage 1 and Stage 2 hydroelectric projects. He has found that villagers of this area were less aware about the overall impact of hydroelectric projects in their day to day life and environmental impacts. Due to the widely scattered villages, the villagers were finding it hard to attend the public hearing held by the project authorities. They were with many demands, ranging from adequate compensation, employment, providing amenities like drinking water, defecation and sanitations and overall infrastructural development. The

people were also with the opinion that the construction of new road, schools, and hospital etc. should be undertaken by the project authorities. As far as economic progress is concerned, the positive signs were noticed in this front.

Nayak (2010) has studied that the dams today has become a symbol of economic development. They have multiple utilities include generation of electricity, irrigation, flood control and navigation. At present China has the highest number of dam constructed followed by USA. India also appears in the top five countries as far as number of dams is concerned. There is also a protest going on against big dams.

Sindhu(2010) has conducted a study on hydro power projects and its impacts on the socio economic life of the people of Himachal Pradesh. Under this he has conducted a survey of the four projects namely, Kol Dam, Larji, Malana I and Malana II. He has evaluated the common facilities like drinking water, health and sanitations etc. further he has also enquired about the changes the people has witnessed before and after the inception of the project in the socio economic life. He found that most of the affected people have found that they were happier before the start of the project than after its inception/commissioning.

Tiwari (2010) has studied that the energy is an essential ingredient of economic growth which provides the quality of life to the people. Its need is continuously increasing in every walk of life. The acceleration in economic growth and standard of living depends upon the availability of adequate power at affordable prices.

Objectives of the study

1. To study sector wise impact of Hydro Power Projects in the economic upliftment of affected people.
2. To study the Economic Impact Hydro Power Projects in term of changes in economic activities.

Hypothesis

H_0 = “Due to the commissioning/inception of the project there was no increase in the overall economic activities”

Table No 2 Sector Wise Comparative Impact on the local Job opportunities

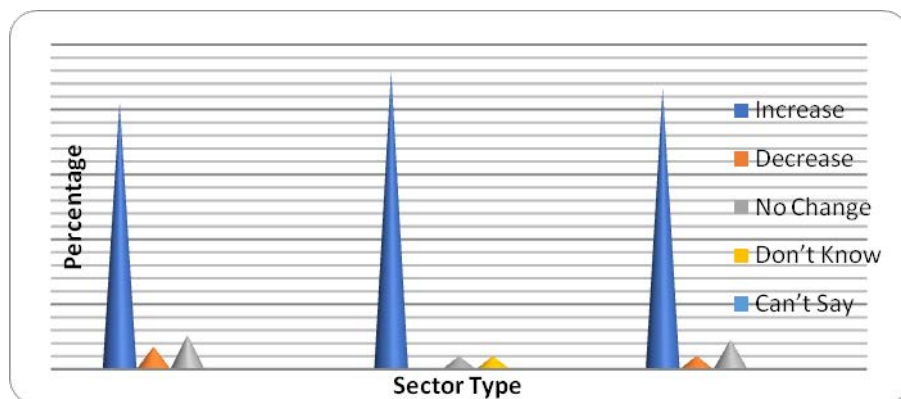
Type of Project	Mention The Impact of Projects in the Job Opportunities					Total
	Increase	Decrease	No Change	Don't know	Can't Say	
Joint Sector	131 (76.6)	19 (11.1)	21 (12.3)	0 (0.0)	0 (0.0)	171 (100.0)
Private Sector	94 (94.0)	0 (0.0)	0 (0.0)	6 (6.0)	0 (0.0)	100 (100.0)
State Sector	85 (86.7)	4 (4.1)	9 (9.2)	0 (0.0)	0 (0.0)	98 (100.0)
Total	310 (84.0)	23 (6.2)	30 (8.1)	6 (1.6)	0 (0.0)	369 (100.0)

Chi square Value 43.906, Degree of Freedom 6, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage

Figure 1Sector Wise Comparative Impact on the local Job opportunities



The table no. 2 and figure no.1 reflects the impact of hydro projects on the local job opportunities in the state of Himachal Pradesh. In the joint sector projects, 76.6 percent of the people have accepted that there was an increase in the local job opportunities after the inception of the project. 12.3 percent has noticed no change while 11.1 percent has noticed a decrease. In private sector run projects 94.0 percent of the people have noticed an increase in local job opportunities while 6.0 percent were not aware of any change. In State run projects 86.7 percent have noticed an increase, 9.2 percent didn't noticed any change while 4.1 percent have noticed a decrease in local job

opportunities. In all the three types of projects 84.0 percent have noticed an increase in local job opportunities, 8.1 percent didn't noticed any change, 6.2 percent noticed a decrease while 1.6 percent were not aware of this. Of all the above projects highest increase in local job opportunities was witnessed in private sector projects. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and local job opportunities.

Table No 3 Sector Wise Comparative Impact in Changes in Manual Labour Work

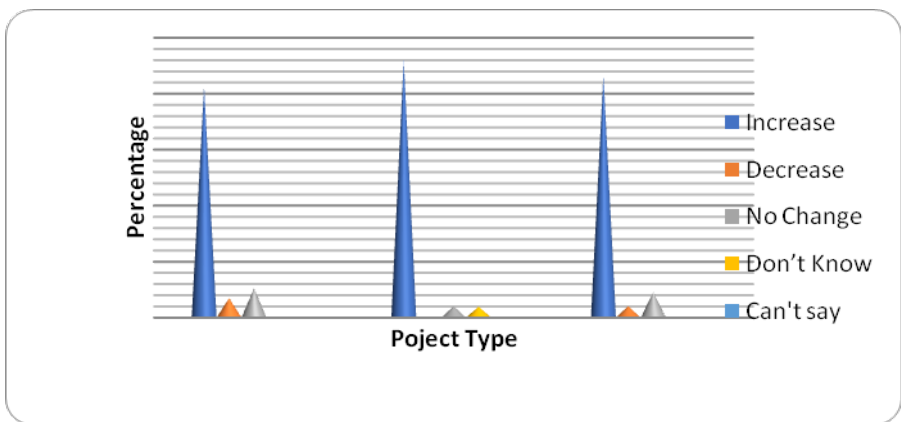
Type of Project	The Impact on Manual Labour Work					Total
	Increase	Decrease	No Change	Don't know	Can't Say	
Joint Sector	141 (82.5)	12 (7.0)	18 (10.5)	0 (0.0)	0 (0.0)	171 (100.0)
Private Sector	92 (92.0)	0 (0.0)	4 (4.0)	4 (4.0)	0 (0.0)	100 (100.0)
State Sector	85 (86.7)	4 (4.1)	9 (9.2)	0 (0.0)	0 (0.0)	98 (100.0)
Total	318 (86.2)	16 (4.3)	31 (8.4)	4 (1.1)	0 (0.0)	369 (100.0)

Chi square Value 21.914, Degree of Freedom 6, P value 0.001

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage.

Figure 2 Sector Wise Comparative Impact in Changes in Manual Labour Work



The table no. 3 and figure no 2 reflects the impact of hydro power projects on manual labour works in the affected area. 82.5 percent of the joint sector project affected people have noticed an increase in the manual labour works, 10.5 percent didn't noticed any change while 7.0 percent have noticed a decrease. In private sector run projects 92.0 percent have noticed an increase, 4.0 percent didn't noticed any change and further 4.0 percent were not aware of this. In state run projects 86.7 percent have noticed an increase in manual labour instances after the inception of the project, 9.2 percent didn't noticed any change while only 4.1 percent have noticed a decrease. In all of the three sectors 86.2 percent of the people have noticed an increase, 8.4 percent didn't notice any change, and 4.3 percent noticed a decrease and 1.1 percent were not aware of any such changes. Highest instances of increase in manual works were witnessed in private sector project affected area. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and manual labour work.

Table No 4 Sector Wise Comparative Impact in Changes in Renting out of houses

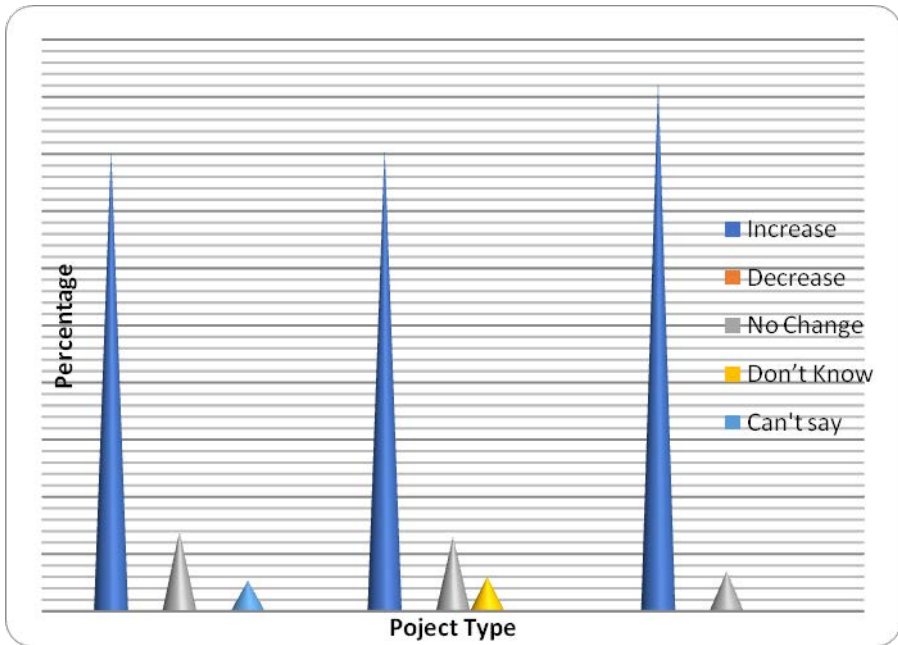
Type of Project	The Impact of Projects in Renting out of Houses					Total
	Increase	Decrease	No Change	Don't know	Can't Say	
Joint Sector	138 (80.7)	0 (0.0)	24 (14.0)	0 (0.0)	9 (5.3)	171 (100.0)
Private Sector	81 (81.0)	0 (0.0)	13 (13.0)	6 (6.0)	0 (0.0)	100 (100.0)
State Sector	91 (92.9)	0 (0.0)	7 (7.1)	0 (0.0)	0 (0.0)	98 (100.0)
Total	310 (84.0)	0 (0.0)	44 (11.9)	6 (1.6)	9 (2.4)	369 (100.0)

Chi square Value 30.420, Degree of Freedom 6, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage.

Figure 3 Sector Wise Comparative Impact in Changes in Renting out of houses



The table no. 4 and figure no. 3 describes about the impact of hydro power projects on the renting out of the houses in project affected areas. In joint sector run hydro power project 80.7 percent of the people have noticed and increase in renting out of the houses in project affected area, 14.0 percent didn't noticed any change while 5.3 percent were indecisive to say anything. In private sector run projects, 81.0 percent noticed an increase, 6.0 percent were not aware and 13.0 percent didn't noticed any change. In state run projects 92.9 percent of the people have noticed an increase in renting out of the houses after the installation of the projects, while 7.1 percent didn't noticed any change. In all the three types of projects 84.0 percent have noticed an increase, 11.9 percent didn't notice any change, and 2.6 did say nothing while 1.6 percent were not aware of. Highest increase in the instances of renting out of the houses was seen in state sector run projects. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and renting out of the houses.

Table No 5 Sector Wise Comparative Impact in the lease of land

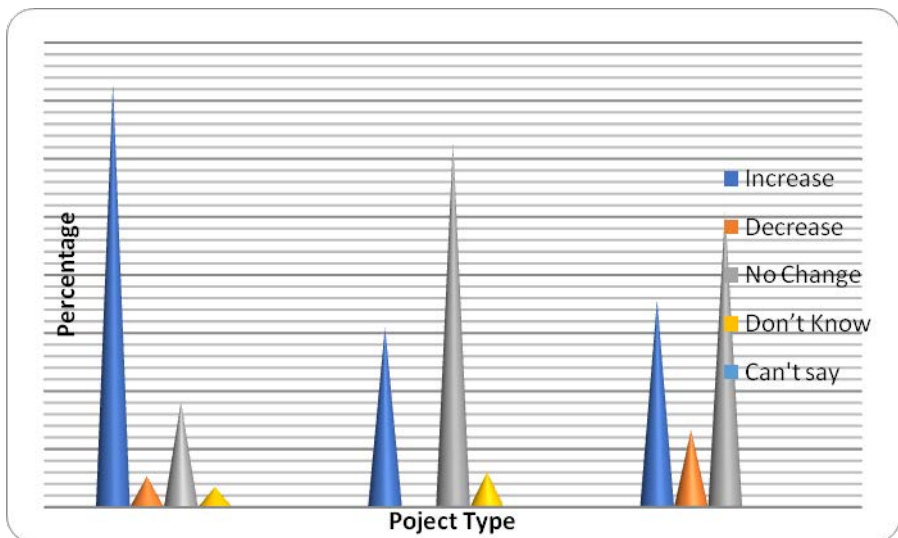
Type of Project	Mention The Impact of Projects in the lease of land					Total
	Increase	Decrease	No Change	Don't know	Can't Say	
Joint Sector	125 (73.1)	9 (5.3)	31 (18.1)	6 (3.5)	0 (0.0)	171 (100.0)
Private Sector	31 (31.0)	0 (0.0)	63 (63.0)	6 (6.0)	0 (0.0)	100 (100.0)
State Sector	35 (35.7)	13 (13.3)	50 (51.0)	0 (0.0)	0 (0.0)	98 (100.0)
Total	191 (51.8)	22 (6.0)	144 (39.0)	12 (3.3)	0 (0.0)	369 (100.0)

Chi square Value 86.13, Degree of Freedom 6, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage.

Figure 4 Sector Wise Comparative Impact in the lease of land



The table no 5 and figure no. 4 makes a comparative analysis of the hydro power projects on the instances of lease of land for money, in project affected areas. In joint sector run projects 73.1 percent of the people have noticed an increase in lease of land, 18.1 didn't noticed any change, 5.3 percent noticed a decrease and 3.5 percent were not aware of any lease. In

private sector run projects 31.0 percent have noticed an increase, 63.0 percent didn't noticed any change and 6.0 percent were not aware of this. In state sector run projects 35.7 percent have noticed an increase, 13.3 percent a decrease and 51.0 percent didn't noticed any change in the instances of lease of land. In all the three types of projects 51.8 percent have noticed an increase, 6.0 percent a decrease, 39.0 percent didn't noticed any change while 3.3 percent were not aware of any change. Highest increase was registered in joint sector affected areas. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and land lease.

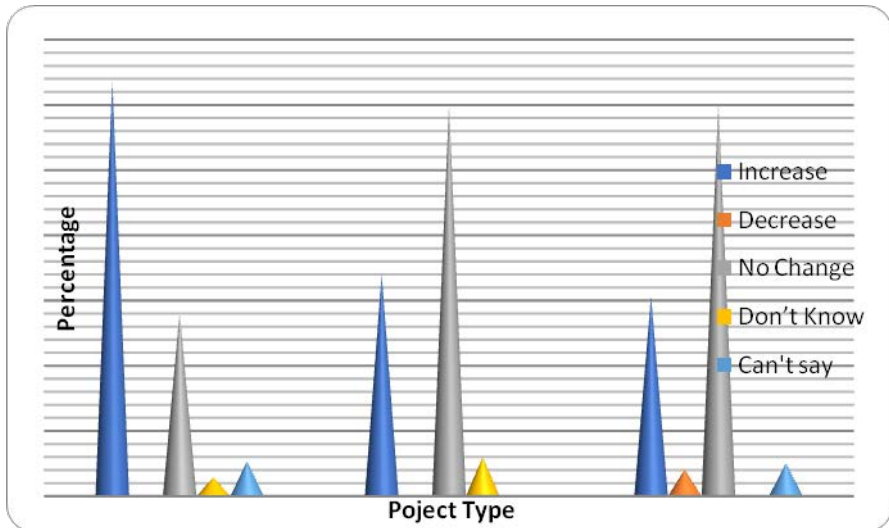
Table No 6 Sector Wise Comparative impact in the Number of visitors

Type of Project	The Impact of Projects in Number of visitors					Total
	Increase	Decrease	No Change	Don't know	Can't Say	
Joint Sector	109 (63.7)	0 (0.0)	48 (28.1)	5 (2.9)	9 (5.3)	171 (100.0)
Private Sector	34 (34.0)	0 (0.0)	60 (60.0)	6 (6.0)	0 (0.0)	100 (100.0)
State Sector	30 (30.6)	4 (4.1)	59 (60.2)	0 (0.0)	5 (5.1)	98 (100.0)
Total	173 (46.9)	4 (1.1)	167 (45.3)	11 (3.0)	14 (3.8)	369 (100.0)

Chi square Value 62.493, Degree of Freedom 8, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage

Figure 5 Sector Wise Comparative impact in the Number of visitors

The table no. 6 and figure no. 5 describes about the impact of the inception of the project, on the number of visitors in its affected areas. In joint sector run projects 63.7 percent of the people have noticed an increase in number of visitors in their area, while 28.1 percent didn't noticed any change, 5.3 percent did say nothing and 2.9 percent were not aware of any such development. In private sector run projects 60.0 percent didn't noticed any change, 34.0 percent have noticed an increase and 6.0 percent were not aware of. In state sector run projects 60.2 percent didn't noticed any change, 30.6 percent have sought an increase, 5.1 percent did say nothing and 4.1 percent noticed a decrease. In all the three type of projects, 46.9 percent of the people have noticed an increase, 45.3 percent didn't see any change, 3.8 percent did say nothing, 3.0 percent did say nothing and 1.1 percent did noticed a decrease in the number of visitors after the inception of project. Highest increase was witnessed in joint sector project. The increase in the joint sectors may be due to the other factors as one of the two joint sector project fall very close to the world heritage site, Great Himalayan National Park. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and number of visitors.

Table No 7 Sector Wise Comparative impact in the inflow of Money

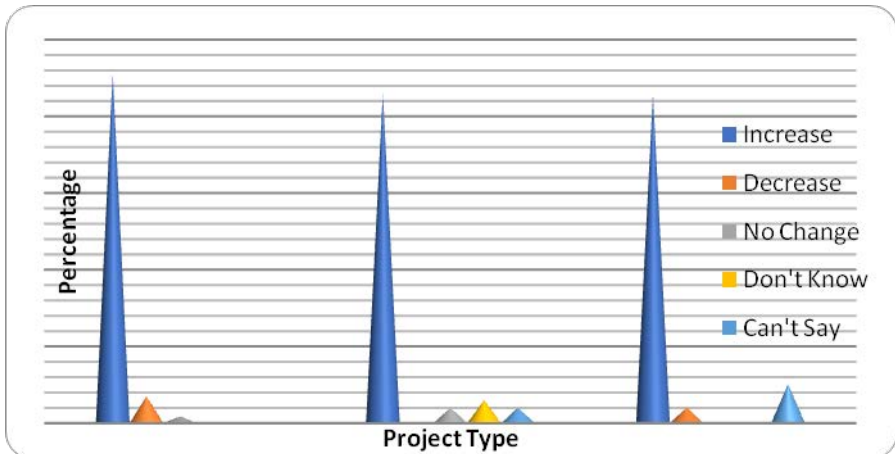
Project Type	Inflow of Money					Total
	Increase	Decrease	No Change	Don't Know	Can't Say	
Joint Sector Count % within Project Type	156 (91.2)	12 (7.0)	3 (1.8)	0 (0.0)	0 (0.0)	171 (100.0)
Private Sector Count % within Project Type	86 (86.0)	0 (0.0)	4 (4.0)	6 (6.0)	4 (4.0)	100 (100.0)
State Sector Count % within Project Type	84 (85.7)	4 (4.1)	0 (0.0)	0 (0.0)	10 (10.2)	98 (100.0)
Total Count % within Project Type	326 (88.3)	16 (4.3)	7 (1.9)	6 (1.6)	14 (3.8)	369 (100.0)

Chi square Value 44.947, Degree of Freedom 8, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage

Figure 6 Sector Wise Comparative impact in the inflow of the Money



The table no. 7 and figure no. 6 describes about the inflow of the money after the installation of the projects. In joint sector run projects, 91.2 percent of the people have noticed an increase in the inflow of the money after the installation of the project, 7.0 percent have noticed a decrease while 1.8 percent didn't noticed any change. In private sector run projects 86.0 percent of the people have noticed an increase in the inflow of the money after the installation of the project, 6.0 percent were not aware of this and 4.0 percent each did say nothing and didn't seen any change. In state sector run projects 85.7 percent of the people did see an increase in the inflow of the money, 10.2 percent did say nothing, and 4.1 percent have noticed decrease in the inflow of the money after the inception of the project. In all the three types of projects, 88.3 percent did see an increase in the inflow of the money, 4.3 percent did notice a decrease, 3.8 percent did say nothing, and 1.9 percent has not noticed any change and 1.6 percent were not aware of. The highest increase was registered in joint sector run projects. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and inflow of money.

Table No. 8 Sector Wise Comparative Impact in the Purchasing Power of the people

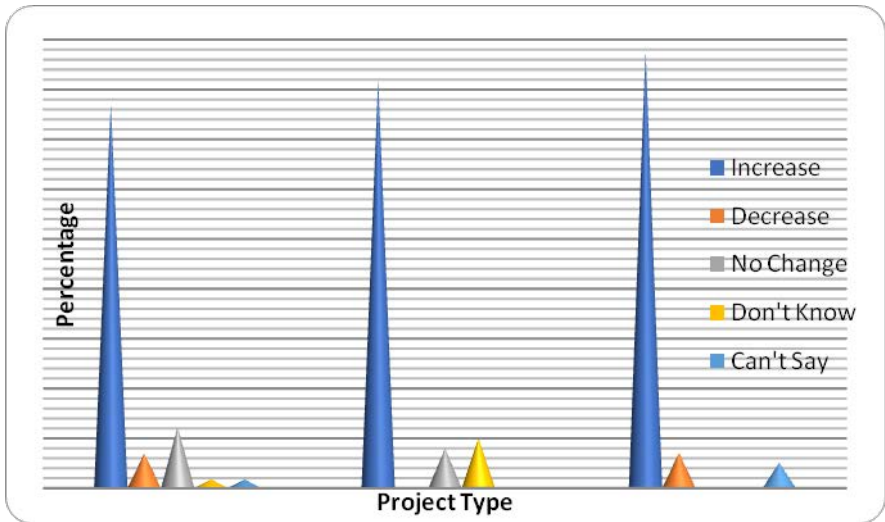
Project Type	Purchasing Power					Total
	Increase	Decrease	No Change	Don't know	Can't say	
Joint Sector Count % within Project Type	132 (77.2)	12 (7.0)	21 (12.3)	3 (1.8)	3 (1.8)	171 (100.0)
Private Sector Count % within Project Type	82 (82.0)	0 (0.0)	8 (8.0)	10 (10.0)	0 (0.0)	100 (100.0)
State Sector Count % within Project Type	86 (87.8)	7 (7.1)	0 (0.0)	0 (0.0)	5 (5.1)	98 (100.0)
Total Count % within Project Type	300 (81.3)	19 (5.1)	29 (7.9)	13 (3.5)	8 (2.2)	369 (100.0)

Chi square Value 42.959, Degree of Freedom 8, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage

Figure 7 Sector Wise Comparative Impact in the Purchasing Power of the people



The table no.8 and figure no.7 describes about the impact of inception of hydro power projects in the purchasing power of the affected people. In the joint sector affected people 77.2 percent were of the opinion that there was an increase in the purchasing power of the people after the inception of the project, 12.3 percent didn't noticed any change, 7.0 percent noticed a decrease while 1.8 percent were not in a position to say anything and further 1.8 percent were not aware of it. In the private sector run projects 82.0 percent were agreed that there was an increase in purchasing power of the people after the inception of the project, 8.0 percent didn't noticed any change while 10.0 percent were not aware of this. In state sector run projects 87.8 percent of people have noticed an increase in the purchasing power of the people after the inception of the project, 7.1 percent noticed a decrease while 5.1 percent didn't said anything. In total of all the three typed of projects 81.3 percent were agreed that there was an increase in their purchasing power after the inception of the project, 7.9 percent didn't noticed any change, 5.1 percent noticed a decrease, 3.5 percent were not aware of and 2.2 percent did said nothing about this. Of all the above highest increase was noticed in state sector run projects. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and purchasing power.

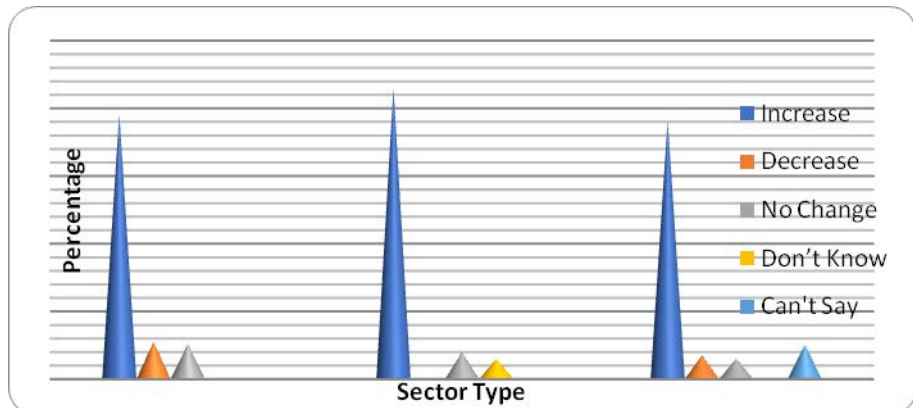
Table No 9 Sector Wise Comparative Impact in the Overall Family Income

Project Type	Family Income					Total
	Increase	Decrease	No Change	Don't know	Can't say	
Joint Sector Count % within Project Type	134 (78.4)	19 (11.1)	18 (10.5)	0 (0.0)	0 (0.0)	171 (100.0)
Private Sector Count % within Project Type	86 (86.0)	0 (0.0)	8 (8.0)	6 (6.0)	0 (0.0)	100 (100.0)
State Sector Count % within Project Type	75 (76.5)	7 (7.1)	6 (6.1)	0 (0.0)	10 (10.2)	98 (100.0)
Total Count % within Project Type	295 (79.9)	26 (7.0)	32 (8.7)	6 (6.1)	10 (2.7)	369 (100.0)

Chi square Value 56.970, Degree of Freedom 8, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage

Figure 8 Sector Wise Comparative Impact in the Overall Family Income

The table no. 9 and figure no.8 discuss about the overall impact of hydro power projects on family income of project affected areas in joint, state and private sector projects. In joint sector run projects, 78.4 percent of the people have noticed an increase in family income while 11.1 percent have noticed a

decrease and 11.1 percent didn't noticed any change. In private sector run projects, 86.0 percent of the people have registered an increase, 8.0 percent with no change while 6.0 percent were not aware of it. In state sector projects 76.5 percent have seen an increase in family income, 10.2 percent didn't say anything while 7.1 percent registered a decrease and 6.1 percent have noticed no change in their family income. In all of the three type of the projects 79.9 percent have witnessed an increase, 8.7 percent with no change, 7.0 percent with decrease, 2.7 percent didn't say anything and 1.6 percent were not aware of. Highest increase in overall family income was witnessed in private sector run project. The increase is not solely because of project but also due to the close proximity of the market from one of the private sector hydro power project. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and family income.

Table No 10 Sector Wise Comparative Impact in the Standard of Living

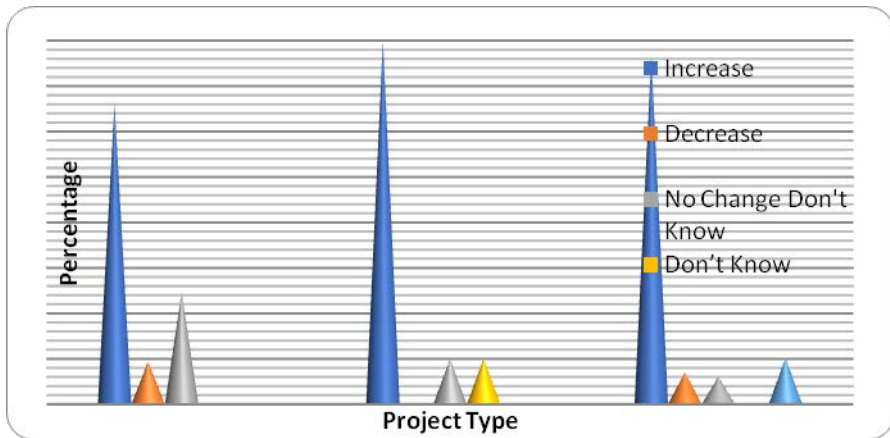
Project Type	Standard of Living					Total
	Increase	Decrease	No Change	Don't know	Can't say	
Joint Sector Count % within Project Type	113 (66.1)	16 (9.4)	42 (24.6)	0 (0.0)	0 (0.0)	171 (100.0)
Private Sector Count % within Project Type	80 (80.0)	0 (0.0)	10 (10.0)	10 (10.0)	0 (0.0)	100 (100.0)
State Sector Count % within Project Type	75 (76.5)	7 (7.1)	6 (6.1)	0 (0.0)	10 (10.2)	98 (100.0)
Total Count % within Project Type	269 (72.6)	23 (6.2)	58 (15.7)	10 (2.7)	10 (2.7)	369 (100.0)

Chi square Value 81.885, Degree of Freedom 8, P value 0.000

Source: data compiled through questionnaire

Note: Figures in parenthesis denotes percentage.

Figure 9 Sector Wise Comparative Impact in the Standard of Living



The table no. 10 and figure no. 9 describes about the impact of hydro power projects in the standard of living of the people of affected areas in the joint, state and private sector run projects. In the joint sector run projects 66.1 percent have claimed the better standard of living than earlier, 24.6 percent didn't noticed any change while 9.4 percent noticed worse standard of living after the inception of the project. In the private sector run hydro power projects 80.0 percent have witnessed a better standard of living, 10.0 percent with no change, while 10.0 percent were not aware of this. In state sector run projects 76.5 percent have witnesses a better standard of living 10.2 percent didn't say anything, 7.6 percent witnessed worse standard and 6.1 percent didn't noticed any change in the standard of living of the people. In total of all the three types of projects 72.6 percent said to have enjoyed a better standard of living, 15.7 percent with no change, and 6.2 percent with worse, while the remaining 2.7 percent were not aware of. The private sector projects seem to have performed better in this field. The calculated value of chi square is greater than the table value; hence it shows significant results at 5 percent level of significance. It indicated that there is relation between the hydro power projects and standard of living.

Table No 11 Overall Economic Impact of Hydro Project in the Affected area

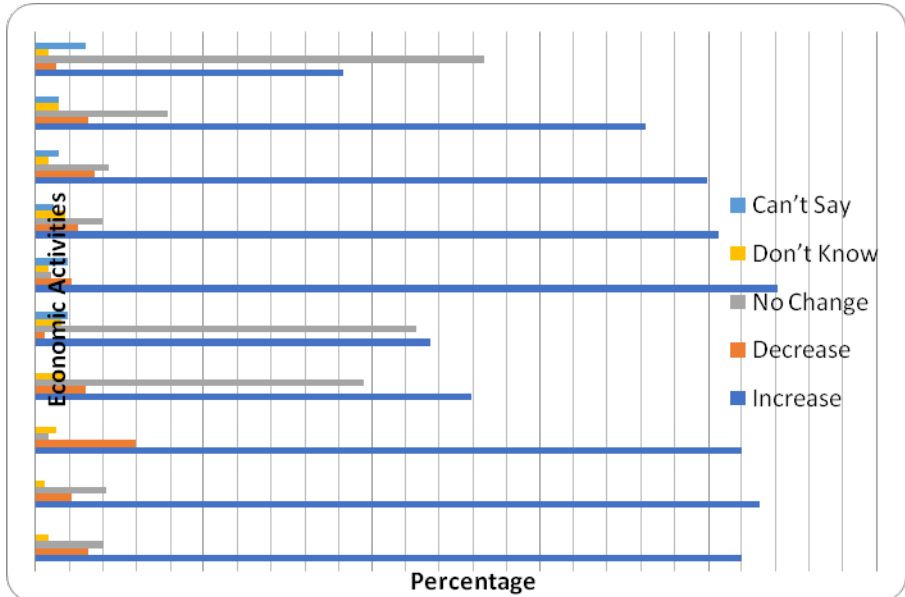
	Answers of the respondents					Mean Value	S. D.	Chi Square	P. Value
	Increase	Decrease	No Change	Don't Know	Can't Say				
Local Job opportunities	310 (84)	23 (6.2)	30 (8.1)	6 (1.6)	0	4.73	0.678	688.615	0.000
Manual Labour Instances	318 (86.2)	16 (4.3)	31 (8.4)	4 (1.1)	0	4.76	0.647	740.561	0.000

Renting out of houses	310 (84.0)	44 (11.9)	6 (1.6)	9 (2.4)	0	4.62	0.932	694.989	0.000
Lease of Land	191 (51.8)	22 (6.0)	144 (39.0)	12 (3.3)	0	4.06	1.018	258.046	0.000
No. of visitors	173 (46.9)	4 (1.1)	167 (45.3)	11 (3.0)	14 (3.8)	3.84	1.167	418.954	0.000
Inflow of money	326 (88.3)	16 (4.3)	7 (1.9)	6 (1.6)	14 (3.8)	4.72	0.892	1078.331	0.000
Purchasing power	300 (81.3)	19 (5.1)	29 (7.9)	13 (3.5)	8 (2.2)	4.60	0.933	869.957	0.000
Family Income	295 (79.9)	26 (7.0)	32 (8.7)	6 (1.6)	10 (2.7)	4.60	0.916	835.079	0.000
Standard of Living	268 (72.6)	23 (6.2)	58 (15.7)	10 (2.7)	10 (2.7)	4.43	1.025	659.686	0.000
Urbanisation	135 (36.6)	9 (2.4)	197 (53.4)	6 (1.6)	22 (6.0)	3.62	1.167	411.962	0.000

Source: Data compiled through questionnaires.

Note: Figures in parenthesis denotes percentage.

Figure 10 Overall Economic Impact of Hydro Project in the Affected area



The economic impacts can be measure by different methods. Under the present study various indicators has been developed to measure the direct and indirect impacts caused by the inception of the project. It is usually seen that due to the inception of the project various types of activities mushroom

out in and around the vicinity of the project. The retailing activities go high as the influx of the people. The demand for local produce like milk, pulses, fruits and vegetables go high for a short run. Due to the compensation money received by the peoples in lieu of their lost property further pushes the demand for consumables and durables. It has some obvious impacts on the manual labour works, renting out of the houses, and lease of land and inflows of the money. The table no 11 and figure no 10 throws light upon the overall economic impact of hydro power projects. As far as local job opportunities were concerned 84.0 percent of the people has noticed an increase, 8.1 percent no change, 6.2 percent a decrease and 1.6 percent were not aware of any change. With mean score as 4.73 and standard deviation as 0.678, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that “Due to the inception of the project there was not an increase in the local job opportunities in the affected areas” is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the local job opportunities in the affected areas is accepted.

On the issue of manual labour works 86.2 percent has noticed an increase, 4.3 percent a decrease and 8.4 didn't noticed any change, whereas 1.1 percent were not aware of. With a mean score of 4.76 and standard deviation as 0.647, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that “Due to the inception of the project there was not an increase in the manual labour works in the affected areas” is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the manual labour works in the affected areas is accepted.

On the issue of renting out of houses 84.0 percent has noticed an increase, 11.9 percent a decrease, 1.9 percent not any change and 2.4 percent were not aware of it. With a mean score of 4.62 and standard deviation of 0.932, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that “Due to the inception of the project there was not an increase in the renting out of the houses in the affected areas” is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the renting out of the houses in the affected areas is accepted.

On the issue of incidences of lease of 51.8 percent of the respondents were agreed that there was an increase in lease of land after the inception of the project. 39.0 percent were of the view that there is no change in the lease of

land, 6.0 percent have noticed a decrease and 3.3 percent didn't notice any change. With a mean score of 4.06 and standard deviation of 1.018, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the instances of lease of land in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the instances of lease of land in the affected areas is accepted.

The hydro power project may attract a lot of visitors to see the work in progress. They can spend some money in the adjacent local markets. This boosts the local economy. In all of the projects, 46.9 percent of the people were agreed that there was an increase in the number of visitors after the inception of the project. 45.3 percent didn't noticed any change, 3.0 percent were not aware about this, 3.8 percent did say nothing and 1.1 percent has noticed a decrease. With the mean score of 3.84 and standard deviation as 1.167, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the number of visitors in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the number of visitors in the affected areas is accepted.

Generally with the inception of the project a lot of money comes in the project areas partly due to the compensation received by the project and partly due to the migratory labourers and pay and perks of the project officials. 88.3 percent of the project affected people were agreed that there was an increase in the inflow of the money after the inception of the project. 4.3 percent has noticed a decrease in the inflow of the money. 1.9 percent of the respondents didn't notice any change, 1.6 percent of them were not aware of while 3.8 percent were indecisive on this issue. With a mean score of 4.72 and a standard deviation of 0.892, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the inflow of the money in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the inflow of the money in the affected areas is accepted.

On the issue of impact of hydro power projects on the purchasing power of the people 81.3 percent has noticed an increase. Only 5.1 percent of the respondent has noticed a decrease, which may be linked to other contributory

factors like inflationary trend and price hike in all the goods from consumer to durables. 7.9 percent didn't noticed any change, 3.5 percent were not aware and 2.2 percent did say nothing on this issue. The mean score was 4.60 with a standard deviation of 0.933, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the purchasing power of the people in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the purchasing power of the people in the affected areas is accepted.

On the issue of impact on general family income 79.9 percent has noticed an increase, 7.0 percent a decrease, 8.7 percent no change, 1.6 percent not aware and 2.7 percent did say nothing on this matter. With the mean score of 4.60 and standard deviation of 0.916, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the family income of the people in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the family income of the people in the affected areas is accepted.

Primarily, standard of living is dependent upon the family income. But still family income is not the sole criteria for good standard of living. Due to the demolition, construction, pollution and noise etc. the quality of life is not much better in the project affected areas. But still inflow of the money can provide better facility to the people. on the issue of standard of living a majority of 72.6 percent of the people have noticed an increased standard of living, 6.2 percent noticed a decreased standard, 15.7 percent didn't noticed any change, while 2.7 percent each were not aware and indecisive respectively. With the mean score of 4.43 and standard deviation of 1.025, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the living standard of the people in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the living standard of the people in the affected areas is accepted.

By the increase in project activities and arrival of a lot of migratory peoples the features of urbanization do appear in project areas. Usually these conditions remain upto the completion of the project. Once the project is complete the labourers and other migratory people starts withdrawing and

the conditions apparent before the inception of the projects starts appearing. On the issue of urbanisation, 36.6 percent has noticed the signs of urbanization in their areas, 2.4 percent has negated it, 53.4 percent didn't noticed any change, 1.6 percent were not aware about while 6.0 percent were indecisive on this issue. With the mean score of 3.62 and standard deviation of 1.167, implies that the responses are left handed or negatively skewed. The test of chi-square also shows that responses are not equally distributed. Since the calculated p value is less than 0.05, so the Null Hypothesis that "Due to the inception of the project there was not an increase in the urbanization in the affected areas" is rejected and Alternate Hypothesis that after the inception of the project there was an increase in the urbanization in the affected areas is accepted.

Conclusion

Hydro Power projects which contributes significantly in the revenue generation of the state, has also contributed in the economic upliftment of the project affected people. They have boosted the economic activities in terms of increase in local job opportunities, standard of living, instances of lease and renting out of properties. Further it has increased the inflow of money and thereby has enhanced the purchasing power of the people. Though all these changes may not be the outcome of the project alone but certainly the hydro project had played an important role to increase the economic activities in the project affected regions. There are many of other schemes run by the central government, state government and other private agencies in parallel with the projects. Many a times the farmers fetch better prices for their agricultural and allied activities, which increase the inflow of the money in affected regions. But certainly, there is a contribution of these hydro power projects, which can't be ignored.

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Difference in the Pattern of Smart Phone Usage between Urban and Rural Population of District Shimla: A Comparative Cross-Sectional Study

Amit Sachdeva , Mukesh Grover & Ashwani Kumar

ABSTRACT

Excessive usage of smart phones has been linked to a variety of health & sleeps issues and can even lead to addiction. This study was done to evaluate the difference in the pattern of Smart Phone usage between urban and rural population of District Shimla. This comparative cross sectional survey was conducted amongst the participants in the age group of 18 to 60 years, using Google forms. The questionnaire was circulated among both rural and urban residents of district Shimla for responses. Data was analyzed using Epi info V7 Software. Among the total 400 participants, 150(37.5%) from urban area while 250(62.5%) were from rural area. In the present study higher percentage of urban participants had their own personal smart phone, they were using social networking sites, music & video apps, news apps more frequently, had more difficulty in sleep, headache, cervical problem, had suffered from any injury or met an accident due to smart- phone use, had habit of using smart- phone while driving, while in meeting / conferences/ workshop /any function, just before sleeping in night & in toilet as compared to rural participants. Rural participants were using smart phone >2 hours per day, were suffering from eye related problems, had musculoskeletal problem due to smart- phone use, had habit of using smart- phone while sitting in a group of family members, if ever wake up in night, soon after wake up in morning and felt more addicted to smart phone as compared to urban participants. But all these differences were not found to be statistically significant. We also found that significantly higher percentage of urban participants were using gaming apps, app related to the academic work and had mental health problems due to smart- phone use while significantly higher percentage of rural participants were using smart phone >2 hours per day. Both

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urban and rural participants were likely to become dependent on smart phone which had negative impact on their health and sleep. For this health education strategies can be initiated to make them aware of using the smart phones only for necessity and for limited time.

Keywords: Comparison, Pattern of Smart Phone Usage, Rural and Urban Population, Shimla

Introduction

In the current scenario, the smart phones have become an integral part of our life and its usage is constantly on rise in both rural and urban communities. According to the report by App Annie, an average global user is spending about 4.2 hours per day on a smart phone, which itself is a 30% increase over two years. The average time spent by an Indian user on a smart phone is 4.6 hours a day, which is third on the list of average hours spent on mobile phones. The country rose from 3.3 hours per day in 2019, which is a 39% rise within a year (Pasuranan, 2017).

Smart phones have multiple functions apart from calling, which include mobile gaming, streaming music, photo and video sharing on social networks like Facebook, Twitter, WhatsApp, Instagram, etc. In developing countries like India, the number of smart phone users is showing a rapidly increasing trend, especially in young more so in urban populations. It can easily be seen that the mobile is just started from a need and then transformed into an addiction (Wacks & Stain, 2021).

Excessive smart phones use is an emerging public health issue as research findings have highlighted that Excessive smart phone use has been found to be associated with various health problems such as headache, eye pain, ear pain, fatigue, headaches, dizziness, skin symptoms, a burning sensation in eye, discomfort, anxiety, neck pain, digital thumb, sleep disturbances owing to night time use, stress, frustration irritability, impaired concentration and many were addicted to their mobile phones causing changes in individuals' behavior and daily habits (Khan, 2004).

It is imperative for various groups to understand the behavior of smart phone users. A number of studies have done in different parts of the India to see the pattern of Smart Phone usage in both rural and urban areas but such studies are limited in hilly areas of District Shimla having different type of customs and cultural pattern. Thus the present study was done to evaluate the difference in the pattern of Smart Phone usage between urban and rural population of District Shimla.

Objectives of the Study

To evaluate the difference in the pattern of Smart Phone usage between urban and rural population of District Shimla.

Research Methodology

- Research Approach -Descriptive
- Research Design- Comparative Cross-sectional survey design
- Study area: District Shimla
- Study duration- between September 2021- October 2021
- Study population- Adults population aged between 18-60 years
- Sample size- 400 adults assuming 50% adults have adequate knowledge regarding Smart Phone usage, 5% absolute error, 95% confidence level, and 5% non response rate.
- Study tool: A google form questionnaire consisting of questions regarding socio-demography and pattern of Smart Phone usage was created.
- Inclusive Criteria- who were willing to participate in the study.
- Exclusion Criteria: who were not willing to participate in the study
- Validity of tool - by the experts in this field
- Data collection- Data was collected under the guidance of supervisors. The google form questionnaire was circulated via online modes like e-mail and social media platforms like Whatsapp groups, Facebook, Instagram and LinkedIn in both rural and urban area of District Shimla till the 400 responses were collected. Responses were then recorded in a Google Excel spreadsheet, the information from which was used to generate graphical display.
- Data analysis- Data was collected and entered in Microsoft excel spread sheet, cleaned for errors and analyzed with Epi Info V7 Software with appropriate statistical test in terms of frequencies, percentage, mean standard deviation etc. A difference between rural and urban areas was evaluated by applying chi square test. P value less than 0.05 was taken as statistically significant.
- Ethical Considerations- Participants confidentiality and anonymity was maintained.

Results

Present study was done to evaluate the difference in the pattern of Smart Phone usage between urban and rural population of District Shimla. A total of 400 respondents including 150(37.5%) were from urban area and 250(62.5%) were from rural area from district Shimla were participated in

the study. Among the participants of the majority 249(62.25%) were between 18-30 years, 236 (59%) were males, 234(58.5%) were Graduate, 168(42%) were employee, 383 (95.75%) were Hindu and 221 (55.25%) were from nuclear family.(Table-1)

Table-1: Socio-demographic characteristics of study participants

Socio-demographic Variables		Frequency	Percent
Area	Urban	150	37.5
	Rural	250	62.5
Age	18-30 Years	249	62.25
	31-40 Years	99	24.75
	41-50 Years	43	10.75
	51-60 Years	9	2.25
Gender	Female	164	41
	Male	236	59
Education	Graduate	234	58.5
	Intermediate	46	11.5
	Matriculate	19	4.75
	Middle	4	1
	Post Graduate	97	24.25
Occupation	Businessman	12	3
	Employee	168	42
	Farmer	29	7.25
	Students	102	25.5
	Professional	47	11.75
	Others	42	10.5
Religion	Hindu	383	95.75
	Muslim	6	1.5
	Sikh	3	0.75
	Others	8	2
Type of Family	Joint	179	44.75
	Nuclear	221	55.25
Total		400	100

Source: Field Survey

Among the urban participants 147(98%) while among rural participants 240(96%) were using their own personal smart phone and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 83 (55.3%) while among rural participants 176(70.4%) were using smart phone >2 hours per day and difference between urban and rural participants was found to be statistically significant. (Table-2)

Table-2: Usage of smart phone among study participants

Usage of smart phone		Urban	Rural	Total	P value	
Do you use personal smart phone?	No	N	3	10	11	0.343
		%	2.0%	4.0%	2.8%	
	Yes	N	147	240	389	
		%	98.0%	96.0%	97.2%	
How much time you use smart phone per day ?	≤ 2	N	67	74	141	0.003
		%	44.7%	29.6%	35.2%	
	> 2	N	83	176	259	
		%	55.3%	70.4%	64.8%	
Total	N	150	250	400		
	%	100.0%	100.0%	100.0%		

Source: Field Survey

Among the urban participants 149(99.3%) while among rural participants 246(98.4%) were using social networking sites (facebook/whatsapp/ tweeter/ instagram etc.) and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 65(43.3%) while among rural participants 42(16.8%) were using gaming apps and difference between urban and rural participants was found to be statistically significant. Among the urban participants 113(75.3%) while among rural participants 184(73.6%) were using music & video apps and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 84(56.0%) while among rural participants 101(40.4%) were using app related to the academic work and difference between urban and rural participants was found to be statistically significant. Among the urban participants 67(44.7%) while among rural participants 107(42.8%) were using news apps and difference between urban and rural participants was found to be statistically non-significant. (Table-3)

Table-3: Reasons for Usage of smart phone among study participants

S.No.	Variables		Urban	Rural	Total	P value	
1.	Do you use social networking sites (facebook/whatsapp/tweeter/ instagram etc.)?	No	N	1	4	5	0.654
			%	0.7%	1.6%	1.2%	
		Yes	N	149	246	395	
			%	99.3%	98.4%	98.8%	
2.	Do you use gaming apps?	No	N	85	208	293	0.000
			%	56.7%	83.2%	73.2%	
		Yes	N	65	42	107	
			%	43.3%	16.8%	26.8%	
3.	Do you use music and video apps?	No	N	37	66	103	0.725
			%	24.7%	26.4%	25.8%	
		Yes	N	113	184	297	
			%	75.3%	73.6%	74.2%	
4.	Do you use apps related to academic work?	No	N	66	149	215	0.003
			%	44.0%	59.6%	53.8%	
		Yes	N	84	101	185	
			%	56.0%	40.4%	46.2%	
5.	Do you use news apps?	No	N	83	143	226	0.755
			%	55.3%	57.2%	56.5%	
		Yes	N	67	107	174	
			%	44.7%	42.8%	43.5%	
Total			N	150	250	400	
			%	100.0%	100.0%	100.0%	

Source: Field Survey

Among the urban participants 68(45.3%) while among rural participants 132(52.8%) were suffering from eye related problems like eye strain/watering/itching in eyes and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 39(26.0%) while among rural participants 53(21.2%) had difficulty in sleep due to smart- phone use and difference between urban and

rural participants was found to be statistically non-significant. Among the urban participants 36(24.0%) while among rural participants 49(19.6%) had problem of headache due to smart- phone use and difference between urban and rural participants was found to be statistically non-significant Among the urban participants 16(10.7%) while among rural participants 25(10.0%) had cervical problem due to smart- phone use and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 37(24.7%) while among rural participants 24(9.6%) had mental health problems (like depression, loneliness, irritation etc.) due to smart- phone use and difference between urban and rural participants was found to be statistically significant. Among the urban participants 8(5.3%) while among rural participants 23(9.2%) had musculoskeletal problem (like pain in hands, thumb, fingers) due to smart- phone use and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 11(7.3%) while among rural participants 16(6.4%) had suffered from any injury or met an accident due to smart- phone use and difference between urban and rural participants was found to be statistically non-significant. (Table-4)

Table-4: Health problems due to Usage of smart phone among study participants

S.No.	Variables		Urban	Rural	Total	P value	
1.	Do you suffer from eye strain/watering/itching in eyes?	No	N	82	118	200	0.179
			%	54.7%	47.2%	50.0%	
		Yes	N	68	132	200	
			%	45.3%	52.8%	50.0%	
2.	Do you have difficulty in sleep due to smart-phone use?	No	N	111	197	308	0.272
			%	74.0%	78.8%	77.0%	
		Yes	N	39	53	92	
			%	26.0%	21.2%	23.0%	
3.	Do you have headache due to smart-phone use?	No	N	114	201	315	0.314
			%	76.0%	80.4%	78.8%	
		Yes	N	36	49	85	
			%	24.0%	19.6%	21.2%	
4.	Do you have cervical problem due to smart-	No	N	134	225	359	0.866
			%	89.3%	90.0%	89.8%	

	phone use?	Yes	N	16	25	41	
			%	10.7%	10.0%	10.2%	
5.	Do you have mental health problems (like depression, loneliness, irritation etc.) due to smart-phone use?	No	N	113	226	339	0.000
			%	75.3%	90.4%	84.8%	
		Yes	N	37	24	61	
			%	24.7%	9.6%	15.2%	
6.	Do you have any musculoskeletal problem (like pain in hands, thumb, fingers) due to smart-phone use ?	No	N	142	227	369	0.181
			%	94.7%	90.8%	92.2%	
		Yes	N	8	23	31	
			%	5.3%	9.2%	7.8%	
7.	Do you ever suffer from any injury or met an accident due to use of smart phone?	No	N	139	234	373	0.837
			%	92.7%	93.6%	93.2%	
		Yes	N	11	16	27	
			%	7.3%	6.4%	6.8%	
Total			N	150	250	400	
			%	100.0%	100.0%	100.0%	

Source: Field Survey

Among the urban participants 18(12.0%) while among rural participants 28(11.2%) had habit of using smart- phone while driving and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 65(43.3%) while among rural participants 92(36.8%) had habit of using smart- phone while in meeting / conferences/ workshop /any function and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 103(68.7%) while among rural participants 172(68.8%) had habit of using smart- phone while sitting in a group of family members and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 117(78.0%) while among rural participants 194(77.6%) had habit of using smart- phone just before sleeping in night and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 61(40.7%) while among rural participants 120(48.0%) had habit of using smart- phone if you ever wake up in night and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 91(60.7%) while among rural participants 164(65.6%) had habit of using smart- phone soon after wake up in morning and difference between urban and

rural participants was found to be statistically non-significant. Among the urban participants 73(48.7%) while among rural participants 113(45.2%) had habit of using smart- phone in toilet and difference between urban and rural participants was found to be statistically non-significant. Among the urban participants 79(52.7%) while among rural participants 142(56.8%) feel addicted to smart phone and difference between urban and rural participants was found to be statistically non-significant. (Table-5)

Table-5: Habits of smart phone use in different situations among study participants

S.No.	Variables		Urban	Rural	Total	P value
1.	Do you have habit of using smart phone while driving?	No	N 132	222	354	0.872
			% 88.0%	88.8%	88.5%	
	Yes	N 18	28	46		
		% 12.0%	11.2%	11.5%		
2.	Do you have habit of using smartphone while in meeting / conferences/ workshop?	No	N 85	158	243	0.206
			% 56.7%	63.2%	60.8%	
	Yes	N 65	92	157		
		% 43.3%	36.8%	39.2%		
3.	Do you have habit of using smartphone while sitting in a group of family members?	No	N 47	78	125	1.000
			% 31.3%	31.2%	31.2%	
	Yes	N 103	172	275		
		% 68.7%	68.8%	68.8%		
4.	Do you have habit of using smart phone after going to bed in night?	No	N 33	56	89	1.000
			% 22.0%	22.4%	22.2%	
	Yes	N 117	194	311		
		% 78.0%	77.6%	77.8%		
5.	Do you have habit of using smart phone ,if you ever wake up in night?	No	N 89	130	219	0.177
			% 59.3%	52.0%	54.8%	
	Yes	N 61	120	181		
		% 40.7%	48.0%	45.2%		
6.	Do you have habit of using smart phone soon	No	N 59	86	145	0.335
			% 39.3%	34.4%	36.2%	

	after wake up in morning?	Yes	N	91	164	255	
			%	60.7%	65.6%	63.7%	
7.	Do you have habit of using smart phone in toilet?	No	N	77	137	214	0.535
			%	51.3%	54.8%	53.5%	
		Yes	N	73	113	186	
			%	48.7%	45.2%	46.5%	
8.	Do you ever feel addicted to smart phone?	No	N	71	108	179	0.467
			%	47.3%	43.2%	44.8%	
		Yes	N	79	142	221	
			%	52.7%	56.8%	55.2%	
			N	150	250	400	
			%	100.0%	100.0%	100.0%	

Discussion

In the present study, among the urban participants 98% while among rural participants 240(96%) were using their own personal smart phone and difference was found to be statistically non-significant. Among the urban participants 83 (55.3%) while among rural participants 176(70.4%) were using smart phone >2 hours per day and difference was found to be statistically significant. Sinha S et al³ also found in their study that 98.19% of participants were using smart phone and 51.21% were using the mobile phone for more than five hours. According to the report by App Annie, average smartphone usage is about 4.6 hours a day in India which stands third after Indonesia and Brazil.⁴ In another study by Patki MB et al², no significant difference was found in usage pattern of mobile phones pertaining to age, years of usage and total hours of usage. Acharya et al showed that almost all the participants 96.1% possessed cell phones, and used the device for a greater part of the day. (Bagvey, 2018)

In the current study, among the urban participants 99.3%) while among rural participants 98.4% were using social networking sites (facebook/whatsapp/tweeter/ instagram etc.), among the urban participants 75.3% while among rural participants 73.6% were using music & video apps, & among the urban participants 44.7% while among rural participants 42.8% were using news apps and difference was found to be statistically non-significant in the usage of these apps. Among the urban participants 43.3% while among rural participants 16.8% were using gaming apps& among the urban participants 56.0% while among rural participants 40.4% were using app related to the academic work and difference between urban and rural participants was

found to be statistically significant in the usage of these apps. Sinha S et al (2019) also found in their study that smart phone was used for academic purpose was 89.89%, entertainment 97.75% and for social networking 89.53% by the participants. Bagday et al (2018) in their study showed 5.96% were using internet on mobile phones for chatting, 59.59% for shopping and 40.92% for games. For playing games, mobile phone was used by 14.4%, 5.8% and for watching movies and songs 21.81%, 8.3% according to Damor et al¹³ and Ghosh et al (2012). In another study by Mehta J et al¹⁵, 78% of smart phone owners indulge in searching from their device, 77% of smart phone users in India like listening to music on their smart device and close to 35 % of smart phone owners either read newspapers, book and magazines or watch TV and close to 33% enjoy playing games. In another study by Patki MB et al (2020), it was observed that playing games in mobile phones was more in urban (50.5%) when compared with rural (35.5%). Listening to music using mobile phones was also more in urban (77.7%) when compared with rural (54.5%). Also in their study, Factors like internet usage, Facebook, Instagram, WhatsApp, YouTube, Email, online shopping, and browsing were more in urban population when compared with rural population. Increase in number of free mobile data by various service providers, which could have made the customers to use more of internet facilities and social networking through smart phones.

In the present study, among the urban participants 45.3% while among rural participants 52.8% were suffering from eye related problems like eye strain/watering/itching in eyes. Among the urban participants 26.0% while among rural participants 21.2% had difficulty in sleep due to smart- phone use. Among the urban participants 24.0% while among rural participants 19.6% had problem of headache due to smart- phone use. Among the urban participants 10.7% while among rural participants 10.0% had cervical problem due to smart- phone use. Among the urban participants 5.3% while among rural participants 9.2% had musculoskeletal problem due to smart- phone use. Among the urban participants 7.3% while among rural participants 6.4% had suffered from any injury or met an accident due to smart- phone use. All these differences in health problems were found to be statistically non-significant. But among the urban participants 24.7% while among rural participants 9.6% had mental health problems due to smart- phone use and this difference between urban and rural participants was found to be statistically significant. Sinha S et al (2019) found in their study that 46.21% faced sleep deprivation due to smart phone use, (51.26%) experienced decrease in concentration, majority of them have faced eye symptoms (55.23%) and headache 42.60% and one fourth of them had faced neck pain (27.44%), restlessness (24.55%) & painful fingers (24.19%) .Study conducted by Arumugam et al where 64.3% had experienced health

problems like headache, sleep disturbance, ear pain, irritability. Similar study was conducted by Paul et al found that 35.4% of the participants complained of headache and spasms of arm or neck muscles (31.0%) or loss of attention (24.7%). A similar study done by Stalin et. al showed that most of the respondents complained of headache (35.2%), neck pain (17.3%), eye problems (10.7%) and sleep disturbances (10%).¹⁰ Similarly in the study by Patki MB et al, majority of the participants experienced health problems like headache (40%), eye symptoms (63%) which includes symptoms like eye irritation and eye strain, sleep disturbances (24%) and neck pain (21%) due to prolonged mobile usage. Among physical symptoms like body pains (32.19%), eye strain (36.51%), digital thumb (13.8%) were found to be frequent in their study. They also found that the perceived ill health effects like headache and neck pain were more common among urban population and was also statistically significant. Another study by Acharya JP¹¹, the most common symptom reported was Headache (51.47%) followed by anger/irritability (50.79%). Other common mental symptoms seen were lack of concentration and poor academic performance, insomnia, anxiety etc. Another study done by Arumugam et al showed that majority of the participants (64.3%) experienced health problems like headache, sleep disturbances, irritability and nearly 52% of the students responded that they were addicted to mobile phones. These health problems can be attributed to the increased usage of smartphones among participants.

In the present study, among the urban participants 12.0% while among rural participants 11.2% had habit of using smart- phone while driving ,among the urban participants 43.3% while among rural participants 36.8% had habit of using smart- phone while in meeting / conferences/ workshop /any function , among the urban participants 168.7% while among rural participants 68.8% had habit of using smart- phone while sitting in a group of family members , among the urban participants 78.0% while among rural participants 77.6% had habit of using smart- phone just before sleeping in night, among the urban participants 40.7% while among rural participants 48.0% had habit of using smart-phone if you ever wake up in night ,among the urban participants 60.7% while among rural participants 65.6% had habit of using smart- phone soon after wake up in morning , among the urban participants 48.7% while among rural participants 45.2% had habit of using smart- phone in toilet and among the urban participants 52.7% while among rural participants 56.8% feel addicted to smart phone and all these difference between urban and rural participants was found to be statistically non-significant. Similar to our study, Sinha S et al reported that 23.83% of study participants kept the mobile under the pillow while sleeping, only 7.58% of them switched off their phone during sleep, 21.30% of them check the mobile for any missed calls or messages at midnight and 65.70% of them

were checking the mobile as soon they get up from the bed. According to George et al, 2019 in Kerala, 34% were checking their phone at midnight. In the study by Sinha S et al (2019) 6.86% were using the mobile phone while driving and 17.4% in a study conducted in South India (2013). In studies conducted in Indian adult population, Nehra et al, (2012), found 33.5% participants while Aggarwal et al (2012), found 39.6% participants had mobile phone dependence. Patki MB et al, (2020) in their study found that the usage of mobile phones was more during night time (52.4%) in urban area versus rural (40%) and the findings were statistically significant. In their study, factors like, decreased interaction with family members and conflict with family members were more in rural population and statistically significant.

All these difference and similarity between the studies can be attributable to socio demographic, geographic, cultural, customs, sample size and the study population of the studies.

Conclusion

Our study concluded that urban participants were more often using social networking, music, video, news, academic & gaming apps, had more sleep, headache, cervical & mental health problems and had habit of using smart phones in meeting / conferences/ workshop /any function, habit of using smart- phone just before sleeping in night & in toilet while rural participants were more often using smart phone >2 hours per day, suffering from eye related & musculoskeletal problems, had habit of using smart- phone while sitting in a group of family members, if ever wake up in night, soon after wake up in morning and felt more addicted to smart phone.

Both urban and rural participants were likely to become dependent on smart phone which had negative impact on their health and sleep. They should be educated regarding the health problems owing to the over usage of smart phone. For this health education strategies and awareness campaigns can be initiated to make them aware of using the smart phones only for necessity & to optimize its usage time and regarding the ill health effects of smart phone usage.

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Understanding the Inter-Regional Disparities in India in the Post-Globalization Era

Ved Prakash

ABSTRACT

Regional disparities are a global phenomenon. The socio-economic disparities among different regions or nations of the world have been a focus of study by those in power and to the scholars interested in regional politics and economics. Attention has been focused on disparities between Nation-States at the international level as well as disparities between the different regions within these Nation-States. Intra-regional disparities within the regions have also been extensively studied and analyzed within different regions of countries. Growing inter regional disparities are a real and contemporary challenge to Indian growth and development, and to Indian politics. India being a large federal nation witnesses widespread disparities; economic, social and political, between the different regions of the Indian nation.

Keywords: Inter-Regional Disparity, Post-Globalization, India

Growing inter regional disparities are a real and contemporary challenge to Indian growth and development, and to Indian politics. India being a large federal nation witnesses widespread disparities; economic, social and political, between the different regions of the Indian nation. A remarkable feature of inter-regional disparities in India is the presence of backward areas even within states that have grown faster and are at relatively high-income level on an average. In the era of globalization, opening up of an economy could be correlated with the rising inter regional inequalities. Since global integration leads to a sharper expression of comparative advantages the well-placed regions in terms of geography, education and governance grab global opportunities and are better accessed while others lags behind. It is hence a matter of considerable research interest to know the manner in which inter

regional disparities have grown in the level of economic, social and political spheres in India over time in the past two decades. The paper is a dispassionate attempt to find how in a liberalized economic scenario, with the affirmation of faith in the market mechanism and an implicit assumption that the invisible hand will deliver the goods which leads to the further increased in inter regional disparities. Shift from a protectionist national economy with centralized planning to a liberalized and global economy on the plea that the growth could not trickle down under earlier command and controlled regime has been an important factor in the increase of inter-regional disparities. An important aspect of the study is to find out whether regional party politics and coalition governments are the cause or consequence of inter-regional disparities? The attempt is therefore to explore the phenomena of regional party politics in states and coalition government at the center as important aspects which needs deeper analysis to find whether this phenomenon has further accentuated regional disparities or are movements for the mitigation of disparities.

Regional disparities are a global phenomenon. The socio-economic disparities among different regions or nations of the world have been a focus of study by those in power and to the scholars interested in regional politics and economics. Attention has been focused on disparities between Nation-States at the international level as well as disparities between the different regions within these Nation-States. Intra-regional disparities within the regions have also been extensively studied and analyzed within different regions of countries. Many researchers have worked to measure or decipher the patterns of regional development in the process of growth of national economics. It has been argued that regional disparities tend to accentuate in the process or initiate balancing measures.

Therefore, government intervention is considered as an essential requirement to overcome regional disparities both in the developed as well as developing countries. In this context, the problem or regional imbalances is increasingly becoming a matter of greater concern to policy makers in most of the countries, especially in developing countries like India.

One of the important problems of Indian development is that regional disparities are fast increasing. Some states are outgrowing in their capacities, while some others remain poor. These are distinguished as 'forward states' and 'backward states. More than four-fifths of India's population (80.7%) now lives in states with per capita income below the national average. A remarkable feature of India's spatial disparities (Intra regional disparities) is the presence of backward areas even within states that have grown faster and

are at relatively high income levels on average. Eastern and Northern Karnataka, and Inland Eastern Maharashtra are examples of lagging regions within prosperous states. Moreover, they form a contiguous corridor with deprived areas of Andhra Pradesh, Odisha, Chhattisgarh, Jharkhand and Bihar (Tremblay, 2005, pp.341-42). These are tribal backward areas which have seen the growth of Maoist violence in recent times. The region has also been called the 'Red Corridor'.

The problem of regional disparities in economic as well as political development for India up to a great extent is an inheritance from the colonial past. For example, in India historical factors have guided the development of the ports of Mumbai, Tamil Nadu, Kolkata and the three cities have in turn worked as nuclei for the development of Maharashtra, Gujrat and Tamil Nadu and West Bengal respectively, which are at present the most industrially advanced states in India. On the other hand, the areas having natural advantages in the form of mineral resources, such as Bihar, Madhya Pradesh, Odisha and Rajasthan have lagged far behind in the process of economic development.

Besides, the legacy of the Colonial Rule, our economic and development policies followed immediately after independence was responsible for the aggravation of the situation. Though government objectives in the first two plans were to increase production and ensure more equitable distribution. In fact the government becomes more interested in quick results, and as such the greater emphasis was placed on completion of the projects already started by the colonial rulers. As a matter of expediency, it also initiated projects which could be completed within the short period in order to overcome the stagnation that had set in. As a consequence, development outlays were fixed according to the capacities of different states to spend and achieve physical targets. Naturally, the developed states got more favorable treatment than others. The imbalances which were already these became deep-rooted during this period, and in spite of attempts at correcting or preventing the growth of regional imbalances during the Third Plan, imbalances continued to grow.

Many others policies like industrial licenses which largely benefited the developed states, the various public policies directed at encouraging private investments in such regions have been pursued. While efforts to reduce regional disparities were not lacking, but achievement were not commensurate with these efforts (Kurian, 2011, pp.4-5). Considerable level of disparities remained at the end of the seventies. The accelerated economic

growth since the early eighties appears to have aggravated regional disparities. The ongoing reforms since 1991 with stabilization and deregulation policies as their central pieces seem to have further accentuated the regional disparities.

Globalization and its impact

In India, globalization has resulted very paradoxical situation. On the one hand it has allowed more autonomy of action in favour of the state to reap the benefits of globalization, on the other hand it has created long-term basis of crisis in Indian federalism. Bhattacharya explains some of the manifestations of globalization in Indian federalism. First, the political autonomy of the liberal democratic states has been compromised in favour of the market. Second, states have been engaged in fierce competitions among themselves for foreign direct investment and SEZ models of development giving rise to a new division among the states such as forward and backward states, inter-jurisdictional competition in place of inter-state cooperation, and weakening loyalty of the 'union'. Third, with the weakening of the welfare states, the newly created conflicts out of disparity in regional development, and widening inequalities following globalization remain unmitigated. Fourth, with the political autonomy of the liberal democratic state compromised in favour of the market, local governance is more and more exposed to direct penetration by global and corporate power structures. Finally, the gradual withdrawal of the very meagre welfare measures, and the relative absence of any social security, or safety nets, have meant that there is mass protest against globalization led by various forms of grass root political activism. According to Bhattacharya, this cuts into the very democratic basis of legitimacy of the party(ies) in power in the states (Bhattacharya, 2010, p.3).

It is understandable from the above arguments that if out of these competition among the regions and states for foreign capital and investment, the social, economic and political disparities increased in a multiregional and multicultural society, it harms national identity and cohesion. By making a faith in the making a faith in the market mechanism, if state withdraws itself from its social welfare activities under the concept of "rolling the state back" as propagated by globalization, results are dangerous. There is no arbitrator in the inter-regional/intra-regional disputes, and there is no longer planning for removing gaps in development. In the society, class, group including ethnic tensions accentuated, the 'forward' and the 'backward' states created, which are also a great challenge to the national identity.

The end of the cold war has created space for various regional and transitional political associations. Notable example is European Union and other associations which have undermined the classical notion of nation-state based on homogeneity and uniformity. Now there is a notion of genuine federal state respectful of diversity and heterogeneity. So, globalization has created the congenial conditions for federalism.

According to Ronald Watts, the desire for progress, a rising standard of living, social justice, and the growing awareness of the interdependence of the world in conditions of revolutions in communication, transportation, technology and industrial organization has encouraged on the one hand, smaller, self-governing political units, and governments more responsive to citizen' preferences as well as to some primordial group attachments more responsible to citizens' preferences as well as to some other hand, larger political units (transnational, global and so on) where states pool their sovereignties for various common interests. The renewed emphasis on contractual relationship, non-centralized character of the market based economies, entrepreneurial self-governance, consumer rights, diversity and the recognition of the difference, etc., is closely connected with globalization and supportive of the federal idea. This kind of situation seems as a paradigm shift from statism to increasingly decentralized forms of governance in the context of that Thomas Fliener has termed 'diminished state sovereignty' (Watts, 2000, p.395).

Globalization and Growing Regional Disparities in India

Economic liberalization was brought about in a big way since the 1990s in India, although the process had its beginnings in the mid-1960s when Lal Bahadur Shastri then the Prime Minister of India (1964-66), set in motion a process of liberalization. The process of liberalization until the early 1990s was a combined process of liberalization, privatization and globalization. The so-called 'structural reforms' as is heard a lot these days, encompass the combination of 'decontrol and deregulation of industry, changes in monetary and fiscal policy, liberalization of trade policy, changes in monetary and fiscal policy, liberalization of trade policy, changes in foreign exchange regulations, encouragement of foreign direct investment, financial sector reforms, promotion of private foreign investment in infrastructure, partial privatization of public sector units, and the promise to enact labour reforms, and an exit policy that allows bankrupt private sector firms to go out of business (Hardgrave and Kochanek, 2000, p.395).

Now the questions arises that where and how do the states in Indian federation figure in the process of globalization? Is globalization beneficial, or harmful to the India states? To be sure, a federation provides a different space for (reforms) policy interaction and implementation from that of a unitary state, and hence the constituent units of the federation become strategically important in this respect.

The growing literature on globalization and Indian federalism, suggests that Indian federalism has been drastically changed and it needs to be redefined. Rudolph and Rudolph argued that as a result of globalization, the interventionist state in India had given way to a 'regulatory state, which again was more suited to a growing multi-party system (Bhattacharya, 2010, p. 8) He believes that Indian federalism has undergone some major transformation from the inter-governmental cooperation to inter-jurisdictional competition (among the states).

Globally, opening up of an economy appears to be correlated with rising spatial inequalities. Since global integration leads to a sharper expression of comparative advantage, and regions well placed in terms of location, education, governance and initial conditions tend to surge ahead as global opportunities are better accessed, while others lag behind. These are serious concerns then if the fact some Indian states with large populations and vast natural resource were pockets of poverty. This concern has even greater relevance today because the changes over time in the boundaries and in the number of states in India have been such as to make each of them more and more linguistically, culturally and even ethnically homogeneous.

Secondly, analyzing the balance sheet of benefits and loses resulted from globalization, at the positive side of globalization; states are today offered more freedom of action in respect of adopting and implementing structural adjustment programmes. The states have become more competitive for inviting investment, industrialization, trade and commerce, entrepreneurial governance for development. Globalization thus is encouraging for more rights for the states, but it is difficult to conclude that all the states will benefit equally from out of globalization, and also that people in each state will be able to reap the benefits of globalization. At the negative side, globalization as economic and political processes has posed new challenges for Indian states. First, democratically mandated state governments are more politically vulnerable because being close to the people it is they who suffer from the after effects of the policies of globalization. In other words,

implementation of some unpopular structural adjustment policies may cut into the democratic basis of state government. At the same, the globalization may create risk and uncertainties for the states governing parties' legitimacy since an uncritical approach to and implementation of the reforms process inevitably adversely affects the socially and economically vulnerable sections of society, and paves the way for what is termed 'democratic deficit'. Second, give the growing inter-state and inter regional disparities in terms of investment, whether by FDI, or otherwise, when placed in the context of the withdrawal of the central state, there is genuine ground for fear that the situation will accentuate inter regional tensions and encourage ethnic conflicts, which will affect adversely the sense of national identity. Third, we have also the phenomenon of regional party policies coming up in a big way in last few years, not only at the state level but also the formation of a number of coalition governments at the centre. In such a scenario, widespread inter-state disparities in levels of economic and social development can have serious economic, social and even political consequences this being particularly so if these have persisted over a long period of time.

Conclusion

The study of inter-regional disparities in India in the globalized and liberal economic era presents a discouraging scenario. Globalization propelled growth has favored, broadly urban India, organized sectors, richer states, and property owners against rural India, unorganized sectors, poorer states and wage earners. The result is a huge polarization of the economy and society resulting from the policy.

Looking from the view point of national unity and integrity, the effects of globalization are more acute in terms of inter-state and intra-regional disparity in India. Historically during the colonial period India's regions lacked balanced development. The centuries of colonial exploitation and plunder of India left the country on independence (1947) not only underdeveloped but with huge unevenness in regional development. Later, regional and separatist movements were mainly the result of that uneven regional development. In post-independence period there was hope on socially and economically interventionist state for ensuring political unity and cohesion. But globalization seems upsetting all that by recreating basis of ethno-regional conflicts. It has resulted in creating broadly two groups of states as R.C. Tremblay called, 'have' states and 'have-not' states.

Building national unity and identity in the midst of manifold, complex diversity coupled with mass poverty, illiteracy, extremes of social and economic inequalities and so on in India, has since independence been perhaps the most difficult task. But India's achievement in this regard, compare to other post-colonial states has been remarkable indeed. But in the wake of globalization. Withdrawal of the public welfare state, globalization propelled growth has produced disparities of many kinds, and somewhere sharply polarizing the society. This kind of complex situation sometime looks creating challenges to our democracy and the hope is on governments and people to overcome all these challenges in order to strengthen national identity and cohesiveness.

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The Anxiety Level of Inter-College Male Volleyball Players of Himachal Pradesh University: A Comparative Analysis

Shamsher Singh & Ashok Kumar

ABSTRACT

The purpose of this study was to compare the anxiety among winner and loser male volleyball players of Himachal Pradesh University. The present study has been conducted on 192 players with an aim to find out the difference in selected psychological variable between winner and loser of inter-college volleyball players of Himachal Pradesh University. To analyze the difference in selected psychological variable of winner and loser sportsmen were determined through 't' test. Anxiety variable was selected on the basis of available literature and discussion with experts. Anxiety was measured by using Anxiety Questionnaire developed by A.K.P. Sinha and L.N.K. Sinha. Collected data was analyzed with the help of 't' test at 0.05 level of significance. It has been found that there is significant difference between winner and loser male volleyball players from inter-college championship of Himachal Pradesh University.

Keywords: Anxiety, volleyball players, sports competition.

Introduction

Sports are Physical, psychological and social activities. It has both psychological and social dimensions, besides physical, physiological and technical aspects. The main objectives of sports are to develop physical and mental health. Further, it also integrates or brings about psycho-physical coordination, socialization and cultural interaction, and thus develops a spirit of tolerance in order to promote national and international, social and

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cultural integration and peace. Man's interest in sports is found in all societies of the world. Most of the nation's share a common interest in sports competition, especially during the Olympics. But the quality of participation of students and sportsman are determined by their psychological factors. In this modern era of competition, the psychological preparation of an individual's is as much important teaching the different skills of a game on scientific lines. The individuals are prepared to develop the skills through competition. This is not only to develop proficiency but also to develop the spirit of sportsmanship with which they play and perform their best in the competition.

Anxiety is one of the important psychological factors that severely affect athletes' performance, particularly in critical and determining situations. Anxiety is the concept of unsafe or a threat of which the person clearly does not understand the resource. The type of anxiety that in recent years in the field of sport psychology have been considered, is competitive anxiety occurring in competitive sport situations, and is defined as the desire to understand the competitive position as a threatening factor that the response to this situation is associated with a sense of worry and stress. When discussing competitive anxiety, even professional players who have high anxiety, compared with players who have low anxiety, when placed in a state of anxiety, they show large increase in physiological arousal, so they are more prone to drop on the run.

Kamlesh (1998), sports competition without 'aggression' is body without soul. Competition and aggression are twins. There is clear evidence that in general aggression is more boisterous games, help performance because it arouse players overly to put in harder effort, and "do or die" for the success of the team. Aggression comes from the Latin word 'aggress', 'Ad' (to or toward) and greater (walk). Literally then the word means 'to work towards or approach'.

Spielberger (1989), anxiety should be considered in terms of being a trait or state characteristic. Trait anxiety is similar to a personality characteristic. It is a person general predisposition to perceive a situation as threatening or non-threatening. State anxiety has been closely associated with an individual's level of arousal. State anxiety refers to an existing or an immediate emotional state characterized by apprehension and tension. State anxiety is immediate or right now emotional responses that can change from one moment or situation to the next. For example, a person's state anxiety might be low at night before an athletic contest, moderate in the morning of the event, rise steadily as the contest draws near the return to a low or moderate level once the activity.

State anxiety generally follows a pattern of personal feelings of tension and inadequacy, combined with heightened arousal of the autonomic nervous system. It is an immediate emotional state of an individual that is characterized by apprehension, tension, fear and an increase in physiological arousal. The level of the anxious state alternates according to the number of stressful stimuli the athlete encounters, and the period of subjective threat created by the stimuli (Hackfort & Schwenkmezger, 1989).

Gray (1982a) and Eysenck (1967) assume that physiological differences account for the differences in anxiety level that people experience and that there is a genetic basis for individual differences in anxiety. A number of genetic studies, especially of twins, indicate that perhaps 30%-50% of the variance in trait anxiety may be genetic (Eysenck, 1997) although this is not a trivial amount, it accounts for only half the variance, at best. It would be seen that other factors must be brought into play. This other factor also has a basis in the brain but of a different sort than we usually attribute to emotion.

Gray (1982b), fear and anxiety are generally conceded to involve arousal of the systematic nervous system and related hormones. Gray (1982b) proposed a theory that more specifically relates anxious behavior to particular brain locations and neurochemistry.

Successful play in volleyball is not the outcome of power alone but it is the product of combined display of power, shrewdness and abilities. Modern game of volleyball is characterized by accuracy and differentiation which can be facilitated by absolute self-control and maximum concentration.

In several ball games a technical skill, anthropometrical characteristics and a physical performance capacity of an individual player are most important characteristics that contribute to the competitive success of a whole team. However, volleyball is an anaerobic sports having high alacrity anaerobic power production performed with fairly long recovery periods. But modern era's throat cutting competitions it is the bitter psychological make-up that helps athletes to overcome stress provoking situation and to give their best performance.

We like to think of sports as a unique part of our lives, yet sports psychologists have recognized many sports psychology issues, including the development of physical and psychological skill, the need to cope under pressure and produce to provide services for the performance's arts and the worlds of business. The skill and knowledge that experts' sports psychologists possess are transferable to these and other domains, and the practitioners often gain credibility from work with elite sports performance.

Method

The following are the steps in the sequence of methodology and procedure being adopted in the present study;

Design of Study

A survey type of research study had been designed to investigate the psychological variable anxiety of inter-college level male volleyball players of Himachal Pradesh University

Population

For the present research, population consisted of male volleyball players who were studying in the various colleges located in the state of Himachal Pradesh and affiliated to Himachal Pradesh University Shimla., were selected a sample of the study. The data was collected during intercollege championship which held at Government college Rampur Bushahr during academic session 2018-19. Forty-six male volleyball teams from different colleges of Himachal Pradesh participated in the championship. Twelve teams which include 192 players in the fixture of the championship, qualified for the quarterfinal stage were selected as sample of the study.

Sampling

For the present research investigation, purposive sampling method was being employed. The sample for the present study comprised of male volleyball players who had represented their respective in inter-college volleyball championship of Himachal Pradesh University during academic session 2018-19. There was sample of 192 sportsmen.

Tools Used

To assess the Anxiety of intercollege male volleyball players of Himachal Pradesh University Anxiety inventory developed by A.K.P Sinha and L.N.K Sinha (Sinha's comprehensive anxiety test) (SCAT) was used to collect the data of 192 players at different level from intercollege championship.

Objectives of the Study

1. To find out and compare the level of "Anxiety" between the Pre-Quarter Final Winner and Loser Male Volleyball Players participated in Inter college championship of Himachal Pradesh University.
2. To find out and compare the level of "Anxiety" between the Quarter Final Winner and Loser Male Volleyball Players participated in Inter college championship of Himachal Pradesh University.

3. To find out and compare the level of "Anxiety" between the Semi-Final Winner and Loser Male Volleyball Players participated in Intercollege Championship of Himachal Pradesh University.
4. To find out and compare the level of "Anxiety" between the Final Winner and Loser Male Volleyball Players participated in Intercollege Championship of Himachal Pradesh University.

Purpose of the Study

To achieve the purpose of the study of 192 male volleyball players were selected randomly at different levels from different colleges of Himachal Pradesh who has taken part in Intercollege Volleyball Championship. Anxiety Questionnaire developed by A.K.P. Sinha and L.N.K. Sinha has been used to measure the anxiety level of male volleyball Intercollege Sportsmen of Himachal Pradesh University. To test the significance of mean difference between winner and loser of college sportsmen, statistical technique of 't' test was applied.

Table 1 Comparison of Anxiety level of winner and loser male volleyball players participated at Pre-Quarter Final stage of Intercollege Championship from Himachal Pradesh University

S.No.	Group	N	Mean	Mean Differences	df	S.D.	SEM	"t"
1.	Winner	96	27.52	1.96	190	9.733	.993	1.136
2.	Loser	96	29.48			13.813	1.410	

Significant at 0.05 level of significance.

Table value of "t" at 0.05 level = 1.97 for df 190.

Table value of "t" at 0.01 level = 2.60 for df 190.

As per Table 1, mean value of anxiety level, winners of Pre-Quarter Final stage Intercollege Championship Male Volleyball Players of Himachal Pradesh University is 27.52 and mean value of loser is 29.48. The mean difference is 1.96. Standard deviation of winner is 9.733 and standard deviation of loser is 13.813 respectively. The obtained 't' value for df 190 is 1.136. The obtained 't' value is statistically insignificant at 0.05 level of significance when compared to table value of 't'.

This indicated that winner and loser male volleyball players of Intercollege at Pre-Quarterfinal stage differ insignificantly in the psychological variable i.e., Anxiety. Hence the formulated hypothesis that there would be no significant

difference between winner and loser volleyball players at Pre-Quarter Final stage in the psychological variable 'Anxiety'. Null hypothesis stands accepted.

The mean difference between winner and loser in the psychological variable i.e., Anxiety for Pre-Quarter Final stage Male Volleyball Players of Intercollege Championship from Himachal Pradesh University is further graphically depicted in Figure 1.

Figure 1

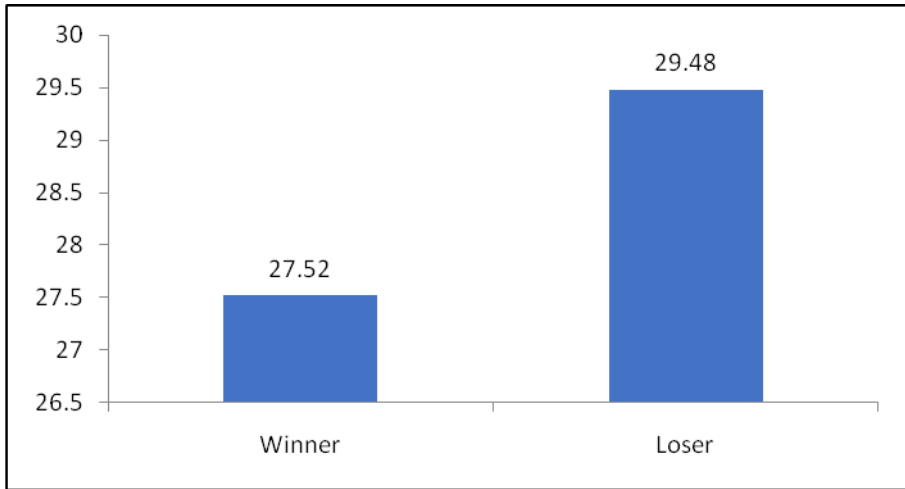


Table 2 Comparison of Anxiety level of winner and loser male volleyball players participated at Quarter Final stage of Intercollege Championship from Himachal Pradesh University

S.No.	Group	N	Mean	Mean Differences	df	S.D.	SEM	"t"
1.	Winner	48	25.04	4.96	94	8.298	1.198	2.568
2.	Loser	48	30.00			10.492	1.514	

Significant at 0.05 level of significance.

Table value of "t" at 0.05 level = 1.98 for df 94.

Table value of "t" at 0.01 level = 2.63 for df 94.

As per Table 2, mean value of Anxiety level, winners of Quarter Final stage Intercollege Championship Male Volleyball Players of Himachal Pradesh

University are 25.04 and mean value of loser is 30.00. The mean difference is 4.96. Standard deviation of winner is 8.298 and standard deviation of loser is 10.492 respectively. The obtained 't' value for df 94 is 2.568. The obtained 't' value is statistically insignificant at 0.05 level of significance when compared to table value of 't'.

This indicated that winner and loser male volleyball players of Intercollege at Quarterfinal stage differ significantly in the psychological variable i.e., Anxiety. Hence the formulated hypothesis that there would be no significant difference between winner and loser volleyball players at Quarter Final stage in the psychological variable 'Anxiety'. Null hypothesis stand rejected.

The mean difference between winner and loser in the psychological variable i.e. Anxiety for Quarter Final stage Male Volleyball Players of Intercollege Championship from Himachal Pradesh University is further graphically depicted in Figure 2.

Figure 2

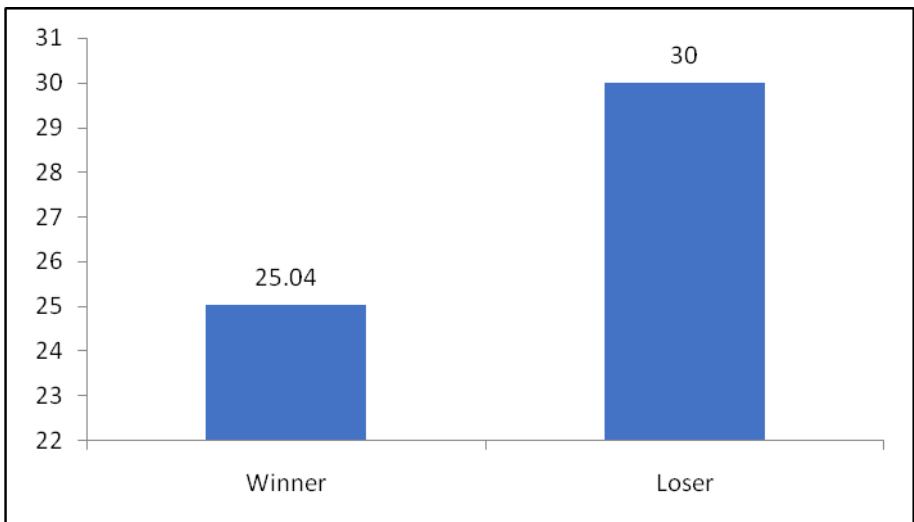


Table 3 Comparison of Anxiety level of winner and loser male volleyball players participated at Semi-Final stage of Intercollege Championship from Himachal Pradesh University

S.No.	Group	N	Mean	Mean Differences	df	S.D.	SEM	"t"
1.	Winner	24	23.29	3.5	46	11.529	.985	1.480
2.	Loser	24	26.79			1.179	.609	

Significant at 0.05 level of significance.

Table value of "t" at 0.05 level = 2.01 for df 46.

Table value of "t" at 0.01 level = 2.68 for df 46.

As per Table 3, mean value of Anxiety level, winners of Semi-Final stage Intercollege Championship Male Volleyball Players of Himachal Pradesh University are 23.29 and mean value of loser is 26.79. The mean difference is 3.5. Standard deviation of winner is 11.529 and standard deviation of loser is 1.179 respectively. The obtained 't' value for df 46 is 1.480. The obtained 't' value is statistically insignificant at 0.05 level of significance when compared to table value of 't'.

This indicated that winner and loser male volleyball players of Intercollege at Semi-Final stage differ insignificantly in the psychological variable i.e., Anxiety. Hence the formulated hypothesis that there would be no significant difference between winner and loser volleyball players at Semi-Final stage in the psychological variable 'Anxiety'. Null hypothesis stands accepted.

The mean difference between winner and loser in the psychological variable i.e., Anxiety for Semi-Final stage Male Volleyball Players of Intercollege Championship from Himachal Pradesh University is further graphically depicted in Figure 3.

Figure 3

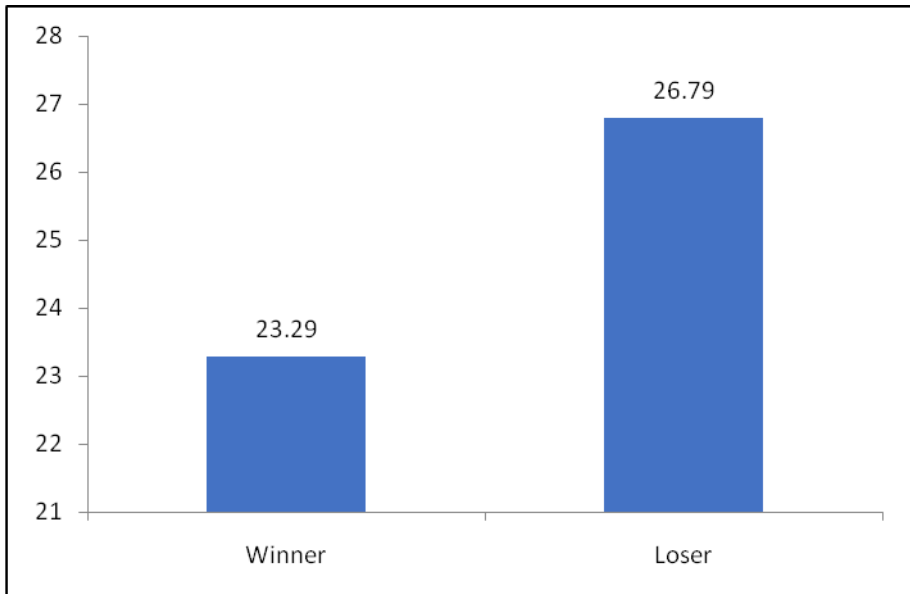


Table 4. Comparison of Anxiety level of winner and loser male volleyball players participated at Final stage of Intercollege Championship from Himachal Pradesh University

S.No.	Group	N	Mean	Mean Differences	df	S.D.	SEM	"t"
1.	Winner	12	13.33	13.92	22	15.269	4.408	1.757
2.	Loser	12	27.25			3.251	.938	

Significant at 0.05 level of significance.

Table value of "t" at 0.05 level = 2.07 for df 22.

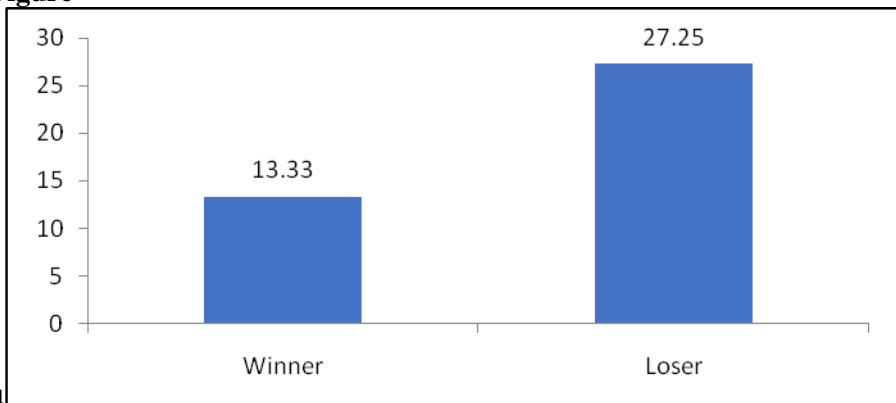
Table value of "t" at 0.01 level = 2.82 for df 22.

As per Table 4, mean value of Anxiety level, winners of Final stage Intercollege Championship Male Volleyball Players of Himachal Pradesh University is 13.33 and mean value of loser is 27.25. The mean difference is 13.92. Standard deviation of winner is 15.269 and standard deviation of loser is 3.251 respectively. The obtained 't' value for df 22 is 1.757. The obtained 't' value is statistically insignificant at 0.05 level of significance when compared to table value of 't'.

This indicated that winner and loser male volleyball players of Intercollege at Final stage differ insignificantly in the psychological variable i.e., Anxiety. Hence the formulated hypothesis that there would be no significant difference between winner and loser volleyball players at Final stage in the psychological variable 'Anxiety'. Null hypothesis stands accepted.

The mean difference between winner and loser in the psychological variable i.e., Anxiety for Final stage Male Volleyball Players of Intercollege Championship from Himachal Pradesh University is further graphically depicted in Figure 4.

Figure



Discussion and Findings

Sports are a medium which can provide a sense of purpose, a sense of continues challenge, as well as a range of emotion which is some-time difficult to experience elsewhere. There are few occasions where we have such close comment and with over selves, as in sports. Great satisfaction comes from the actual experience of being competent and in control. There are numerous opportunities for personal growth and for stretching forth the limits of human potential both physically and psychologically.

The desire to do your personal best, to excel, to attain the highest standard of performance, to be supreme in one's chosen field is a worthy human ambition which has led and can continue to led to increased standard and personal growth. Yet high levels of achievement and excellence in any area do not come easily. There are numerous obstacles to overcome and barriers to push aside. The Greatest barriers we confront in our pursuit to excellence are psychological barriers which we impose upon ourselves, sometimes unknowingly.

The present study was conducted to compare the anxiety level of male volleyball players at difference stages of Intercollege Championship of Himachal Pradesh University.

Anxiety generally follows a pattern of personal feelings of tension and inadequacy, combined with heightened arousal of the autonomic nervous system. It is an immediate emotional state of an individual that is characterized by apprehension, tension, fear and an increase in physiological arousal. In competitive situation an athlete can react both physically and mentally in a manner which can negatively affect his performance abilities.

From the table 1, 2, 3 and 4, it is quite clear that the winners of pre-quarter final, quarter final, semi-final and final stages of intercollege male volleyball championship has found lower mean value in the psychological variable i.e., Anxiety, as compared to their counterpart i.e. loser. Losers found more anxiety level as compared to winners of different stages of championship.

Sports competition creates some anxiety in nearly all participants, and for some individuals the anxiety is so intense that successful performance and enjoyments of the activity is impossible. To an extent, all human behaviour is influenced by anxiety. Anxiety is a fundamental human emotion that evolved our countless generations as an adaptive mechanism for coping with change (Spielberger, 1989).

Conclusion

Anxiety is a term used to describe uncomfortable feeling of nervousness, worry and tension, which we all feel from time to time. Anxiety can affect anyone, whatever their age, gender etc. it effect our thoughts, physical reaction, moods and behavior's. Anxiety can also cause us to feel panicky and frightened and prevent us from doing things. Too much stress in our lives can result in higher level of anxiety. Anxiety is also a perfectly normal response to threat, and in some situation that is really it can be helpful in preparing us for action. Situations such as job interviews, taking exams, sporting events or even helping us to pay our bills one time. However, if anxiety occurs too often and for no apparent reason, or if it begins to interfere with our life, than it has become a problem. We know from research that at any one time, there are many people experiencing anxiety that is a problem to them. Anxiety can either be very general; affecting many areas our lives, or it may be more specific to certain situations such as crowded place, talking to people or travelling on buses. It could even occur as a specific phobia such as a fear of lifts or a fear of abiders.

Anxiety can affect sports positively or negatively. Because competitors may misunderstand the terms anxiety, nervousness or arousal. Accordingly, problems can be created for athletes by both over intensity and under intensity; therefore, each athlete needs to develop the ability to find and maintain their prime intensity level that is most optimal to performance.

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B.R. Ambedkar's Perception of the Indian Economy and its Relevance

Vimal Raja & Ajil Babu

ABSTRACT

Dr. B.R. Ambedkar was a renowned economist; Ambedkar was a well-known scholar in the economic area of research. He has the principles of welfare economics, and his serious research study subject is Political Economy. He has seriously regularly thought about the currency problem, poverty, taxation policy, caste economies, and India's unemployment. The establishment of the Reserve Bank of India is a sweet fruit of his recommended things. Dr. B.R Ambedkar was an economic theme not foreside of the capitalistic economy. He supports the communist economy and distinguishes between Marxist Economy and Welfare Economy. He tried to apply mixed economies such as capitalistic Economies and socialistic Economies. Ambedkar's thoughts on economics are very relevant to the Indian economy, and Ambedkar's view on currency exchange is legally responsible for studying the economists. The present paper tries to explore Dr. Ambedkar's perceptions of the Indian economy in a different way of land reforms, taxation policy, currency problem economics of caste and Nationalization and Industries, etc.

Keywords: Dr. Ambedkar, Poverty, taxation policy, unemployment, and Caste

Introduction

Dr. B.R. Ambedkar was a renowned economist; Ambedkar was a well-known scholar in the economic area of research. He has the principles of welfare economics, and his serious research study subject is Political Economy. He has seriously regularly thinking about the currency problem, poverty, taxation policy, caste economies, and India's unemployment. The establishment of the Reserve Bank of India is a sweet fruit of his recommended things. Dr. B.R Ambedkar was an economic theme not

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foreside of the capitalistic economy. He supports the communist economy and distinguishes between Marxist Economy and Welfare Economy. He tried to apply mixed economies such as capitalistic Economies and socialistic Economies. Ambedkar's thoughts on economics are very relevant to the Indian economy, and Ambedkar's view on currency exchange is legally responsible for studying the economists.

Ambedkar was a strong advocate of Political Democracy, and India should have a Mixed economy with a more significant role for the State, particularly in the early stages of the development. Dr. B.R Ambedkar believed that a newly independent India's productivity could remain low unless the government played an active role, and even handedness would not be possible. Ambedkar portrays “the requirement on the state to plan the economic life of the people which is lead to the private enterprise and provide for the equitable distribution of wealth highest point of productivity without closing every avenue to.” Being born at a juncture in Indian history when the social structures of caste swept deeply into the lives of every Indian, Ambedkar faced immense hostility as a Dalit. These historical experiences led him to eventually become one of the greatest minds who brought about social transformation in India. Dr. Ambedkar addressed the socio-economic and political questions as a historian, an economist, a constitutionalist, journalist, parliamentarian, prolific writer, activist, lawyer, and philosopher. A cross-cultural intervention in every walk of his life, from social involvement to evolving a political philosophy, formed the basis of Ambedkar's concept as a Universalist. About the caste system, Ambedkar enabled the ex-untouchable castes to explore and build their lives devoid of inequality, consequently with dignity.

In contrast, a never-ending quest for scientific inquiry became possible, which allowed him to understand caste and gender power structures and their associated discourses from a different perspective. With further development of his ideas, a new school of thought evolved as an ideological or practical intervention of inclusiveness of historically excluded communities to achieve socio-economic equality. It laid down certain pathways for the devalued, dehumanized, and disempowered people to transform from apathy to action, dependency to independence. The powerlessness to assertiveness, ignorance of knowledge, alienation to involvement, and manipulation of self-determination.

Ambedkar's rhetoric in nation-building was earmarked as an eminent economist through his direct participation and formulation of specific developmental policies and planning. He was one of the foremost Indians to write a comprehensive economic study, addressing the economic problems

and their theoretical underpinnings. Most significant and outstanding of his economic studies comprise ideas of fiscal policy and administration, the problem of Indian people, poverty, unemployment, the question of inequality, stagnant agriculture, and distorted industrialization. His master's and doctoral thesis from Columbia University was reflected in the Indian economy, his thesis 'The Evolution of Provincial Finance in India' and 'the rupee problem.' He critically analyzed the problems of landless labourers, khoti system, smallholdings, collective farming, maharwatsan, land revenue, and the abolition of the zamindari system. In addressing many of these issues, including overcoming the taxation problem, he suggested the nationalization of industries, socialistic ideas, and ensuring social equality, including in his budget speeches.

Dr. Ambedkar and Land Reforms

Ambedkar has provided a solemn reflection on the matter of Indian agricultural arrangement. He made an extremely gradual inference, and major inspection came with him, that he argued that land is just one of many factors of production. The productivity of an element of production depends on the extent to which the opposite factors of production are collective. He added that the most objective of the efficient output is to form every aspect of the enterprise contributing to the utmost, which it can only do if it can cooperate with its fellows having the desired capacity. Thus, a perfect proportion should exist between the various factors combined. However, the ideal will vary with changes in proportions. He recognised that it says that if agriculture is to be treated as an economic enterprise, then, per se, there can't be large or small agricultural factors of production.

Dr. Ambedkar's article entitled "The Smallholdings in India and their remedies" was published in 1918. Ambedkar is seriously thinking about the problem of the Indian agricultural system. He made very advanced conclusions, and a major inspection arrived with him. He argued that land is only one of the many factors of production. The productivity of one factor of production depends upon the proportion in which the other factors of production are collective. In his words: "the chief object of an efficient production consists in making every factor in the concern contribute its highest, and it can do that only when it can cooperate with its fellow of the required capacity. Thus, an ideal of proportions ought to exist among the various factors combined. However, the ideal will vary with the changes in proportions". According to him, an economic holding was "a holding which allowed a man to change by producing sufficient to keep him and his family in reasonable comfort after paying necessary expenses." It could be deciphered from the above definition that Ambedkar conceived economic holdings from consumption rather than production. Furthermore, he pointed

out that capital arose from saving, for which there was a requirement of surplus, which it had not obtained within agriculture. The underlying reason for this phenomenon was the presence of a large agriculture-dependent population with a very low proportion of actual cultivation. He pointed out that the existence of idle labours resulted in a depression for the national dividend of India. Hence, the agricultural population of the country exerted immense pressure upon the economy by reinforcing the process of ruralisation complemented by subdivision and fragmentation, for which the only consistent solution was consolidation.

The accumulation of holdings among a few groups has been identified as an acute problem faced by Indian agriculture. It is also burdened with other disadvantages such as difficulties in cultivation and utilization of resources, increasing cost of production, low productivity, inadequate income, and low living standards. In addition, Ambedkar has argued that there was no correlation between productivity and factors such as the size of landholdings, capital, labour, and others. This implied that, despite the land being larger, there is no assurance about productivity or profits without these factors. On the contrary, the productivity could be increased in a smallholding, provided the availability of capital and labour, which later became the basis for the Land Ceiling Act in India.

The existence of bonded labour system and multiple forms of slavery associated with the caste system were pinpointed as extremely detrimental to economic development, and Ambedkar strived for its abolition. Other suggestions to the agrarian question in India included collective farming, economic holding of land or equal distribution, large-scale industrialization, and provision of governmental subsidies for inputs. The cultivation of wasteland by allotting wasteland to landless labourers, assuring them minimum wages, and control and regulation of private moneylenders. In 1918, Dr. Ambedkar wrote an essay on the farm holdings in India; this essay described that the real challenges existed in increasing the stock of capital, which is only possible through large savings in the economy. Would be large numbers of people depend on land for their livelihood, which has unachievable for a longer time. At that moment, the process of industrialization could aid the process, which was Ambedkar's answer to India's agricultural problem. "In short, strange though it may seem, industrialization of India is the soundest remedy for the agricultural problems of India. He argued that the cumulative effects of industrialization, namely a lessening pressure and an increasing amount of capital and capital goods, will forcibly create the economic necessity of enlarging the holding. Not only this, industrialization by destroying the premium on land will give rise to few occasions for its sub-division and fragmentation."

His notion of disguised employment was remarkable, especially when it had been formulated before it evolved as a concept in development economics. Ambedkar anticipated through the lines of Arthur Lewis but two years before his two-sector model of the economy. Lewis' two-sector model argues that when the developing economies were surplus, which constituted the idle labour in the sector farm. It is transferred to the industrial sector to increase the productivity and savings levels in a particular sector, which increases overall economic growth. Dr. Ambedkar's speech in the Bombay Legislative Assembly argued for a suggestion for regulating landholdings. Dr. Ambedkar wanted to that the extension of landholdings by controlling the separation of permanent property.

Dr. Ambedkar and Currency Problem in India

The major economics publications of Dr. B. R. Ambedkar are; “The Problem of the Rupee: Its Origin and Its Solution” (1923) and “The Evolution of Provincial Finance in British India -A Study in the Provincial Decentralization of Imperial Finance”. Dr. B.R. Ambedkar: Ambedkar criticized the thought of pegging the rupee to gold and suggested non-convertible and fully managed currencies with a set spending limit. He assured us that it might be better to implement a measure and work off the gold standard reserve and currency standard. Dr. B. Ambedkar's vision of the pure gold standard includes the employment of gold in an exceedingly standard interchangeable form. In other words, folding money is issued additionally to gold coins, which are possibly exchanged for gold. Under the gold exchange standard, the medium of exchange consisted solely of currency held as tradable gold at fixed rates; during this system, the exchange reserves of such countries can have gold standards. Ambedkar had been highly critical of John Keynes as a crucial economist and proponent of the gold coin standard and immersed the adoption of an in-depth gold.

Besides these, his unpublished M.A. thesis, “Administration and Finance of the East India Company” (1915). Apart from these academic economic writings, there are his Memoranda and evidence given to various government commissions, speeches in the different legislative bodies, and book reviews which all have some economic content. All of these have been brought together by the government of Maharashtra in a multi-volume complete edition, “Dr. Babasaheb Ambedkar: Writings and Speeches.” There is one significant academic paper he wrote in 1918, 'Small Holdings in India and Their Remedies' in Journal of the Indian Economic Society, Vol I, 1918. Besides these, his unpublished M.A thesis is Administration and Finance of the East India Company (Columbia University, 1915). Ambedkar reviled the idea of linking rupees with gold, and he has recommended and involved the inconvertible, fully managed currency with a fixed limit of issue. He had

assured us that it would better introduce a currency system and perform away from the gold standard reserve and the currency standard. Dr. B.R. Ambedkar's view on the pure gold standard comprises the use of gold in some exchangeable standard form. In other words, the paper money had been issued in addition to the gold coins, which were likely to be exchangeable in gold. Under the gold exchange standard, the medium of exchange consisted of only paper currency reserved as transferable gold at fixed rates; in this system, foreign currency reserves of such countries have gold standards could be. Ambedkar had strongly criticized John Keynes as an eminent economist, and also other supporters of the gold exchange standard had argued for a customized gold standard.

In his work, 'The Problem of Rupee' (1923), Dr. B.R. Ambedkar, that the currency problem was best elucidated by Ambedkar, in the year 192, Dr. Ambedkar had presented as evidence before the Hilton-Young Commission. He explained the chain of events that led to the currency problem and established an exchange standard complemented by a realistic theoretical explanation. At the same time, many writers claim that the Government of India initially contemplated the concept of exchange standards. But Dr. B.R. Ambedkar found that it was a cross fault, on the more, opposed it. According to his idea, "a far better way to have a convertible rupee with sound and the essential measure would be to dissolve the rupee, sell them as bullion, use the proceeds for revenue purpose and fill the void by an inconvertible paper." Dr. B.R. Ambedkar added, "Once that is done, the course of action to say that the Indian currency, based on gold as legal tender with a rupee currency fixed, is an issue. He presented 1925 with evidence from before the Royal Commission on Indian currency and finance in the Ambedkar anticipated various steps to resolve the problem of Indian currency, which is stooped the coinage of rupees by enormously closing the mints to the government as to the public. But opening gold for the coinage of an appropriate gold coin, from maintaining and fixing a ratio between rupee and gold coin and rupee could not be exchangeable in gold, which is gold does not convert in rupee.

Dr. Br. Ambedkar supported to gold currency and suggested the conclusion that this could be imbalances in internal payments and eliminate money inflation. Ambedkar opined that gold is the most suitable measure to assure currency flexibility. According to him, the Flower Committee report was irrational and insisted on abandoning the principle of the Committee if the Indian currency has placed on stable terms. This argument was formulated because the persistence of value between different currency factors was a pre-requisite for a well-regulated monetary system. Dr. B.R Ambedkar raised an important question about how the rupee failed to maintain its gold parity. Ambedkar's most important reserved scientific explanation of the fall of the rupee was that there was a loss of currency in its general purchasing parity,

which usually is unfavorable to the balance of trade. Ambedkar had destined the findings of Chamberlin commission or Smith commission regarding Indian currency as they the problem India prices and India price rose not only as much as gold price because grew more than the latter, is observed by Keynes.

Ambedkar's views on Taxation Policy

Another topic discussed by Ambedkar is said to be public finance. Ambedkar draws his main conclusions from his study of the Indian system, which is probably more important now than when he wrote. His writings on monetary economics, provincial and public finance, context, agricultural economics, and their reflections on radical socio-economic changes, reforms, and therefore the quality of political leadership placed within the development perspective aren't only seminal and visionary works but historically unprecedented authenticity and originality. But these have long been ignored in Indian economic thinking. His economic writings were relevant to his contributions to other areas like legal theory and practice, sociocultural philosophy, government, caste, and anthropology, which have earned him the title of Architect of the Constitution of India. Unfortunately, he has projected because of the leader of the "datit". He was an excellent nation-builder who intelligently and meticulously—with a vision—established institutional structures and frameworks, including the Indian Constitution. His economic ideas, though scattered, must be re-studied so as not only to acknowledge him as an excellent economic thinker. The nation-builder but also to counterpoint this quality of economic thought and add cognitive knowledge of the determinants of the specified socio-economic and political situation to generate a change in Bharat and improve our governance and policymaking environment. This is often all the truer on the condition that even seven decades after the Oi Constitution came into force, the dream of "Bharat" as he envisioned it remains unfulfilled. And issues associated with justice, liberty, equality, and fraternity, which are so dear to him, remain unresolved.

Dr. B. R. Ambedkar's views on taxation in the manifesto of the Swatantra Majdur party in 1936. His opinion is that the system that existed then was prejudiced and unequal. He strongly opposed the land revenue system and taxation as these were from poor sections of the society and identified certain pre-requisites of tax. His opinion about the tax revenue system was that executed tax should be imposed based on the payer's capacity and not income. The tax should be less on the poor and more on the rich, the tax should be a certain extent and exception, tax should be equality between different sections of society exemption, and also tax should not lead to a

lowering of the standard of life of the people. Finally, the land revenue taxation should be more flexible and not levied on agricultural land.

Ambedkar on Nationalization of Industries

Dr. Ambedkar, views nationalization as there is no country that may perhaps achieve the rapid pace of development in the absence of industrialization. The production of necessary goods for mass consumption leads to large-scale employment opportunities. Besides, this persuades an optimum utilization of raw materials, thereby falling foreign dependence and increasing labor security, significantly affecting the country's overall development. Dr. B.R. Ambedkar pointed out that the private sector could not formulate heavy industries for large-scale investments in the country; more incentives and implications should be given to developing small-scale industries. The government should initiate these consequences to start up large-scale industries in various sectors of the economy. Ambedkar recommended the nationalization of industries such as transport and insurance. His importance on the rights of the labourers to strike and better conditions of work, and he was envisaged in the post-independent era, there would be a balance between India's industrialization and policymaking. His thought is that the two objectives of abolishing poverty and removing inequalities by ending the development of the masses are at the center of economic development. He also emphasized eliminating economic and social inequalities perpetrated through caste, religion, or gender institutions. Dr. B.R Ambedkar also surprisingly expressed his ideas on free enterprise economy, globalization, liberalization, and privatization as early as 1923. However, it took roughly half a century for India to adopt this framework, and the strength of the currency's value is necessary for propagating the idea of a Free Economy.

Ambedkar spoke in favour of industrialization; he warned against the ill effects of capitalism, arguing how unconstrained capitalism would finally result in exploitation and oppression. According to Dr. Ambedkar, the speech on the economic upliftment of women and his contribution was unchallengeable. In his studies on the Evolution of Patriarchal structures and how it was deeply warped with the caste system to create an inclusive structure of domination and control. Ambedkar points out that for women in India to contribute to the economy becomes possible only with the development of their achievement of social status and equality; it is realized through freedom and equal rights.

Economics of Caste system

Dr. B.R Ambedkar contemplated politics and committed himself to social change rather than economic analysis. Dr. B.R. Ambedkar's vision of the

economy was as complex as his opinion about politics. Both areas cannot be placed purely within laissez-faire or revolutionary socialism frameworks. This could be best deciphered from his analysis of the agrarian question in India. He found no contradiction between cooperative farming on the one hand and industrialization on the other; there is so much empirical evidence from different countries to support his views. Dr. B. R. Ambedkar, the caste system was a significant obstruction in achieving economic development and growth. The caste system came to be historically related to various occupations, which are restrictions on an endorsed identity. This could not allow the people to attain professional skills only when they transcended the caste identity. They understood that a person could not accept a profession that is lower than the one ascribed by caste. According to Ambedkar, contrastingly, every individual has to be choice freedom to choose a different occupation, which is, in this case, delayed due to socio, economic-religious, and restrictions. The lack of inter-occupational mobility has subsequent the logic of endorsed occupation identity; it could be deciphered that caste becomes a direct basis of unemployment in economic efficiency through various groups, and individual integrity demands the survival of competition. As a result, the limitations upon intergenerational mobility of capital, labour, and entrepreneurship get isolated based on caste.

In the economics of the caste system in India, Ambedkar pointed out that there are different types of situations connected to the division of labour. It is to some extent related and disassociated with work from interest. It had also confused cleverness from any persons by denying their growth of vital interest and excluded enlistment to Sudras' miserable situation of all other economic activities of employment opportunities; it has a problem of untouchables. Especially in the labour market, the respect of the oppressed people is completely distracted by the general structure of the theory of caste. The untouchability practices emerge from the concepts of pollution and purity, and it has fragmentation of the country and economy as a whole. They had been placed at the lowest levels of the pecking order, and the untouchables could not sustain their income. There was no education, property, economic security, or independence for former untouchables. They were also prohibited from attaining wealth, which is still evolving. The Ambedkarite Economics with its economic and moral philosophy and economy policy encompassing macro & micro; monetary & economic fiscal policies, have both humane and economic considerations for individual good, common good, and the public good, not merely private good and universal good. It, however, differs from the capitalist, socialist or communist, and welfare economics. It is a new thinking in economics and a new economic

order and must be viewed so, not through the prisms of Adam Smith, Sydney Webb, Karl Marx, or Amartya Sen.

Conclusion:

Dr. Babasaheb Ambedkar was a marvellous, comprehensive thinker, philosopher, and His economic thought had not recognized by the so-called economist. The main reason is that his contribution was to politics and laws after independence. His views on land reforms, mode of farming, and industrialization had spoken on different occasions. His views on outmoded methods of collective farming were his leading thought. The problem of agricultural labours could not be solved within the ambit of even a reformed and improved agriculture. That industrialization alone was the only ultimate remedy for significantly improving their condition. Capital formation is the important factor that gives impetus to economic production. The solution to the problem of landless labourers depends upon the Indian agriculture problem or, more broadly, the Indian economic problem. Ambedkar also advocates that land revenue was brought under the income tax problem, and his views on the problem of the Indian rupee were solved. He traced its history, analyzed all sorts of opinions, and finally gave us his verdict that the problem had arisen because of the neglect by those in the power of the truth that the rupee's internal purchasing power was the primary importance. The real remedy was the democratic collection which economic efficiency, productivity, and overhauling village economy materialized.

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Impact of Economic Reforms on India's Balance of Trade: A Study in the Post-reform Period

Ajay sood

ABSTRACT

During the early years of Independence, the Indian Policy makers adopted a planned economy approach to development and advocated state-run industries with just a few areas open to the private sector. But after three decades, the Policy makers in the early 1980s started realizing the drawbacks of the old inward looking, import substitution strategy of economic development. By mid-1980s, it was clear that a drastic shift in policy was needed to speed up the rate of growth. India launched its massive economic reforms in 1991 under the pressure of economic crises and the government converted the prevailing economic crisis into an opportunity to launch massive economic reforms. After economic reforms significant changes have taken place in the economy. Exports have increased because of qualitative improvement of the products and imports have increased because of liberal import policies. But BOT/BOP deficits instead of narrowing down have further increased because of greater import intensity of exports.

Key Words: Economic reforms, Balance of Trade, OECD Countries, OPEC, Eastern Europe, Developing Countries, Others unspecified countries.

Introduction

The Indian Government followed a comprehensive set of control measures. State intervention was considered essential to deal with under development and industrialization was considered essential for economic development. In the area of trade Economic policies of the first three decades of planning led to inferior quality of domestic production with high cost as compared to world prices. Over a period of time through 1950s, 1960s and 1970s the economy had become over controlled and rigid. Mounting losses of public sector enterprises were causing great concern to the Government. These losses were upsetting fiscal balance of the Government both at the Central

and State levels. By mid-1980s, it was clear that a drastic shift in policy was needed to speed up the rate of growth. Economic liberalization was considered the solution of all problems in the same manner as socialism was considered to be the only method of achieving growth with social justice during the first four decades of development. The government announced new economic policies which radically departed from the economic policies and regulatory framework pursued in India during the previous forty years. The Government recognized in 1991 that the time had come to reshape India's economic policies based on more export-oriented and more globally connected strategies of development. Indian Government launched its massive economic reforms in 1991 under the pressure of economic crises. The then government converted the prevailing economic crisis into an opportunity to launch massive economic reforms. After Economic reforms significant changes have taken place in the economy. After three decades of economic reforms, signs of economic dynamism are visible in the Indian Economy. Indian economy has been growing faster than its historical growth rate. The economy, therefore, has shown that it is capable of achieving high growth rates in response to the implementation of appropriate economic reforms policies.

Large number of studies have already been conducted regarding balance of India's foreign trade & balance of Payment position but no such study has so far been conducted which gives decade wise comparative picture of foreign trade and balance of trade position. Hence in this background the present study is undertaken with a view to achieve the following objectives.

2 Objectives

To analyse balance of trade of India with different trade partners during three decades of economic reforms.

To identify the major problems of India's adverse balance of trade position during post reforms period.

To suggest ways and means for improvement of India's balance of trade in future.

3 Data & Methodology

The present study is based upon the time series secondary data collected from various published sources of Government agencies. The data has been collected from various Economic Survey of Govt. of India, RBI Bulletins, RBI Handbook of Statistics, Ministry of Commerce and Industry of Govt. of India etc. The study broadly covers the period of 30 years from 1990-91 to 2019-20. In order to achieve the objectives of the study the entire study period is divided into three sub periods viz., 1990-91 to 1999-2000 (first

decade of economic reforms), from 2000-01 to 2009-10 (second decade of economic reforms), 2010-11 to 2019-20 (third decade of economic reforms). Difference of exports earnings and import spending has been calculated in order to draw the inferences.

India's foreign trade has been measured with five major blocks (group of countries) namely OECD Countries which includes European Union (Belgium, France, Germany, Italy, Netherland and UK), North America (Canada and USA), Asia and Oceania (Australia and Japan) and Switzerland. The other group is OPEC which includes (Iran, Iraq, Kuwait, Saudi Arabia and UAE), Eastern Europe includes mainly Russia. Group of Developing Countries includes Asia (SAARC, Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Srilanka) other developing countries (China, Hongkong, South Korea, Malasia, Singapore, Thailand and Indonesia), Africa (Benin, Egypt Arab Republic, Kenya, South Africa, Sudan, Tanzania and Zambia) along with these Latin American countries are also included in this group. The fifth group includes others/ unspecified countries.

4 Results and Discussions

The post reforms period in India has been characterized by high growth rates of exports which have often been attributed to the reforms process. Reforms have enhanced export competitiveness. The reforms have contributed not only to an increase in export volume but also to a moderate shift into higher quality. Table-I to Table – XV along with Graph-I to Graph-XV show the balance of trade position in the first, second and third decade of reforms respectively. Reforms have not only affected exports positively but imports have also multiplied because of liberalized policies.

4.1 Balance of Trade from OECD Group in the first decade of reforms

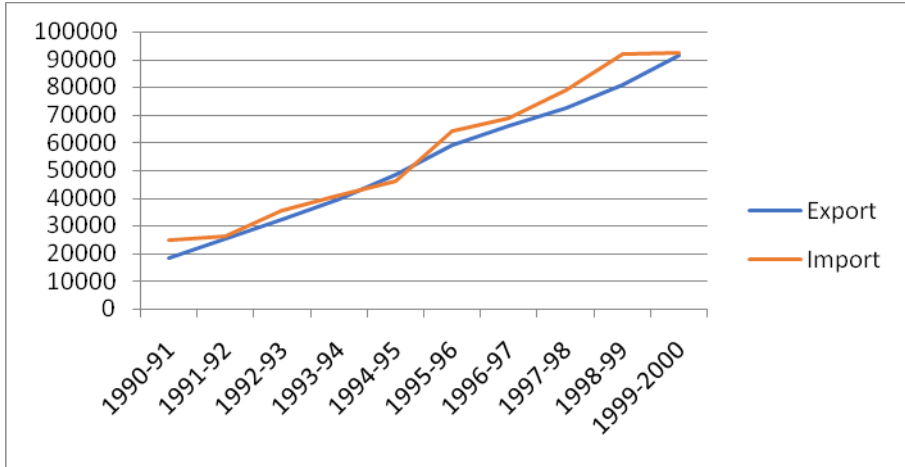
Balance of Trade remained adverse throughout the first decade of economic reforms with OECD group. 1993-94 was the only exceptional year when balance of Trade was positive with 1364.7 crores. Not only BOT remained adverse but this gap kept increasing year after year. Table-1 and Graph-I are reflecting that exports kept increasing to OECD group in the first decade but it is also observed that intensity of imports was higher than intensity of exports.

Table-1 Balance of Trade from OECD Group in the first decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
1990-91	18389.3	24712.6	-6323.3
1991-92	25482.2	25939.4	-457.2
1992-93	32466.4	35535	-3068.6
1993-94	39672.4	41037.1	-1364.7
1994-95	48491.3	46255.5	+2235.8
1995-96	59223.3	64254.2	-5030.9
1996-97	66034.7	69070.6	-3035.9
1997-98	72415.2	79293.9	-6878.7
1998-99	81044.9	91965	-10920.1
1999-2000	91460.5	92577.2	-1116.7

Source: Handbook of Economics and Statistics of Indian Economy (2000)

Graph -I



4.2 Balance of Trade from OECD Group in the Second decade of reforms

The second decade of economic reforms started under the impact of second generation of economic reforms. During this decade Balance of Trade remained positive with OECD group w.e.f 2000-01 to 2002-03. From 2003-04 onwards BOT became negative and the gap between receipts and

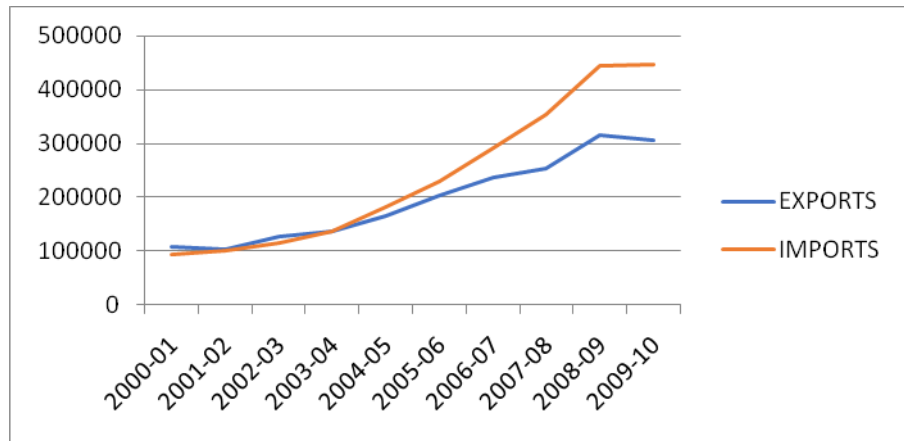
payments kept increasing for remaining years. Second generation of reforms proved fruitful for initial three years but this advantage could not be continued and BOT became adverse. Both Table-2 and Graph-II depicts this position of trade with OECD group during second decade.

Table-2 Balance of Trade from OECD Group in the Second decade of reforms (in Rs Crore)

Year	Export	Import	Balance of Trade
2000-01	107237.8	92090.3	+15147.5
2001-02	103119.7	98439.1	+4680.6
2002-03	127679.2	112766.4	+14912.8
2003-04	136151.1	135888.6	-122273
2004-05	163976.6	179680.5	-15703.9
2005-06	202935.8	229322.5	--26386.7
2006-07	235333.2	289771.8	-54438.6
2007-08	252204.5	352061.3	-99856.8
2008-09	314835	443316	-128481
2009-2010	304309	446645	-142336

Source: Handbook of Economics and Statistics of Indian Economy (2010)

Graph-II



4.3 Balance of Trade from OECD Group in the Third decade of reforms

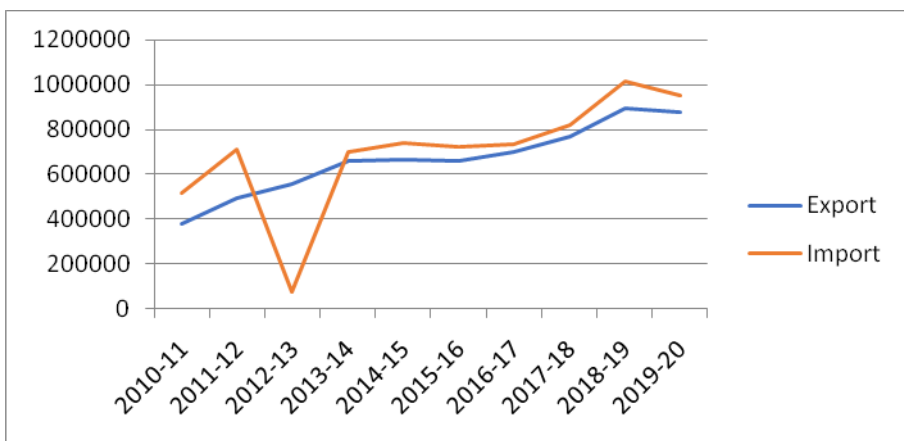
Balance of Trade remained adverse almost throughout the third decade of economic reforms with OECD group. 2012-13 was the only exceptional year when BOT was positive otherwise it remained negative. But the gap between receipts and payments was not that high as it was in the second decade of reforms. This position of BOT is visible in Table-3 and Graph-III as well.

Table-3 Balance of Trade from OECD Group in the Third decade of reforms (in Rs Crore)

Year	Export	Import	Balance of Trade
2010-11	380212	515703	-135491
2011-12	496519	708775	-212256
2012-13	559688	77023	+482665
2013-14	659203	697370	-38167
2014-15	668241	736111	-67870
2015-16	659910	719138	-59228
2016-17	700520	732885	-32365
2017-18	770981	816989	-46008
2018-19	896332	1012313	-115981
2019-20	879006	946766	-67760

Source: Handbook of Economics and Statistics of Indian Economy (2020)

Graph-III



4.4 Balance of Trade from OPEC Group in the first decade of reforms

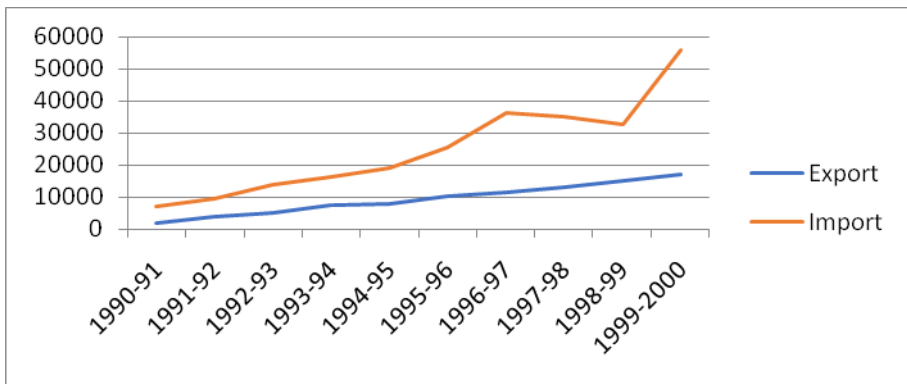
During First decade of economic reforms, exports were increasing to OPEC group throughout the decade but Imports were much higher than the exports. Import bill remained higher because of increasing demand of oil and petroleum products. Balance of Trade with OPEC group was not encouraging in the first decade of reforms. Not only BOT remained adverse but it kept increasing throughout the year. Table-4 and Graph-IV depicts this position of adverse trade.

Table-4 Balance of Trade from OPEC Group in the first decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
1990-91	1830.9	7040.7	-5209.8
1991-92	3850.2	9419.6	-5569.4
1992-93	5179.7	13834.6	-8654.9
1993-94	7471.8	16377.5	-8905.7
1994-95	7625.6	18996.4	-11370.8
1995-96	10299	25570.2	-15271.2
1996-97	11462.2	36006.2	-24544
1997-98	13109.6	34949.9	-21840.3
1998-99	14938	32669.7	-17731.7
1999-2000	16881.7	55685.6	-38803.9

Source: Handbook of Economics and Statistics of Indian Economy (2000)

Graph-IV



4.5 Balance of Trade from OPEC Group in the Second decade of reforms

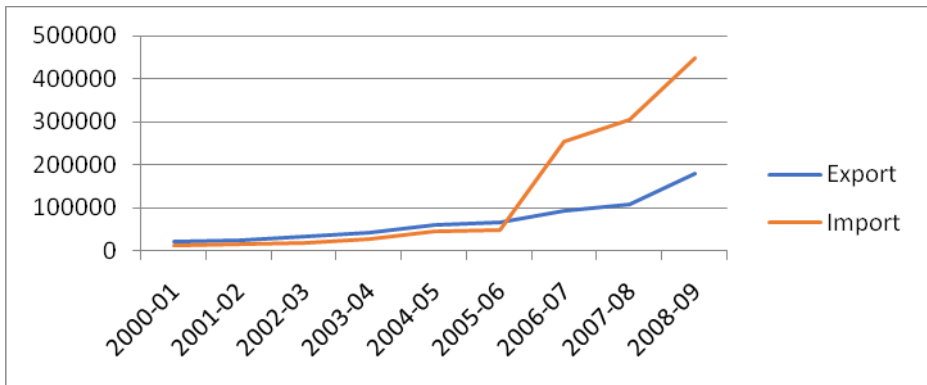
Second decade of economic reforms started with positive balance of trade with OPEC group. This situation continued for six years i.e. from 2000-01 to 2005-06. But then things turned around and BOT became negative for the remaining years. Impact of second-generation reforms was positive and encouraging. Table-5 and Graph-V explains this scenario.

Table-5 Balance of Trade from OPEC Group in the Second decade of reforms (in Rs Crore)

Year	Export	Import	Balance of Trade
2000-01	22156.9	12283.6	+9873.3
2001-02	24916.5	14144.4	+10772.1
2002-03	33318.2	16838.5	+16479.1
2003-04	43858	25775	+18083
2004-05	59342.7	45032.4	+14310.3
2005-06	67482.8	49458.4	+18024.4
2006-07	93668.3	253759.3	-160091
2007-08	107379	306286.7	-198907.7
2008-09	178789	448379	-269590
2009-10	178618	438189	-259571

Source: Handbook of Economics and Statistics of Indian Economy (2010)

Graph-V



4.6 Balance of Trade from OPEC Group in the Third decade of reforms

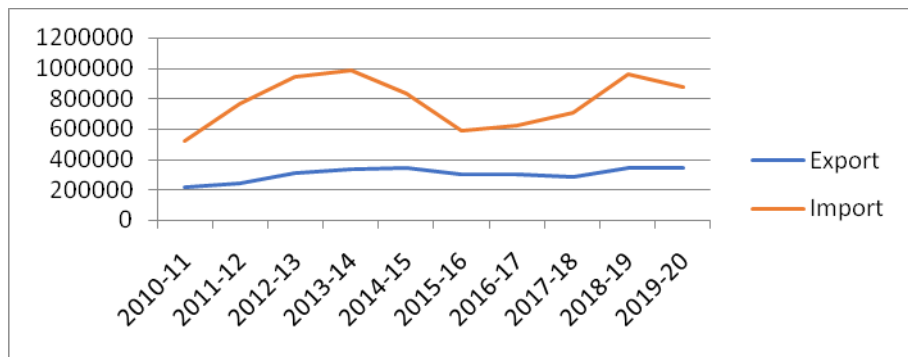
Downward trend of balance of trade from second decade continued in the third decade of economic reforms. BOT remained adverse with OPEC group throughout the third decade of economic reforms. Adverse BOT position from OPEC is clearly visible in table-6 and Graph-VI.

Table-6 Balance of Trade from OPEC Group in the Third decade of reforms (in Rs Crore)

Year	Export	Import	Balance of Trade
2010-11	217844	520149	-302305
2011-12	246190	762471	-516281
2012-13	313223	940679	-627456
2013-14	337161	983714	-646553
2014-15	344479	836138	-491659
2015-16	302570	587977	-285407
2016-17	302967	620585	-317618
2017-18	285590	704829	-419239
2018-19	340521	955502	-614981
2019-20	341229	877719	-536490

Source: Handbook of Economics and Statistics of Indian Economy (2020)

Graph-VI



4.7 Balance of Trade from EASTERN EUROPE in the first decade of reforms

After the Reforms were introduced in the country total trade with Eastern Europe kept falling because of disintegration of USSR. But the BOT was

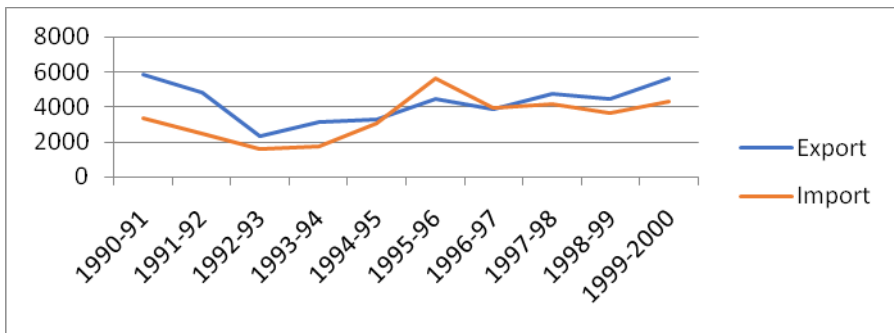
positive in the year 1990-91 and remained same for the next five years i.e. till 1994-95. It became adverse for the next two years but the difference between receipts and payments was not significant. From 1997-98 to 1999-2000 BOT again became positive. Trade with Eastern Europe proved good but unfortunately percentage of trade was very low and it had almost negligible impact on overall BOT position. Table-7 and Graph-VII reflects this position of trade with Eastern Europe.

Table-7 Balance of Trade from EASTERN EUROPE in the first decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
1990-91	5819.2	3377.2	+2442
1991-92	4813.7	2444.4	+2369.3
1992-93	2359.3	1605.5	+753.8
1993-94	3140.9	1766.3	+1374.6
1994-95	3319.1	3038.2	+280.9
1995-96	4482.2	5598.7	-1116.5
1996-97	3899.7	3914.4	-14.7
1997-98	4769.5	4142.5	+627
1998-99	4429.7	3634.5	+795.2
1999-2000	5602.5	4309.9	+1292.6

Source: Handbook of Economics and Statistics of Indian Economy (2000)

Graph-VII



4.8 Balance of Trade from EASTERN EUROPE in the Second decade of reforms

Balance of Trade looked good with the start of second decade of economic reforms. BOT remained positive from 2000-01 to 2002-03 but this advantage could not be continued for long and from 2003-04 onwards BOT became negative and continued that way only. Start of the decade was positive but this advantage could not be continued for long. Table-VIII and Graph-VIII highlights this position of trade with the Eastern Europe during second decade of economic reforms.

Table-8 Balance of Trade from EASTERN EUROPE in the Second decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
2000-01	6020.4	3884.2	+2136.2
2001-02	5984.2	4515.6	+1468.6
2002-03	6040.1	5516.4	+523.7
2003-04	7147.3	7484.9	-337.6
2004-05	7998.8	11296.5	-3297.7
2005-06	8767.9	16796.7	-8028.8
2006-07	11354.2	22682.6	-11328.4
2007-08	13622.5	21119.9	-7497.4
2008-09	9256	30410	-21154
2009-2010	8508	29213	-20705

Source: Handbook of Economics and Statistics of Indian Economy (2010)
Graph-VIII



4.9 Balance of Trade from EASTERN EUROPE in the Third decade of reforms

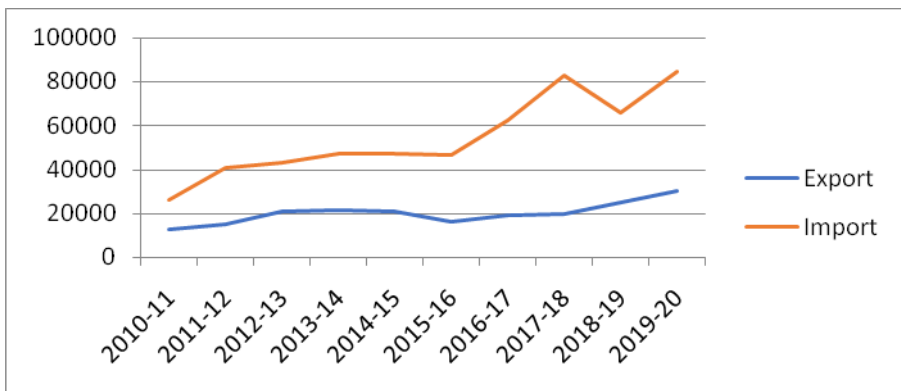
Third decade of reforms proved to be very discouraging as far as trade with Eastern Europe is concerned. BOT from EE remained adverse throughout the third decade. Impact of worldwide economic slowdown was evident. Demand for Indian exports reduced everywhere including Eastern Europe. The adverse position of BOT with Eastern Europe can be realized by looking at Table-9 and Graph-IX.

Table-9 Balance of Trade from EASTERN EUROPE in the Third decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
2010-11	12375	25916	-13541
2011-12	14997	40517	-25520
2012-13	20520	43194	-22674
2013-14	21466	46858	-25392
2014-15	20880	47038	-26158
2015-16	15828	46383	-30555
2016-17	18906	62511	-43605
2017-18	19575	83294	-63719
2018-19	24540	66063	-41523
2019-20	30030	84865	-54835

Source: Handbook of Economics and Statistics of Indian Economy (2020)

Graph-IX



4.10 Balance of Trade from Developing Countries in the first decade of reforms

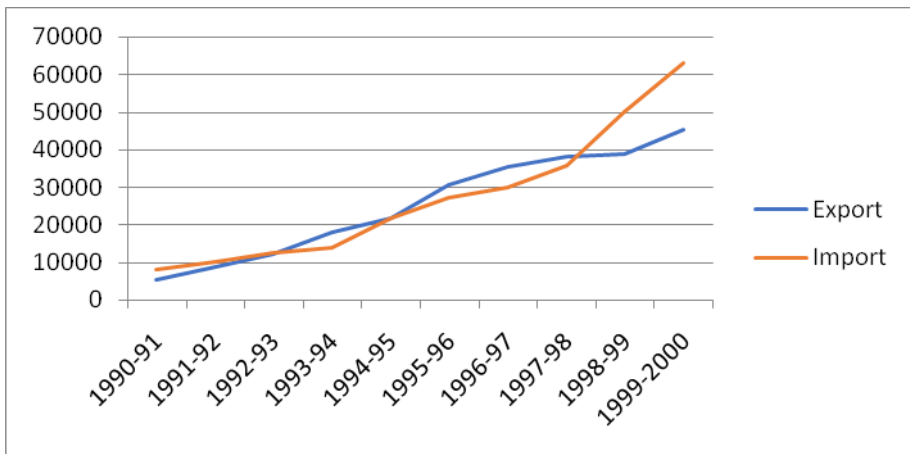
External trade increased with developing countries after economic reforms were introduced in the country. As far as BOT with developing countries during first decade of economic reforms is concerned, it was negative for the first three years in the first decade. From 1993-94 to 1997-98 things improved and BOT became positive w.e.f. 1993-94 to 1997-98 but this advantage could not be continued and BOT became negative for the next two years. The position of BOT with developing countries can be observed from Table-10 and Graph-X.

Table-10 Balance of Trade from Developing Countries in the first decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
1990-91	5560	8057.1	-2497.1
1991-92	8842	10043	-1201
1992-93	12268.8	12398.6	-129.8
1993-94	18184.5	13911.8	+4272.7
1994-95	21883.4	21672.5	+210.9
1995-96	30768.4	27245	+3523.4
1996-97	35630.2	29914.9	+5715.3
1997-98	38324.8	35775.4	+2549.4
1998-99	38794.5	50044	-11249.5
1999-2000	45325.9	62936.5	-17610.6

Source: Handbook of Economics and Statistics of Indian Economy (2000)

Graph-X



4.11 Balance of Trade from Developing Countries in the Second decade of reforms

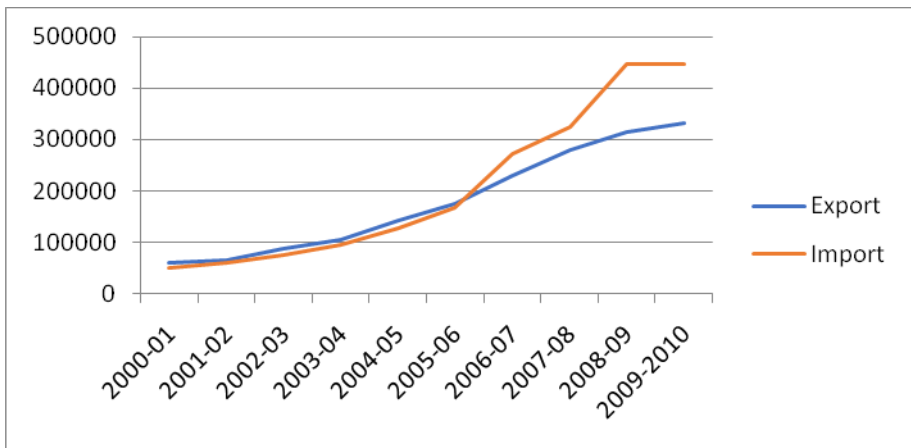
The situation of BOT with developing countries during second decade of economic reforms was 60:40. For the first six years BOT was positive and for the next four years it not only became adverse but the difference between imports and exports kept increasing year after year. But BOT during second decade proved good at least for six years like other groups. Table-11 and Graph-XI depicts this position clearly.

Table11 Balance of Trade from Developing Countries in the Second decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
2000-01	59447.1	50966.4	+8480.7
2001-02	64553.2	60933.3	+3619.9
2002-03	86445.2	75923.4	+10521.8
2003-04	104697.3	94509.7	+10187.6
2004-05	141970.5	128523.1	+13447.4
2005-06	175927	167754.4	+8172.6
2006-07	229704.6	270569.6	-40865
2007-08	280102	324694.3	-44592.3
2008-09	315265	445484	-130219
2009-2010	332577	444624	-112047

Source: Handbook of Economics and Statistics of Indian Economy (2010)

Graph-XI



4.12 Balance of Trade from Developing Countries in the Third decade of reforms

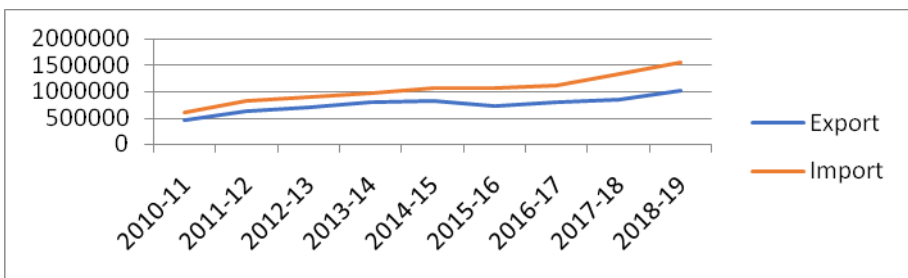
BOT from developing countries in the third decade of economic reforms was never encouraging. It remained adverse throughout the decade. The difference between receipts and payments kept increasing all the time. Demand for Indian products kept shrinking because of worldwide economic slowdown but demand of Indian imports kept increasing and the net result was adverse BOT. This position is highlighted in Table-XII and Graph-XII.

Table-12 Balance of Trade from Developing Countries in the Third decade of reforms (in Rs Crore.)

Year	Export	Import	Balance of Trade
2010-11	463507	601572	-138065
2011-12	629724	827040	-197316
2012-13	70975	903657	-832682
2013-14	814630	960661	-146031
2014-15	836565	1069485	-232920
2015-16	720272	1078148	-357876
2016-17	809039	1111682	-302643
2017-18	863229	1335986	-472757
2018-19	1025119	1559950	-534831
2019-20	950487	1450210	-499723

Source: Handbook of Economics and Statistics of Indian Economy (2020)

Graph-XII



4.13 Balance of Trade from Others in the first decade of reforms

Trade from other countries contributed positively to India in the first decade of economic reforms. BOT remained positive throughout the decade. First eight years were really good in the next two years amount of receipts reduced

but still bop was positive. But the volume of trade with others/ unspecified countries was not that significant. Surplus BOT of India during first decade of economic reforms is depicted through Table-13 and Graph-XIII.

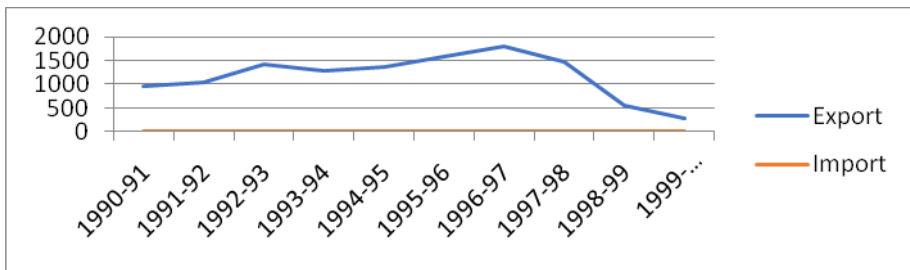
Table-13 Balance of Trade from Others in the first decade of reforms

(in Rs Crore.)

Year	Export	Import	Balance of Trade
1990-91	958.2	5.3	+952.9
1991-92	1052.7	4.5	+1048.2
1992-93	1414.1	1.0	+1413.1
1993-94	1282.1	8.3	+1273.8
1994-95	1354.7	8.1	+1346.6
1995-96	1580.4	10	+1570.4
1996-97	1790.3	13.6	+1776.7
1997-98	1481.5	14.6	+1466.9
1998-99	546	18.71	+527.29
1999-2000	290.8	19	+271.8

Source: Handbook of Economics and Statistics of Indian Economy (2000)

Graph-XIII



4.14 Balance of Trade from others in the Second decade of reforms

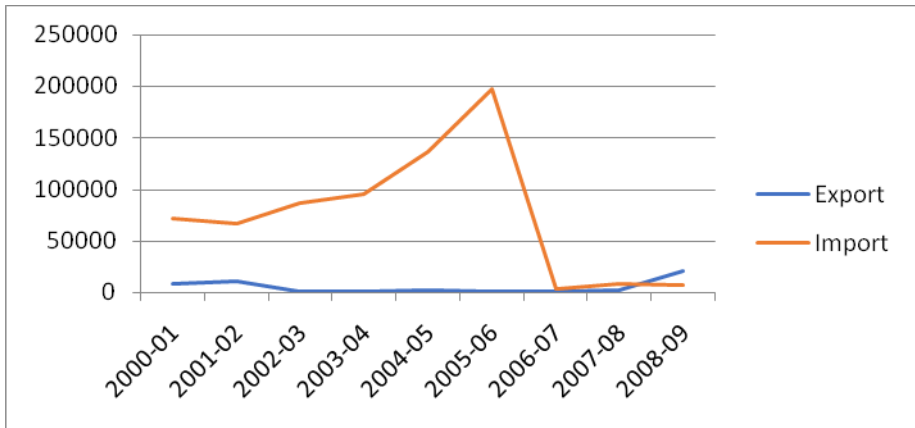
The advantage of first decade could not be continued in the second decade of economic reforms. BOT remained negative from 2000-01 to 2007-08 and after that it became positive. Trade from these countries was not very encouraging during second decade as was the case with other trade partners. This position is highlighted through Table-14 and Graph-XIV.

Table-14 Balance of Trade from others in the Second decade of reforms
(in Rs Crore.)

Year	Export	Import	Balance of Trade
2000-01	8708.7	71648.3	-62939.6
2001-02	10444.4	67167.4	-56723
2002-03	1654.6	86161.2	-84506.6
2003-04	1513	95449.4	-93936.4
2004-05	2050.9	136532	-134481.1
2005-06	1304.5	197076.8	-195772.3
2006-07	1719	3722.9	-2003.9
2007-08	2555.5	8077.6	-5522.1
2008-09	20610	6847	+13767
2009-2010	21522	5065.1	+16456.9

Source: Handbook of Economics and Statistics of Indian Economy (2010)

Graph-XIV



4.15 Balance of Trade from others in the Third decade of reforms

Third decade proved to be 60:40 for India during third decade of economic reforms from BOT point of view. During this decade BOT with others and unspecified countries, for the first four years i.e., from 2010-11 to 2013-14 was positive and then for the next four years it became adverse and then in the next two years BOT again became positive. BOT position with other

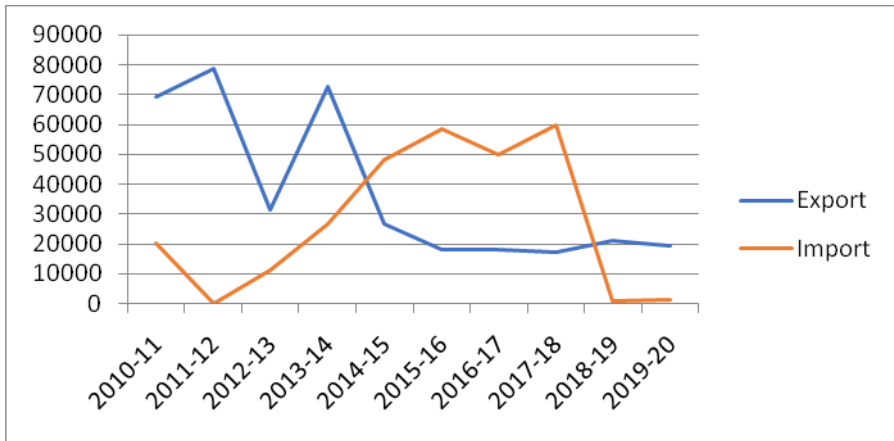
countries during third decade of economic reforms is shown through Table-15 and Graph-XV.

Table-15 Balance of Trade from others in the Third decade of reforms
(in Rs Crore.)

Year	Export	Import	Balance of Trade
2010-11	68984	20126	+48858
2011-12	78529.2	66.6	+78462.6
2012-13	31156	11401	+19755
2013-14	72551	26832	+45719
2014-15	26377	48315	-21938
2015-16	17804	58660	-40856
2016-17	18001	50012	-32011
2017-18	17140	59935	-42795
2018-19	21215	847	+20368
2019-20	19101	1394	+17707

Source: Handbook of Economics and Statistics of Indian Economy (2020)

Graph-XV



Summary, Conclusions and Future Policy Implications

It is observed that during the first decade of economic reforms balance of trade with OECD group remained adverse except in 1994-95. Second decade started with surplus of trade from 2000-01 to 2002-03 but after that period,

things turned around and balance of trade became adverse and continued that way only. Third decade was not different either. In this decade balance of trade was surplus only in 2012-13. From OPEC group Balance of trade remained adverse in the first decade but second decade proved fruitful and BOT remained surplus for first six years from 2000-01 to 2005-06 and after that it became negative and continued even in third decade of reforms. From Eastern Europe positive waves were coming as balance of trade was positive except in 1995-96 during the first decade of reforms but the size of trade was very small. Surplus trade from Eastern Europe continued during the first three years of second decade of reforms but after 2002-03, it became negative and continued that way even during third decade of economic reforms. The gap between imports and exports kept increasing year after year. Balance of trade with Developing countries was adverse for initial three years in the first decade of economic reforms but from 1993-94 to 1997-98 it became surplus. Although end of the decade was not good but second decade of economic reforms started on positive note and BOT was surplus from 2000-01 to 2005-06. But this advantage could not be continued and trade became adverse and remained adverse in the third decade of economic reforms. As far as trade with others is concerned, the volume of trade was not that significant but during first decade of economic reforms balance of trade remained surplus throughout the decade. This advantage could not be continued in the second decade and imports started exceeding exports. In the last two years of this decade some positivity prevailed and trade became surplus. This positivity continued in the third decade up to 2013-14 and then became negative till 2017-18 but fortunately end of the decade was again good and trade was surplus in the last two years. It can be concluded that different trends of trade have been observed during three decades of economic reforms with all trade partners. But second decade of economic reforms seems to be better than the other two decades. Our policy makers need to realize and review the policies by looking at the trends of the trade with different trade partners.

Thus, it can be concluded that on one hand, the exports are getting the rising share in world market but Indian market has greater absorption capacity for imports. Greater import demand may partly be attributed to free competition and better consumer goods. But as long as imports are higher than exports trade balance will remain adverse. Imports have increased in the post reforms period because of liberalizing policies and also because of availability of quality goods at lower prices in the international market. In fact Indian economy was opened to world economy to improve balance of Trade and Balance of payment position but so far this objective has not been achieved. The Economic Reforms were started with the objective of creation of a dynamic export sector in the economy which can help in the overall growth

of the economy. After three decades of economic reforms the export sector has shown very little improvement which tells the sad story of reforms. So, it can be concluded that economic reforms have affected Indian economy positively but results are not satisfactory. Still the objectives for which the process of economic reforms was started have not been achieved.

The following policy implications have been emerged on the basis of the above discussions.

- The Government should make efforts to increase infrastructure and provide efficient technology to the exporters. Efforts should be made to provide cheaper finance to the exporters and business environment of the country also needed to be improved.
- Increasing imports is another area of concern for the Indian Government. Although imports are likely to increase when the trade policies are liberal but the time has come when it should be realized that the excessive dependence on foreign technology will not benefit the country. Imports can be discouraged by encouraging R&D activities in the country and by promoting make in India products. The import intensity of the exports needs to be curbed because if the imports intensity of exports becomes very high then even if the exports rise at a phenomenal rate the balance of trade problems will continue to be adverse.
- The quality of Indian exports need to be improved. Without improving the quality of exports the quantum of exports will not increase. The product and market range of the country be diversified so that pressure on balance of trade be reduced. Government of India must take lead to find new business partners in Africa, South East Asia and Latin America.
- The Special Economic Zones should be developed by simplifying laws, rules and procedures and also by reducing unnecessary bureaucratic control. Maximum utilization of installed capacity should be ensured so as to minimize costs and generate surpluses for exports without pushing up the prices of domestic supplies. The product and market range of the country should be diversified. Our exporters have yet to explore fully oil rich countries of Middle East and Saudi Arabia and Developing markets of Africa and South America.

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Book Review

Farhan Karim. (2019) *Of Greater Dignity than Riches: Austerity and Housing Design in India*, University of Pittsburgh Press.

Poonam Prakash

Idea of modern, in India is shaped by our colonial past. Unlike in the west, it was never a clean break from the tradition. The project of enlightenment based largely on the principles of scientific rationality, standardisation and universal truth unfolded very differently in India. While colonial rulers used technology to build rail networks and cities and settlements with primary motive of control and resource extraction. However, modern always co-existed with tradition in post-colonial societies. Adding to the emerging literature on how post-colonial modernity is a different construct than western modernity, this book makes a fascinating read by deconstructing the idea of resource scarcity that Karim terms as “modernism of austerity”. According to the author, scarcity of resources and poverty are not incidental but central to the story of Indian modernism. Austerity as an idea needs to be seen as a pre-condition of development.

The book is an important addition to understanding of dynamics of development immediately after independence, particularly in build environment. It also has important lessons for the present context. Problem of cities in India was seen as problem of housing provision in the mid twentieth century. The focus of initial five-year plans has mostly been on housing. Even today, the government continues to grapple with the problem. With programme like Housing for All Mission, Model village and design innovation centres, at places there seems to be uncanny sense of history repeating itself.

Discussions around minimum standards for the poor, model villages and design innovations arising at that time from the technology optimism is visible again as part of the information technology revolution. The book explores what did modernism arising out of this technology optimism meant for the poor. The book weaves a rich tapestry through harchival study of three exhibitions on Ideal homes designed for industrial workers, the idea of model villages and Indian handicrafts and product designs. It traces the

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history of low-cost housing as an intertwined process of global transferences of knowledge, cold war cultural politics, post-colonial nationalism, politics of economic development.

Divided in seven chapters, the book poignantly starts with the state of Hindustan housing factory, that in some ways represented the dream of modern India starting the path of industrialisation and self-sufficiency after Independence. Centred around three exhibitions, one in 1918 focussing on prototypes for industrial workers, second in 1954 – UN Exhibition on low-cost housing and one in 1959–Museum of Modern Art exhibition, the book takes and connects different actors and their networks that shaped the modern sensibilities in low cost housing and design.

Setting the context, the introductory chapter sets the stage to explore how resource scarcity shaped modernity in India particularly for the poor. Calling it “modernity of austerity”, the author threads his discussion of modernity and poor in the discourse of austerity. The state slogan “Poverty can sometimes give an impression of greater dignity than riches” was the way of dealing with almost insurmountable condition on inequality and lack of resources. Austerity discourse, defined as “tendency and sentiment” of decision makers and professionals to take a path of development with resource scarcity as one of the pre-conditions, shaped the project of modernising the poor. Even today, this narrative is visible when reduction in minimum standards of housing and facilities to the poor are justified on “scarce” land. Through surveys, reports, conferences and exhibitions, the austerity discourse manifested itself in the development of ideal homes and model villages for the poor. Some discussion around how this discourse affected other sections of the society would have been useful.

Negotiating and balancing growth and control, poverty and abundance, the austerity discourse led not necessarily to a pragmatic response but an ideal and imagined response. Given that in the context where one of the elements of enlightenment project was to find the ideal or the universal, it makes sense to imagine future which would be better. However, responding to both the market forces and justice and equity was a fine line for professionals to traverse. The promise of equality by the modern era was not so compatible with market principles. Austerity vision did not permeate all spheres and sections but was particularly meant for the not so affluent. This was reflected in the way homes of the poor and villages were idealised and imagined. However, this imagined was very different from the real and many of these projects be it housing for the poor (e.g.) or the model villages with its promise of participatory democracy, in hindsight, seem programmed to fail.

Contesting the popular notion of centralised state-controlled modernisation, imported from the west, the book demonstrates the complex network of

actors through which state aimed to engage with local communities and existing power structures. The presence of foreign consultants shaped by their own context, when faced with Indian conditions and decision makers shaped the austerity discourse. The austerity discourse was shaped not only through imaginations of ideal home but also through exhibitions. Key player in such dissemination was United Nations, Ford foundation and Government of India.

Second chapter on Industrial Worker housing traces the history of minimum standard of house. It was very interesting to read that how the initial understanding of 27 to 30 sq. of built space with almost 50 sq. m of back yard has now been reduced only to 30 sq. of built space even though the family needs and requirement of open space for the poor has largely remained unchanged. However, this prototype was done more to enhance the efficiency of the workers and a response to 1896 plague. Conflicts around who will be responsible for workers housing provisions private sector or Bombay Improvement Trust seem to fit in quite well in the present context as well. This chapter provides a context to some of the housing programmes and budget allocations made in the first and second five-year plans.

Influx to Mumbai for people as industrial workers and the unhygienic conditions of their living, plague in 1896 and larger project of modernisation created conditions leading to control of body and space where Bombay Improvement Trust played an important role. Story of 1918 exhibition meanders in many directions and traverses' multiple scales that include regulations of buildings, standardisation of worker housing and discourse on who is responsible for worker housing. From Miram's exhibition the authors traces connections to different actors like Patrick Geddes and the Associated Cement Companies Limited. However, prototypes and model houses so imagined represented a vision that rarely matched with the aspirations of the worker as Karim demonstrates in this chapter. Third chapter trace the networks formed and capitalised around organisation of UN exhibition on low cost housing. Through the exhibition Karim contextualises India's response to notion of development. How global discourses on architecture for the poor is negotiated.

Fourth and fifth chapters deal with idea of ideal village and architecture of new villages. Tyrwhitt as one of the main characters in this story, these chapters taking off from 1954 exhibition only highlights the influence of Geddes. Discussing project of ideal village by Sris Chandra Chatterjee, Karim brings the focus on how the promise of equality as well as Gandhi's utopian imaginary of the village shifted by late fifties to discourses on anti-utopia which required acknowledgement of natural inequalities where relation between state and citizen needs to be mediated by public institutions

and not extra state agents like non-governmental organisations. These two chapters also trace the emergence and end of the idea of community development. Many model village projects by Mayer, S.K. Dey, SPA, Delhi imagined inner democratisation through community development programmes did bring in material and visual shift without any radical transformation of existing power structures. While sites and services projects in India upscaled the idea of self-help (driven through World Bank), the book traces its origins in the UN exhibition on low cost housing in 1954 and its application later in pilot projects of model villages. Sixth chapter looks at the idea of austerity in design through the window of Museum of Modern Art exhibition held in 1959 in the USA. Setting up of National Institute of Design and role of Ford Foundation.

Finally, the book concludes that the studies of modernity in India needs to look at the idea of austerity and how it is connected across national and global scales to different actors. The promise of modernity to create a dignified life that will free human being from the drudgery of daily life seems to have gone awry and in Indian context this would be better understood through discourse on austerity. The book furthers the debate on whether architecture and product design contribute to producing social and political justice or are co-opted in existing power structures. One of the important contributions of the work is to demonstrate various negotiations and conflicts that shaped post-colonial modernity. However, underneath these negotiations and scattered ideas, Government of India, United Nations, Ford Foundation created austerity as central discourse to the ideal value system for the poor. Underneath the austerity discourse was a profit-making endeavour. Profit not in the material sense of the word but in ideological sense where by agency and freedom to the poor was systematically controlled. This was done through creating a discourse of austerity meant for the poor but never with them.

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