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- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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**BANKING ON ARTIFICIAL INTELLIGENCE: OPPORTUNITIES & CHALLENGES FOR BANKS IN INDIA**

**SRIHARI SUBUDHI**  
**CHIEF MANAGER (IT)**  
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**ABSTRACT**

*Over the years, technology has revolutionized our world. It has changed our lives like never before. It has changed the way we think, the way we learn, the way we communicate or the way we bank. The technology itself is getting better and smarter day by day. It has also made our lives easier, faster, better... and more fun. To play our favourite Bollywood track or to switch on the TV Set or to get our bank account balance, we can just ask our "Siri" or "Alexa" and the work is done! Technology powered with intelligence (Artificial Intelligence, AI in short) has brought newer opportunities across all industries. Banks are exploring and implementing the technology in various ways - bringing smarter chat-bots for customer service, personalizing services for individuals, and even placing robots for self-service at their specialized Digital Banking Branches. AI in banks is bringing in more efficiency to their back-offices and even reducing fraud and security risks. Opportunities come along with new challenges as a package for the banks implementing AI. This study is an attempt to explore how Banks in India can capitalize on the opportunities, how banks face the challenges in adapting to the new AI culture and also to appreciate the global best practices.*

**KEYWORDS**

Chatbots, artificial intelligence, robots, self-service banking.

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**INTRODUCTION**

**W**hat is artificial intelligence? Broadly, it refers to the development of machines or systems that can perform complex tasks normally considered to require 'intelligence' and thus thought to be the preserve of humans. In simple language, it can be defined as: a computer system that can sense, comprehend, act and also learn. In other words, a system that can perceive the world around it, analyse and understand the information it receives, take actions based on that understanding, and improve its own performance by learning from what happened. And by enabling machines to interact more naturally – with their environment, with people and with data – the technology can extend the capabilities of both humans and machines far beyond what each can do on their own.

Application of AI and ML (machine learning) to different functions within the banking industry has enabled them to offer a far more personalised and efficient customer service. By achieving that, banks have also been able to gain better insights into their customers' preference and expectations from the bank. Accordingly, automation of back-end workflows has shown better outcomes. Banks are reaping the benefits of banking on Artificial Intelligence through use of Chatbots, Robots in various areas of banking.

**RESEARCH OBJECTIVES**

1. To study the areas where the artificial intelligence is presently being used by the banks in India.
2. To study the challenges faced by the banks in India in adapting to new AI culture.
3. To appreciate the Global Best Practices in AI, particularly Chatbots, in Banks

**RESEARCH METHODOLOGY**

This research study is descriptive by nature with qualitative method of data collection and analysis. Data have been collected from various authentic and reliable secondary sources such as various reports published by RBI, IDRBT, NASCOM, Forbes, leading consulting companies, etc. and web sites of various leading banks in India. Inputs/Reports/Research papers from leading research institutes on Banking Technology/Artificial Intelligence have also been referred.

**IMPORTANCE OF THIS STUDY**

Some leading private sector and few public sector banks in India have started implementing AI in various applications – particularly Chatbots, while remaining banks are still on "wait and watch" mode. Some of the banks (of later category) may be very skeptical about the outcome of AI based initiatives by banks. Against this backdrop, we conduct this study to explore what exactly banks are doing with Artificial Intelligence now and what challenges they are facing. We have also attempted to study the global best practices in the area which can be used as opportunities for the banks in India.

**LITERATURE REVIEW**

Artificial Intelligence is not new to India. Research institutions and universities have been working with various AI technologies for decades, and especially in the area of social transformation. With enabling technologies becoming a lot more accessible and inexpensive, AI is now becoming mainstream, with large enterprises and start-ups looking at different opportunities. A research report of Accenture shows that the adoption of AI has the potential to add nearly \$1 trillion to the Indian economy by 2035.

The technology – which enables machines to simulate and augment human intelligence – has finally come of age. Artificial intelligence (AI) is creating the single biggest technology revolution the world has ever seen. Artificial Intelligence is being used, across all industries in general and banking sector in particular, to address a wide range of challenges, large and small, by making interactions with machines and systems simple and smart. It is like getting the best of both worlds – speed & accuracy of machines & intelligence of human beings. Artificial intelligence is expected to enable financial services companies such as banks, insurance companies etc. to completely redefine how they work, how they create innovative products and services, and how they transform customer experiences.

State Bank of India, the largest bank in India conducted "Code for Bank" hackathon to encourage developers to build solutions leveraging futuristic technologies such as AI and Blockchain into the banking sector. SBI is already using chatbot SIA (SBI Intelligent Assistant), while private banks like HDFC Bank and ICICI Bank have also introduced chat-bots (EVA & iPal respectively) for customers service. Some banks have even gone ahead with placing robots in branches for superior customer experience. Canara Bank installed Mitra and Candi robots at some of its offices in Bengaluru. HDFC Bank has deployed Robot IRA (Interactive Robotic Assistant) in some select branches.

Payment companies are using AI to offer personalised payment experience to consumers. By applying AI and analyzing past payment patterns, payment systems can prompt the preferred payment instrument which best suits a purchase at the time of checkout. Say a consumer avails EMI option frequently for his big-ticket

purchases, then the best EMI option is made available to the consumer at the time of checkout. Such personalised consumer experiences drive up consumer spending and creates stickiness to the product consumers are using.

As per a recent media (Economic Times, 04.06.2019) report, Axis Bank used robotic video assessment to hire customer service operators and assistant vice presidents. Algorithm based video interviews – along with aptitude tests were used to hire around 2,000 customer service officers from a pool of 40,000 applicants. Algorithms are analyzing people's emotional states nervousness and happiness based on eye movements, expressions and tone of voice.

## AREAS IN BANKING WHERE AI IS USED IN INDIA

(What Banks in India exactly do with Artificial Intelligence)

### CHATBOTS AND PERSONALIZED CUSTOMER SERVICE

Simply put, a chat assistant (colloquially called a chatbot) is an AI or computer programme that conducts conversations meant to replicate human conversation via auditory or textual means. Chat assistants have come a long way from their humble origins, with advancements in machine learning and natural language processing allowing them to "learn" from their interactions and hold conversations in a human-like manner, thereby becoming more "human".

With increasing automation, there is a fear of reduced loyalty due to less personal contact. However, increased AI usage does not necessarily mean less personalized experience, in fact, banks are using AI to increase client satisfaction, improve efficiency and maintain customer loyalty in many ways. Here is an indicative list of Chatbots being used by various banks in India.

TABLE 1: LEADING BANKS WITH CHATBOTS IN INDIA

Sl. No.	Bank	Chatbot Name	Year of Introduction
1	State Bank of India	SBI Intelligent Assistant (SIA)	2017
2	HDFC Bank	Electronic Virtual Assistant (EVA)	2017
3	ICICI Bank	iPal	2017
4	Kotak Mahindra Bank	Keya	2018
5	Axis Bank	Axis Aha	2018
6	Yes Bank	Yes Robot	2017

SBI Chatbot SIA helps customers with everyday tasks like a bank representative. SIA has been set up to handle 10000 enquiries per second or 864 million a day!

**Customer Support and Helpdesk:** Chatbot interfaces are used in banks to increase efficiency and reduce cost for customer interactions.

**Digitization and automation in back-office processing:** Capturing documents data using OCR and then using machine learning/AI to generate insights from the text data helps in cutting down back-office processing times.

**Wealth management for masses:** Personalized portfolios are managed by Bot Advisors for clients by taking into account lifestyle, appetite for risk, expected returns on investment, etc.

**Risk Management:** Tailored products are offered to clients by looking at historical data, doing risk analysis, and eliminating human errors from hand-crafted models.

**Security:** Suspicious behaviour, logs analysis, and spurious emails are tracked down to prevent and possibly predict security breaches.

**ATMs:** Image/face recognition using real-time camera images and advanced AI techniques such as deep learning are being used at ATMs to detect and prevent frauds/crimes.

### ROBOTS

TABLE 2: LEADING BANKS WITH ROBOTS IN INDIA

Sl. No.	Bank	Robot/Solution Name	Year of Introduction
1	Canara Bank	Mitra & Candi	2017
2	HDFC Bank	Interactive Robotic Assistant (IRA)	2017
3	ICICI Bank	Software Robots	2016
4	City Union Bank	Lakshmi	2016

ICICI Bank has deployed more than 750 software robots (March 2018) to handle more than 20 lakh transactions daily. These robots are being used across different operations and LoBs including retail, wholesale banking, forex, treasury, agro and international operations. Most of the robots deployed have been developed in-house.

### COMPLIANCE, FRAUD DETECTION AND ANTI-MONEY-LAUNDERING

Avoiding fraud and money laundering is a challenge for many banks. Artificial intelligence has the potential to help the banks become more efficient in the process of detecting fraud and money laundering. To quickly identify potential fraud, AI scientists have developed tools and systems that automatically conduct and compress data that normally requires many hours of labor in just a matter of minutes.

### CHALLENGES FOR THE BANKS IN INDIA

Every opportunity comes bundled with a challenge. Artificial Intelligence in banks is no exception. For implementing AI in Banks, there are many challenges. From the lack of a credible and quality data to India's diverse language set, to scarcity of skilled data scientists/engineers and many more, experts believe a number of challenges exist for the Indian banking sector using AI.

#### AVAILABILITY OF CORRECT DATA

A key challenge is the availability of the right data. Data is the lifeblood of AI, and any vulnerability arising from unverified information is a serious concern for businesses. Imagine for example, the risks that could arise from KYC compliance AI systems if the data sources are incorrect. Or consider the efficacy of a fraud detection AI system without the right kind of data. Structured mechanisms for collecting, validating, standardizing, correlating, archiving and distributing AI relevant data is crucial.

#### MANY LANGUAGES

India has more than 100 languages with sizable spoken population. Applications which use speech to text or text to speech rely on natural language processing (NLP) libraries and techniques. Banks can use the existing technologies to start with to support some major Indian languages, but in order to effectively reach out to wider population in India, much more progress is required on NLP front.

#### DATA PRIVACY

Data access and data privacy is a central aspect of any AI work banks do. These aspects will be of paramount importance with introduction of regulations in Europe such as GDPR (General Data Protection Regulation). GDPR regulation is currently applicable to European citizens, but India and other countries have their own data privacy regulations. Banks in India will have to build AI systems with GDPR and similar privacy regulations in mind.

#### SKILLED MANPOWER

Experts also have stressed the need for more skilled data scientists/engineers to drive the segment. "The biggest challenge is the scarcity of trained human resources; the existing workforce is not familiar with latest tools and applications.

One of the important challenges that is faced by Industry and not just banks in India is unavailability of people with right data science skills. With only small number of good data scientists available to do AI work, the industry needs to work with universities in India to develop skilled data scientists as well as develop in-house training programs to train employees on data science skills. Also identification of right use cases for AI implementation with the help of domain experts and data scientists can also help banks in successful implementation of AI technologies for banking functions.

**FEAR OF UN-EMPLOYMENT**

The AI technology is considered a big threat to make employees redundant in the banking sector. Banking Sector in India is one of the top employers in the organized sector in India. The mass adoption of AI may cause a grave unemployment problem in the sector.

**UNWILLINGNESS OF BANK EMPLOYEES**

Senior employees in banks, particularly those in the public sector banks, may not show much interest to learn new technology/applications related to Artificial Intelligence. This may lead to unnecessary delay in implementation of AI related projects. Some employees may be in their comfort zone not to learn new technologies.

**GLOBAL BEST PRACTICES & OPPORTUNITIES FOR BANKS IN INDIA**

Bank of America has already developed a chatbot, Erica, an AI-enabled tool that provides financial guidance for the bank's clients through voice and text messages. The service is accessible 24/7, and it can perform day-to-day transactions. This allows clients to have access to services at any time without costing more money hiring customer service personnel. Chatbots help ensure that, over time, less-typical queries have ready-made responses versus the current status quo where advisors often have to consult experts for immediate advice.

More and more banking organizations across the globe are leveraging artificial intelligence to launch chatbot solutions, reducing costs and serving increasingly tech-savvy consumers. In many instances, chatbots are developed to facilitate two-way communication, replacing channels such as phone, email or text. The objective is to provide quick service and transactional support.

**TABLE 3: BANK CHATBOTS AROUND THE WORLD (OTHER THAN INDIA)**

Sl. No	Bank Name	Bank Headquarters	Chatbot Name	Year of Introduction
1	Bank of America	North Carolina, USA	Erica	2018
2	American Express	New York, USA	Amex Bot	2016
3	HSBC Bank	London, UK	Amy	2018
4	Commonwealth Bank	Sydney, Australia	Ceba	2018
5	SEB (Sweden)	Stockholm, Sweden	Aida	2017
6	Deutsche Bank	Frankfurt, Germany	Debbie	2018
8	OCBC Bank	Singapore	Emma	2017
9	ING of the Netherlands	Amsterdam, Netherlands	Inga	2018
10	RBS	Edinburgh, UK	Luvo	2016

Let us discuss in detail some of these Chatbots and their features and capabilities.

Needless to say, the outlook for Conversational AI in banking looks very promising indeed. Banks are increasingly investing in AI-powered chatbots as a smarter way to acquire, engage and serve customers.

To get a better understanding of how Conversational AI has been beneficial to the banking sector, let us first take a look at some examples of successful implementations, from across the globe.

**1) Erica from Bank of America**

Erica has following features

- sending notifications to customers
- providing balance information
- sharing money-saving tips
- providing credit report updates
- facilitating bill payments
- helping customers with simple transactions

As of early 2019, Erica has surpassed 6 million users and has serviced over 35 million customer service requests.

**2) Amex bot from American Express**

American Express deployed the 'Amex bot' on Facebook Messenger. Once Amex card users link their cards with their Messenger accounts, they will receive messages and push notifications in the Messenger, related to purchases they make using their card. The Amex bot will make contextual recommendations based on the user's purchases, provide real-time sale notifications, and provide information regarding credit card benefits and loyalty program features – in addition to responding to any other customer support query.

**3) EVA from HDFC Bank**

- Eve provides better and faster service to customers
- Accessing information regarding branch addresses, IFSC codes, loan and interest rates etc.
- understands user queries and fetches the requested information from thousands of possible sources, in a matter of milliseconds
- The bot has been deployed across a number of platforms, including Google Assistant and Alexa

EVA has answered over 5 million queries with over 85% accuracy – holding over 20,000 conversations daily with customers across the globe.

**4) Amy from HSBC Bank**

- Amy provides real-time 24x7 responses to customer support queries.
- Amy has enabled customers to seamlessly access information regarding a wide range of HSBC's products and services.
- It easily handles routine queries and FAQs, and gradually learns to respond to more complex and broader queries over time by processing and analyzing customer feedback.

**5) Ceba from Commonwealth Bank Australia**

- Provides real-time customer support.
- Over 200 banking tasks such as activating their card, checking account balance, making payments
- Quickly analyze over 500,000 ways customers ask for 500 different banking activities, making it a highly powerful and effective tool for the Commonwealth Bank.

Banks realize a measurable lift in business results from their personalization campaigns. But, powerful as it is, personalization is only part of the story. To give customers what they want, organizations must be able to listen to them. That is where AI-powered social listening and recommendations systems come in.

A 2017 report by Juniper Research claims that for every query that a chatbot handles, banks save 4 minutes of an agent's time translating to a cost saving of 0.70 USD per query. More recently, it has been estimated that the operational cost savings from the use of Conversational AI in the banking sector will reach 7.3 billion USD by 2023. This represents a total time saved for banks in 2023 of 862 million hours – equivalent to nearly half a million working years!

**MAJOR FINDINGS**

There are primarily three use cases for which Conversational AI solutions have proved to be effective in the banking sector.

**LEAD GENERATION**

E-mail campaigns and cold calls are steadily losing their effectiveness. A conversational interface, like a chatbot, adds a novelty factor to the process of lead generation that appeals to prospective customers. These lead generation bots are embedded on the bank's websites or mobile apps and initiate conversations with users to find out if they wish to purchase products and gauge their interest. Later, these captured 'leads' can be sent to the bank's sales team for additional follow up until the sale is completed.

**CUSTOMER FEEDBACK**

As banks endeavor to continuously improve their customer service, collection of feedback from customers becomes crucial. The conversational survey format of feedback using bots makes it a far more compelling alternative to the use of long, static feedback forms – thus boosting feedback collection. Conversational AI, in particular, has seen a lot of interest in recent years, with a number of banks implementing AI-powered conversational solutions. Bots, be it chatbots or voice bots, can conduct smart and compelling conversations on behalf of the bank with millions of consumers, at a fraction of the cost of using human customer service staff. The interactive nature of Conversational AI, and its speed and efficiency go a long way towards enhancing the customer experience.

**CUSTOMER SUPPORT**

With the advancements in the field of computing and natural language processing (NLP, ML), chatbots have now become capable of having smarter and more compelling conversations, which means they can handle a wide variety of customer support queries which are redundant in nature. These bots can be plugged into most customer touch points, such as social media profiles (Facebook Messenger, Twitter), website (like Internet Banking), apps like mobile banking or Internet Banking, and other platforms. They ask users to specify their problems and either give them direct solutions or redirect them to the right person.

*Here are some other interesting developments from the world of Conversational AI that are of tremendous value to the banking sector:*

**1) Voice Bots on IVR**

Talking to customer care executives of a bank to get your work done may not be good experience. You might have been put on hold for an average of 10 to 15 minutes during working hours, making it seemingly impossible to reach an agent in case of emergency. A voice-based IVR (Interactive Voice Response) system helps battle this problem by providing customers with instant access to service through a voice-based conversational interface. In 2018, Kotak Mahindra Bank launched a voice bot called Keya aimed at helping users navigate swiftly and smoothly through the IVR systems. Further developments in the area of voice bots and IVR are sure to be immensely beneficial to banks.

**2) Siri, Alexa and Google Home Assistants**

Smart speakers and voice assistants such as Amazon's Alexa and Google Home Assistant are becoming increasingly more commonplace in homes across the globe, India being no exception. Just command your Siri, Alexa or Google Assistant for a bank account balance or a fund transfer & it will be done instantaneously. A number of banks and other financial service providers have already started adopting such solutions to be available across Alexa, Siri and Google Assistant.

**3) Handling more unique and complex queries**

Chatbots today are programmed to handle rather simple and redundant queries, which make up the majority of the volume of customer support queries. In addition to this, some replies which can be pulled from a knowledge base can be accessed by the bot using an API. However, certain complex user queries and requirements still reveal the limits of automation. The efforts of AI and NLP developers over the years has already significantly enhanced the ability of Conversational AI to self-learn to respond to such complex queries, and this capability will only continue to evolve with time.

HDFC's Humanoid Intelligent Robotic Assistant (or IRA) is a robot that visitors to certain HDFC branches can physically interact with. The assistive humanoid robot would respond to simple customer queries and guide them to the relevant staff or service counter. IRA was highly successful when it came to relieving the bank's staff from the need to respond to simple and routine queries – servicing an average of 60 customers daily. It's newest iteration, IRA 2.0, leverages the AI and machine-learning backend engine of HDFC's virtual assistant EVA to offer customers an even more personalized, voice-based conversational experience.

While assistive humanoids are a solution not very likely to see widespread adoption in the banking sector, HDFC's successful experiment in this regard stands testament to the innovativeness of Conversational AI in banking!

*AI applications within banking sector include the following:*

**Fraud detection:** AI has the ability to identify fraudulent activity in the real time behavior i.e. while it is happening, as well as identify what the next pattern of suspicious behavior will be by using location services.

**Compliance with regulatory guidelines:** Technology can be used to ensure that regulatory requirements are met and that data is kept with monitoring done on a real-time basis. This can ensure that the regulations are followed in the spirit.

**Improving the customer experience:** AI provides the opportunity for improved and faster decision making by deriving deep and actionable insights (e.g. customer behavior patterns). Some of these interactions will be with new voice or chatbot technology while other applications will be behind the scenes, supporting marketing communication.

**Reducing cost of operations & increasing revenue:** AI can offer the biggest opportunity by automating the frontline, by engaging with customers in a more automated and intelligent way offers significant cost savings, with the risk being spread over millions of customer interactions.

**Enhancing customer engagement:** Artificial intelligence will assist in the creation of customized and intelligent products and services, with new features, more intuitive.

Type of customer engagement can enhance customer loyalty without costly manual intervention. Going a step further, banks can leverage innovative technologies to integrate chatbots into more advanced uses.

The banking industry has only begun to scratch the surface with regard to the potential of AI, machine learning, chatbots and advanced technology. At the foundation of all of these advances is the ability to collect insights and apply advanced analytics to benefit the customers. Banking is a sector that has been ahead of the curve when it comes to adopting Conversational AI solutions. AI-powered chatbots and voice bots have significantly helped banks engage with customers at every stage of the customer life cycle.

AI systems can ingest and evaluate vast amounts of virtually any kind of customer-related information at lightning speed. From automation and analytics to disaster management and digital assistants, AI systems are delivering the business intelligence that boosts the bottom line in every part of today's smart banks.

**CONCLUSIONS**

The traditional banking has evolved and more and more banks are adopting new technologies like AI, Cloud, blockchain to cut down their operating expenses, to provide superior customer service and improve overall efficiency in the banks. Improvement and development in the AI industry will, no doubt, increase productivity at a reduced cost in banks. The recent push towards digitalization is rapidly influencing the traditional banking models. However, it has also exposed the banks to increasing cyber security threats and vulnerabilities. Banks must keep their employees updated with new technologies & processes that may be in place with use of AI in various areas of banking.

There are many ways AI can be explored in the banks. Leaders should broaden their vision and have long term plan for putting necessary infrastructure in place to collect and merge data sets across the bank. Without leadership, a clear plan and proper infrastructure to bring together data living across functions, departments and databases, it will be very tough to make the most out of AI systems.

Integrating artificial intelligence in the dynamic industry of banking has several benefits. Some of these include accuracy, reduction in human error, cost cuts, scalability, etc. Another important activity that will become easy to perform with AI is data analytics. Machine Learning can effortlessly process a large amount of data swiftly. Patterns can be observed and customer service can be enhanced accordingly. The right customer can be contacted at the right time with the right product, leading to rapid business growth. Jobs will have to be enriched in reply to emerging technology being used as an aid to human intelligence. In spite of all challenges, banks in India will get smarter and more intelligent to implement Artificial Intelligence in all possible areas so that it can provide better customer service, reduce bank's risks and cost of operations and also bring efficiency. Further banks in India will have a very exciting time ahead with many opportunities with AI to make their customers and employees happy.

## REFERENCES

1. Chugh Nitin & Jaiswal Sachin, How AI is Disrupting the Banking Sector in India, <https://technology.siliconindiamagazine.com/viewpoint/ceo-insights/how-ai-is-disrupting-the-banking-sector-in-india-nwid-9820.html>
2. Kumar Navnit (2018), Artificial Intelligence in Banking Sector, <http://www.bankingfinance.in/artificial-intelligence-in-banking-sector-2.html>
3. Latimore Dan (2018), Artificial Intelligence in Banking: Where to Start? <https://www.celent.com/insights/940768915>,
4. Maskey Sameer (Forbes Report) (2018), How Artificial Intelligence Is Helping Financial Institutions (2018), <https://www.forbes.com/sites/forbestechcouncil/2018/12/05/how-artificial-intelligence-is-helping-financial-institutions/>
5. NASCOM CMR Report (2018), Artificial Intelligence for Banking, Financial Services & Insurance Sector: <https://www.nasscom.in/knowledge-center/publications/artificial-intelligence-banking-financial-services-insurance-sector>
6. Rao Sanat (2018), Leading with AI, Artificial Intelligence Powered Banking, Finacle Connect, Mar 2018/Vol 10/Issue 35, <https://active.ai/wp-content/uploads/2018/05/Finacle-Connect-2018-leading-ai-online.pdf>
7. RBI Report of the Working Group on FinTech and Digital Banking (2017), <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/WGFR68AA1890D7334D8F8F72CC2399A27F4A.PDF>
8. Roy Jubraj, Tom Graham & Eve Ryan (2018), Redefine Banking with Artificial Intelligence, An Accenture Publication. [https://www.accenture.com/t00010101T000000Z\\_w\\_/gb-en/\\_acnmedia/PDF-68/Accenture-Redefine-Banking.pdf](https://www.accenture.com/t00010101T000000Z_w_/gb-en/_acnmedia/PDF-68/Accenture-Redefine-Banking.pdf)
9. Sabharwal Chaman Lal (2018), The rise of machine learning and robo-advisors in banking, International Journal of Banking Technology, IDRBT, Jul-Dec 2018. [http://www.idrbt.ac.in/assets/publications/Journals/Volume\\_02/No\\_02/Chapter\\_02.pdf](http://www.idrbt.ac.in/assets/publications/Journals/Volume_02/No_02/Chapter_02.pdf)
10. Saman Goudarzi, Elonnai Hickok, Amber Sinha (2018), AI in Banking & Finance, The Centre for Internet & Society <https://cis-india.org/internet-governance/files/ai-in-banking-and-finance>
11. Sloane Tim (2018), The 18 Top Use Cases of Artificial Intelligence in Banks, <https://www.paymentsjournal.com/the-18-top-use-cases-of-artificial-intelligence-in-banks/>
12. The Financial Brand Report, Artificial Intelligence and The Banking Industry's \$1 Trillion Opportunity, <https://thefinancialbrand.com/72653/artificial-intelligence-trends-banking-industry/>

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#### **ABSTRACT**

*Economic development refers to the economic transformation of a country or a region that leads to improvement in wellbeing and economic capabilities of its residents. The development of various sectors in an economy depends on large extent on the infrastructure availability. Infrastructure is basic physical and organisational structure needed for the operation of the real enterprise. Infrastructure plays a significant role in economic development and its inadequacy can slow down or hamper the development of any country. Due to its significance, infrastructure has been accorded high priority in various five year plans in India. Overtime significant improvement is witnessed in infrastructure availability in the country, but much more remains to be done. This paper tries to analyse the contribution of infrastructure in development of the Uttar Pradesh's economy which happens to be the most populous and one of the most backward state of India.*

#### **KEYWORDS**

economic development, economic infrastructure, social infrastructure.

#### **JEL CODES**

O10, O18.

#### **1. INTRODUCTION**

The basic physical and organisational structure needed for the operation of society or an enterprise is known as 'infrastructure'. The adequacy of infrastructure helps to determine the country's success by diversifying production, expanding trade, coping with population growth, reducing poverty, or improving environmental conditions. Providing infrastructure services to meet the demands of businesses, households, and other users is one of the major challenges of economic development. The availability of infrastructure has increased significantly in developing countries over the past several decades. In many cases, however, the full benefits of past investments are not being realized, resulting in a serious waste of resources and lost economic opportunities. The infrastructure plays significant role in the development of directly productive activities like agriculture, industries etc. Infrastructure can be divided on different basis as economic and social, hard and soft etc. Economic infrastructure includes transport and communication, power, roads, banking etc. On the other hand, social infrastructure includes education, health etc. which can be regarded as the 'wheels of development'.

Economic development is the process by which a nation improves the economic, political, and social well-being of its people. It refers to economic transformation of a country or a region that leads to improvement in economic and social wellbeing of its people. Development is a qualitative phenomenon and is used more often for underdeveloped countries. There is no set parameter to measure the development of a country but international bodies like UNDP are using are some parameters such as life expectancy, expected and mean year of schooling per capita income etc. Apart from these poverty ratio, literacy rate, health indicators (IMR, MMR etc.) are often used to measure the level of development.

The development of various sectors in any country depends on large extent on infrastructure of the country. It is therefore considered one of the key indicators for economic development. Various development economists in their theories advocated significant investment for the development of infrastructure if the DPAs have to flourish. Rosenstein- Rodan in his 'Big Push Theory' argued that the big push or high minimum amount of investment is required to overcome the obstacles to development in underdeveloped economies. Hirschman in his famous unbalanced growth theory advocated two sequences of development, namely, development via excess capacity of Social Overhead Capital (SOC) and development via shortage of SOC. Leibenstein in his theory advocated that underdeveloped countries require 'critical minimum effort' to raise their per capita income and to overcome vicious circle of poverty.

Inadequacy of infrastructure can have detrimental impact on overall growth of an economy – agriculture, industry and services. Social infrastructure is also important in that more skilled and healthy manpower can enhance productivity and production manifold. It becomes more important for a country like India where the more than 50% of the population is below age 25 years. If proper social infrastructure is not provided to them the demographic dividend of India may frittered away.

Since infrastructure is of utmost significance and requires lumpy investment with long gestation lag and concomitant uncertainties of future, private entrepreneurs would not generally be inclined to make such investments. As a result, it has always been considered the responsibility of state to provide basic infrastructure. However, in recent years' private investment in infrastructure has increased significantly. For a developing country like India, the arrangement of this huge amount of investment is challenging although in recent years' provision of infrastructure is being made on public- private partnership (PPP) basis.

The present paper aims at analysing the relationship between socio-economic development and infrastructure on the basis of some selected indicators in the context of Uttar Pradesh.

#### **2. PROFILE OF UTTAR PRADESH**

Uttar Pradesh is bounded by Nepal and Uttarakhand in the North, Haryana and Rajasthan in the West, Madhya Pradesh in the south and Bihar in the East. Uttar Pradesh is the most populous state of India. If compared with the population of world it is 5<sup>th</sup> most populous country after China, India, USA and Indonesia. The population of the state as per Census of India 2011 is approximately 19.98 crores as against 17 crores in 2011. The decadal population growth from 2001 to 2011 is 20.2%. Total area of the state is 2.41 lakh sq km. UP is situated in the fertile Indo- gangetic plain. Uttar Pradesh is among the poorest state of country and is one of the BIMARU states (now Empowered action group). With the availability of fertile land, agriculture is the largest source of livelihood. More than 60% of the total the total population of state is dependent on agriculture. However, in recent years the share of service sector and manufacturing sector has increased significantly. The population density of UP is 829 per square km which is significantly higher than India's population density of 382 per sq. km. Literacy rate of UP is 67.7% which is less than India's literacy rate of 73%. Out of the total population, 22.3% of the population lives in urban areas. Lucknow is the administrative and legislative capital of UP and Kanpur is industrial hub of UP.

Uttar Pradesh presently comprises 75 districts. Further Uttar Pradesh is divided in 4 economic regions-

- **Western Region** comprising 30 districts
- **Central Region** comprising 10 districts
- **Bundelkhand Region** comprising 7 districts
- **Eastern Region** comprising 28 districts

Among these regions, the Western region is the most prosperous region and the Eastern region is most backward. While the central and the western regions are fertile Bundelkhand region is not fit for intensive cultivation. In terms of history and topography regions differ from each other.

### 3. OBJECTIVES OF THE STUDY

Present study aims:

1. To study district wise and region wise disparities in availability of both economic and social infrastructure in the state.
2. To analyse district wise and region wise disparities in socio-economic development of the state.
3. To assess and analyse the district and region wise differentials in infrastructure and development in Uttar Pradesh.
4. To analyse inter-regional causal relationship between infrastructure and development in Uttar Pradesh through multiple regression analysis.

### 4. DEVELOPMENT INDICATORS

#### 4.1 INFANT MORTALITY RATE (IMR)

Infant mortality refers to deaths of young children, typically those less than one year of age. It is measured by the infant mortality rate (IMR), which is the number of deaths of children under one year of age per 1000 live births. With the improvement of health infrastructure there has been significant reduction in IMR over last few decades. IMR was 191.26 in 1951 which reduced to 87.4 in 1990 and further 37 in 2015. IMR of the world on an average is 43 per thousand which is more than IMR of India. This shows improvement in health sector. Inverse of IMR has been taken as a proxy of improvement in health and therefore of socio-economic development.

#### 4.2 PER CAPITA NET STATE DOMESTIC PRODUCT

Net State Domestic Product is defined as a measure, in monetary terms, of the volume of all goods and services produced within boundaries of the state during a given period of time after deducting wear and tear or depreciation, accounted without duplication. Per capita NSDP refers to average NSDP per person in a given area in a specified year. According to State statistics of NITI Aayog for 2013-14, Goa has highest per capita NSDP (₹ 2,24,138) followed by Sikkim (₹1,76,491) and Haryana (₹1,33,427). Bihar has lowest per capita NSDP (₹31,199) followed by Uttar Pradesh (₹36,250) and Manipur (₹41,573). In Uttar Pradesh Gautam Buddha Nagar (₹3,76,781) has highest per capita NSDP followed by Agra (₹85,496) and Meerut (₹85,421). Sant Kabir Nagar (₹21,269) followed by Balrampur (₹21,415) and Pratapgarh (₹22,124).

#### 4.3 NUMBER OF LITERATES PER '000 POPULATION

Literacy is traditionally understood as the ability to read, write, and to use simple arithmetic. Literate in India means any person who is able to write his name in any language. However, in modern days literacy is concerned with the ability to use language, numbers, images, computers, and other basic means to understand, communicate, gain useful knowledge and use the dominant symbol systems of a culture i.e. functional literacy. Number of literates per '000 population of world is 863 which is more than India's literacy rate. Number of literates in most of the developed countries and some developing countries like China is almost equal to unity. Education is also taken as a dimension for calculation of HDI. In India number of literates per '000 population is highest in Kerala (940) followed by Mizoram (913), Goa (887) and Himachal Pradesh (828). Bihar has lowest number of literates per '000 population (618) followed by Arunachal Pradesh (654), Rajasthan (661) and Jharkhand (664). In Uttar Pradesh

Gautam Buddha Nagar (801) has highest number of literates per '000 population followed by Kanpur Nagar (796) and Auraiya (790). Shravasti (467) has lowest number of literates per '000 population followed by Bahraich (494) and Balrampur (495).

#### 4.4 NUMBER OF PERSON LIVING IN URBAN AREAS PER '000 POPULATION

For the Census of India 2011, the definition of urban area is as follows;

1. All places with a municipality, corporation, cantonment board or notified town area committee, etc.
2. All other places which satisfied the following criteria:
  - (i) A minimum population of 5,000;(ii) At least 75 per cent of the male main working population engaged in non-agricultural pursuits; and (iii) A density of population of at least 400 persons per sq. km.

According to the Census of India 2011, total number of persons living in urban areas counted to be 37.71 crores which has increased 9.1 % from 28.61 crores in 2001. The total number of persons living in urban areas per '000 population in India is 312. In India, Goa (622) has highest number of persons living in urban areas per '000 population followed by Mizoram (521) and Tamil Nadu (485). Himachal Pradesh (100) has lowest number of persons living in urban areas per '000 population followed by Bihar (113) and Assam (140). In Uttar Pradesh Ghaziabad (675) has highest number of persons living in urban areas per '000 population followed by Lucknow (662) and Kanpur Nagar (658). Shravasti (35) has lowest number of persons living in urban areas per '000 population followed by Kushinagar (47) and Maharajganj (50).

#### 4.5 PER CAPITA ELECTRICITY CONSUMPTION

Non availability of energy can act as constraint in economic growth of country. India is world's seventh largest energy producer and fifth largest energy consumer. It is often said that there is direct relation in economic growth and per capita energy consumption. Electric power is form of energy essential for economic development as it is required in commercial and non-commercial uses. Per capita electricity consumption in India has increased from 532.9 KWh in 2004-05 to 901.3 in 2015-16. In India Goa (3,511.6) has highest per capita electricity consumption of followed by Haryana (1871.1) and Punjab (1,793.2.) Bihar has lowest per capita electricity consumption of (228.8) KWh followed by Jharkhand (229.5) and Assam (265.4). In Uttar Pradesh Gautam Buddha Nagar (1893.68) has highest per capita electricity consumption followed by Ghaziabad (1086.66) and Agra (832.06). Balrampur (52.71) has lowest per capita electricity consumption followed by Shravasti (54.18) and Kushinagar (55.36).

### 5. SOCIAL INFRASTRUCTURE INDICATORS

#### 5.1 NUMBER OF JUNIOR BASIC SCHOOLS PER LAKH POPULATION

Total number schools in the country were 14,45,807 in 2015. Uttar Pradesh has highest number of schools i.e 2,43,014 followed by Madhya Pradesh and Maharashtra. Total number of schools per lakh population of India was 94.4 schools in 2000 which increased to 125.35 in 2015 showing significant increase. A junior school is a type of school which provides primary education to children, often in the age range from 5 to 13 in India. In UP, Etawah (122.63) has highest number of JBS per lakh population followed by Amethi (118.69) and Ramabai Nagar (114.52). Hapur (37.85) has lowest number of JBS per lakh population followed by Ghaziabad (40.01) and Sambhal (46.61).

#### 5.2 NUMBER OF HIGHER SECONDARY SCHOOLS PER LAKH POPULATION

Higher secondary schools are called by different names across India. These include those schools involved in providing education upto intermediate level. In UP, Etah (18.10) has highest number of HSS per lakh population followed by Auraiya (11.87) and Lucknow (11.25). Badaun (2.62) has lowest number of HSS per lakh population followed by Balrampur (2.71) and Bahraich (2.72).

#### 5.3 NUMBER OF PRIMARY HEALTH CENTRES (PHCs) PER LAKH POPULATION

Primary health centres sometimes referred as Public health centres are state owned rural health care facilities in India. They are essentially single physician clinic for minor surgeries. They are part of government funded public health system in India and are most basic units of this system. Total numbers of PHCs were 23,236

in 2005 which increased to 25,308 in 2015. The total number of PHCs per '000 population was 2.09 in 2015. Himachal Pradesh has highest number PHCs per lakh population i.e 7.35 followed by Karnataka and Rajasthan. West Bengal and Jharkhand have lowest number of PHCs per lakh population i.e 0.99 followed by Punjab and Bihar. In UP hamirpur (4.4) has highest highest number PHCs per lakh population followed by Amethi (3.69) and Chitrakoot (3.55). Lucknow (0.88) has lowest number PHCs per lakh population followed by Varanasi (0.98) and Kanpur Nagar (1.13).

#### 5.4 NUMBER OF MATERNAL AND CHILD HEALTHCARE CENTRES (MCH) PER LAKH POPULATION

Maternal and Child Health Centre (MCH Centres) are the identified centres where deliveries are being conducted – in accordance with the standards laid down in the Maternal and Newborn Health Operational Guidelines and in the Indian Public Health Standards. These are very important for the country like India which have high Infant and Maternal mortality rate. In UP Hamirpur (24.22) has highest number of MCH per lakh population followed by Jhansi (19.38) and Lalitpur (18.93). Ghaziabad (5.13) has lowest number of MCH per lakh population followed by Lucknow (9.17) and Moradabad (9.84).

## 6. ECONOMIC INFRASTRUCTURE INDICATORS

### 6.1 TOTAL LENGTH OF PUCCA ROAD PER '000 SQUARE KM AREA

Road network provides the arterial network to facilitate trade, transport, social integration and economic development. It facilitates specialization, extension of markets and exploitation of economies of scale. Total length of roads in India increased 11 times from 3.99 lakh km to 46.90 lakh km in 2011. In UP, Ghaziabad (5264.63) has highest road length density per '000 square km followed by Moradabad (3201.22) and Sultanpur (3009). Hamirpur (474.03) has lowest road length density per '000 square km followed by Mahoba (503.5) and Chitrakoot (537.31).

### 6.2 PERCENTAGE OF ELECTRIFIED VILLAGES TO TOTAL INHABITED VILLAGES

Today power is essential for the development of a country. Growth of manufacturing and tertiary sector on large depend on availability of power. Non availability or irregular supply of power can cause obstruct or delay the economic development of any nation. Though in most of districts of India 100% electrification is achieved still some areas are left. In UP only few districts are left to achieve the target of 100% electrification (According to data of 2015-16).

### 6.3 NUMBER OF SCHEDULED COMMERCIAL BANKS PER LAKH POPULATION

Scheduled commercial banks are those banks which are included in second schedule of Reserve Bank of India Act, 1934. RBI in turn includes only those banks in schedule which satisfy the criteria laid down by 42(6)(a). Number of scheduled commercial bank increased from 60,515 in 1990 to 1,30,482 in 2015 which show significant increase in number of scheduled commercial banks but number of scheduled commercial banks per lakh population has increased from 6.52 banks in 2000 to 10.78 banks in 2015. In India, Punjab with 21.74 banks per lakh of population occupies the highest place followed by Himachal Pradesh (21.56) and Uttarakhand (19.03). Bihar with 5.97 banks per lakh population occupies lowest position. In UP, Gautam Buddha Nagar (24.13) has highest number of scheduled commercial banks per lakh population followed by Lucknow (17.8) and Kanpur Nagar (12.43). Badaun (4.03) has lowest number of scheduled commercial banks followed by Bahraich (4.58) and Kushinagar (4.74).

### 6.4 PERCENTAGE OF GROSS IRRIGATED AREA TO GROSS SOWN AREA

Gross sown area or Gross Cropped Area (GCA) refers to the total area sown once as well as more than once in an agricultural year. When crop is sown on a piece of land for twice, the area is counted twice in GCA. The states of plain regions like Punjab and Haryana have more percentage of net sown area. Percentage of gross irrigated area to gross sown area shows the availability of irrigation to the agricultural land. It is significant as it affects the productivity. In UP, district of Western region such as Meerut, Hapur, Bulandshahr etc. have 100% gross irrigated area to gross sown area. On the other hand, percentage of gross irrigated area to gross sown are is lowest in Balrampur (33.55) followed by Mahoba (38.41) and Hamirpur (40.69).

## 7. DATA SOURCES AND METHODOLOGY

Uttar Pradesh as a whole and its 75 district has been taken as operational area of the present study. The study is based on cross sectional analysis with the use of secondary data. Data for this study is collected from various Government of India publications such as Statistical abstract of India, National Family Health Survey (NFHS) and State government publication of Uttar Pradesh from Department of Planning, Economics and Statistics division. Selected variables are composite index of development (CID), composite index of economic infrastructure (CIEI) and composite index of social infrastructure (CISI). CID has been taken as the dependent variable & CISI and CIEI are taken as independent variable. CID is based on vector of 5 indicators comprising (i) Inverse of IMR, (ii) per capita NSDP, (iii) No. of persons living in urban areas per '000 population, (iv) Number of literates per '000 population, (v) Per capita electricity consumption in kWh. CIEI is based on vector of 4 indicators comprising (i) length of pucca road per '000 sq.km of area, (ii) number of scheduled commercial banks per lakh of population, (iii) percentage of electrified villages to total inhabited villages, (iv) percentage of net irrigated area to net sown area. CISI is based on vector of 4 indicators comprising (i) number of Primary health centers' (PHCs) per lakh of population, (ii) number of maternal and child healthcare centers' (MCH) per lakh population (iii) number of junior basic schools (JBS) per lakh of population (iv) number of higher secondary schools (HSS) per lakh of population. Simple index method has been used to arrive at the composite indices. To understand the role of infrastructure in development we will be making use of multiple regression analysis. It is expected that there is direct relationship between the two i.e. better infrastructure availability lead to greater development.

## 8. REGION WISE SOCIO-ECONOMIC DEVELOPMENT AND INFRASTRUCTURE AVAILABILITY IN UP: COMPOSITE INDEX APPROACH

District wise and region wise index values of composite index of social infrastructure, composite index of economic infrastructure and composite index of development are as follows in Table number 1:

TABLE 1

DISTRICT	CISI	CIEI	CID
SAHARANPUR	87.29	111.81	112.45
MUZAFFARNAGAR	94.27	107.93	152.87
SHAMLI	100.17	107.31	114.42
BIJNOR	101.85	89.98	103.76
MORADABAD	81.72	149.35	110.5
SAMBHAL	77.32	82.53	94.16
RAMPUR	79.92	104.36	99.14
JYOTIBA PHULE NAGAR	121.01	106.51	104.39
MEERUT	90.89	128	173.21
BAGHPAT	119.83	104.27	119.95
GHAZIABAD	49.61	202.76	226.18
HAPUR	86.13	118.7	167.63
GAUTAM BUDDHA NAGAR	69.76	172.79	422.21
BULANDSHAHR	99.69	103.3	107.5
ALIGARH	94.04	101.93	115.02
MAHAMAYA NAGAR	127.26	105.84	118.49
MATHURA	111.49	99.37	131.84
AGRA	93.95	116.37	157.71
FIROZABAD	106.44	101.39	161.87
ETAH	172.7	105.43	102.67



KASGANJ	107.25	92.05	97.81
MAINPURI	142.02	106.77	89.74
BADAUN	74.18	83.33	77.7
BAREILLY	84.25	113.02	101.26
PILIBHIT	81.7	97.81	88.15
SHAHJAHANPUR	105.83	101.92	76.57
FARRUKHABAD	112.44	94.42	84
KANNUAJ	120.27	103.7	77.24
ETAWAH	126.98	109.84	96.39
AURAIYA	141.52	99.22	96.95
<b>WESTERN REGION</b>	<b>96.81</b>	<b>106.42</b>	<b>126.06</b>
KHERI	84.35	86.8	69.55
SITAPUR	86.97	96.34	66
HARDOI	96.33	86.31	66.49
UNNAO	104.51	91.75	87.45
LUCKNOW	83.12	182.37	200
RAE BARELI	94.53	110.05	79.49
RAMABAI NAGAR	135.79	100.73	98.26
KANPUR NAGAR	91.39	138.22	185.56
FATEHPUR	108.75	91.51	87.9
BARABANKI	94.65	105.52	69.69
<b>CENTRAL REGION</b>	<b>95.43</b>	<b>103.94</b>	<b>101.04</b>
JALAUN	139.3	84.16	103.04
JHANSI	121.78	88.71	146.46
LALITPUR	110.95	81.9	81.38
HAMIRPUR	165.73	78.58	109.58
MAHOBA	109.2	70.82	104.55
BANDA	124.93	78.77	86.66
CHITAKOOT	138.45	72.81	78.25
<b>BUNDELKHAND REGION</b>	<b>129.37</b>	<b>80.68</b>	<b>101.42</b>
PRATAPGARH	128.05	113.23	60.19
KAUSHAMBI	110.49	97.55	65.44
ALLAHABAD	92.37	117.7	115.13
FAIZABAD	106.18	117.1	74.42
AMBEDKAR NAGAR	97.57	119.74	78.01
SULTANPUR	126.04	137.38	81.11
AMETHI	146.72	130.76	76.65
BAHRAICH	77.51	68.21	58.53
SHRAWASTI	110.74	76.69	46.29
BALRAMPUR	81.24	70.67	51.03
GONDA	90.45	95.27	60.64
SIDDHARTH NAGAR	104.24	94.94	53.76
BASTI	103.27	101.45	65.89
SANT KABIR NAGAR	82.87	89.89	64.96
MAHRAJGANJ	86.63	79.85	58.41
GORAKHPUR	91.53	110.93	91.88
KUSHINAGAR	91.36	100.95	59.14
DEORIA	128.49	106.08	68.34
AZAMGARH	102.13	110.81	66.86
MAU	113.73	111.89	93.45
BALIA	116.5	95.67	69.09
JAUNPUR	107	111.47	67.93
GHAZIPUR	130.51	113.17	71.01
CHANDAULI	92.45	107.7	79.64
VARANASI	72.04	141.14	129.84
SANT RAVIDAS NAGAR	88.19	115.18	73.72
MIRZAPUR	100.93	94.29	80.16
SONBHADRA	97.2	80.82	88.18
<b>EASTERN REGION</b>	<b>101.61</b>	<b>103.14</b>	<b>73.20</b>
<b>UTTAR PRADESH</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Author's calculation

In Western region Etah, Mainpuri and Auraiya are some districts having high CISI due to better per capita availability of social infrastructure and surprisingly Ghaziabad, Gautam Buddha Nagar and Badaun are districts having low CISI. On the other hand, CIEI is highest in Ghaziabad followed by Gautam Buddha Nagar and Moradabad and lowest in Sambhal followed by Badaun and Bijnor. CID is highest in Gautam Buddha Nagar followed by Agra and Meerut and lowest in Shahjahanpur followed by Kannauj and Badaun. From the above table it can be observed that districts having high CID have high CIEI. But districts having high CID are having low CISI such as Gautam Buddha Nagar. This is because these districts fall in NCR zone which is the center of economic activities and provide better opportunities. So these districts attract migrants across the various underdeveloped regions of the Uttar Pradesh as these districts provide them better source to earn their livelihood (pull factors of migration) which results in lesser per capita availability of social infrastructure.

In Central region CISI is highest in Rambai Nagar followed by Fatehpur and Unnao and lowest in Lucknow followed by Kheri and Sitapur. On the other hand, CIEI is highest in Lucknow followed by Kanpur Nagar and Raebareili and lowest in Hardoi followed by Kheri and Fatehpur. CID is highest in Lucknow followed by Kanpur Nagar and Ramabai Nagar and lowest in Sitapur followed by Hardoi and Raebreli. Central region also shows similar trend. Districts having high CID have high CIEI but low CISI. Lucknow and Kanpur Nagar are district having high CID and CIEI but low CISI.

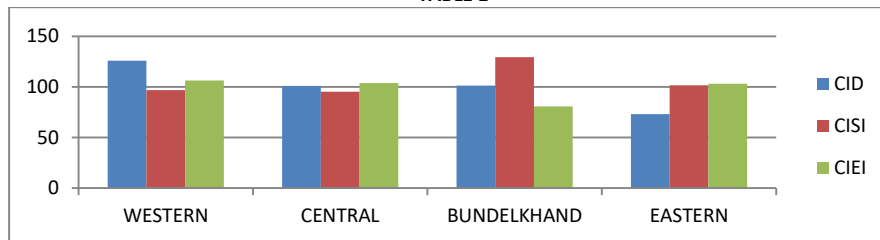
In Bundelkhand region CISI is highest in Hamirpur followed by Chitakoot and Jalaun and lowest in Lalitpur. CISI is comparatively high in all districts of Bundelkhand region. However, CIEI is comparatively low in all the districts. CID is highest in Jhansi followed by Hamirpur and Mahoba and lowest in Chitakoot followed by Lalitpur.

In Eastern region CISI is highest in Amethi followed by Ghazipur and Pratapgarh and lowest in Varanasi followed by Bahraich. CIEI is highest in Varanasi followed by Sultanpur and Amethi and lowest in Bahraich followed by Balrampur. CID is comparatively low in all districts of Eastern region. Varanasi has highest CID and Shrawasti has lowest. Varanasi has highest CID and CIEI and lowest CISI.

Overall in Uttar Pradesh Etah, Hamirpur, Amethi, Mainpuri and Aurai are some districts having high CISI while districts like Ghaziabad, Gautam Buddha Nagar, Badaun and Sambhal are having low CISI. The district having lower CISI mainly belongs to Western Uttar Pradesh which have high CID. CIEI is highest in Ghaziabad followed by Lucknow, Gautam Buddha Nagar and Moradabad. District which fall in zone of NCR and districts of Western Uttar Pradesh have higher CIEI. On the other hand, CIEI is lowest in Bahraich followed by Balrampur, Mahoba, Chitakoot and Shrawasti. The district having lower CIEI mainly belongs to Eastern Uttar Pradesh region. CID is highest in Gautam Buddha Nagar followed by Lucknow, Agra, Kanpur Nagar and Meerut. CID is higher in the district which falls in zone of NCR and Western Uttar Pradesh. Lucknow is capital and an important centre of administrative machinery and IT hub of Uttar Pradesh so is having high CID and Kanpur is industrial area. CID is lowest in Shrawasti followed by Balrampur, Siddharth Nagra, Basti and Maharajganj. CID is lowest in districts of Eastern Uttar Pradesh. The above table shows that CIEI and CID are relatively higher in district falling in zone of NCR, western UP, Lucknow and Kanpur and lower in districts of Eastern Uttar Pradesh. Overall the districts having CID and CIEI have low CISI.

**REGION WISE INDEX**

**TABLE 1**



Region wise observation on the basis of selected variables for the study shows that CISI is highest in Bundelkhand region (129.37) followed by Eastern region (101.61). However, CISI is lowest in Central region (95.43) followed by Western region (96.81). On the other hand, Western region (106.42) has highest CIEI followed by Central (103.94) and Eastern region (103.14). Bundelkhand region (80.68) has lowest CIEI. Western region (126.06) has highest CID followed by Bundelkhand region (101.42) and Eastern region (73.2) has lowest CID followed by Central region (101.04). From the above table and diagram, it can be observed that regions having high CID have high CIEI and low CISI.

**INFRASTRUCTURE AND DEVELOPMENT: A MULTIPLE REGRESSION ANALYSIS**

Dependent variable- CID

**TABLE 2**

INDEPENDENT VARIABLES	REGION					
	WESTERN	CENTRAL	BUNDELKHAND	EASTERN	UTTAR PRADESH	
CONSTANT	-48.95	-113.05	-75.401	38.238	-23.254	
CISI	COEFFICIENT	-.251	.422	.041	-.445	-.178
	SIGNIFICANCE	.514	.422	.936	.005	.422
CIEI	COEFFICIENT	1.812	1.585	2.16	.776	1.356
	SIGNIFICANCE	.000	.000	.229	.000	.000
ADJUSTED R <sup>2</sup>	.504	.807	.004	.524	.397	

Source: Author's calculation from table number 1

Notes: CID stands for composite index of development, CISI stands for composite index of social infrastructure, CIEI stands for composite index of economic infrastructure.

As can be observed from the table, the coefficient of CISI for UP is insignificant i.e. p value=.422. In case of this study social infrastructure is not making a significant contribution to the economic development. It may be concluded that the level of social infrastructure has still not reached the point where it can play a decisive role in the economic development of Uttar Pradesh commensurate to its population requirement. Further, a limitation of this study is that only some indicative indicators have been incorporated. In case of economic infrastructure its highly significant contribution (p value=0.000) to development is discernible. Region wise observation shows that social infrastructure is not making significant impact on development in all the regions except Bundelkhand region (p value =.229). On the other hand economic infrastructure is making significant impact on development of all the regions excepting Bundelkhand region where its significance is relatively lower (p value=.229). Thus economic infrastructure is resulting in significant development of Uttar Pradesh. Economic infrastructure should be further upgraded and extended, whereas social infrastructure which leads merely not to the economic development but also to social transformation seems to be inadequate and should be made available throughout the state for a far reaching and all encompassing socio-economic development.

**9. CONCLUSION**

On the basis of this study it can be concluded that although availability of economic and social infrastructure has increased overtime but still a lot more needs to be done. The district wise cross section data multiple regression analysis shows that economic infrastructure is making a significant contribution to economic development of the state. However, the contribution of social infrastructure seems to be meager on development of Uttar Pradesh. It was also observed that those districts having higher index of development were having lower social infrastructure index. These districts are having high per capita income, higher literacy rate and urbanization. Also these districts attract migrants across the various underdeveloped regions of the Uttar Pradesh as these districts provide them better source to earn their livelihood (pull factors of migration) for e.g. the districts which are part of NCR. This Intra state migration exerts pressure on the available resources. It was observed that all these lead to lesser per capita availability of social infrastructure which have been represented in the present study by indicators such as availability of PHCs and MHCs per lakh of population and availability of JBS and HSS per lakh of population. Also it has been observed that as the per capita income of a person increases they opt for better educational and health facilities which are generally provided by private educational institutions and hospitals in these areas. As the availability of social infrastructure indicators taken in the present study depend on government or public investment, it seems to decline as private players are involved in creating social infrastructure through private investment. This calls for improvement in availability and efficiency in government provided health centres and educational institutions for an all encompassing impact on the masses. Thus while the additional provision of economic infrastructure is also important, greater attention should be paid towards social infrastructure if the state is to move to a faster growth trajectory and catch up with more developed states.

Region wise differentials in infrastructure development also need to be taken care of and the discrepancy in growth of CID and CISI need to be further researched.

REFERENCES

1. Datta and Sundaram (2011), 'Indian Economy', S.Chand and sons, New Delhi
2. District wise indicators Uttar Pradesh (2016), Economics & statistics division, State Planning Institute, Uttar Pradesh
3. Energy statistics (2017), Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.
4. Government of India, Census of India (2011), New Delhi.
5. Handbook of statistics on Indian states (2016-17), Reserve bank of India.
6. Human development report (2016), United Nations development programme.
7. India year book (2017), Government of India
8. J.V Vaishampayan, (2011), 'Infrastructure Development of India', NRBC Lucknow.
9. Rachna Mujoo, (2011), 'Infrastructure Efficiency and Economic Development in Uttar Pradesh' J.V Vaishampayan,op.cit.
10. State statistics (2015), Niti Aayog, Government of India.
11. World bank (1994), World development report
12. www.infrastructure.gov.in

APPENDIX

1 TABLE SHOWING DEVELOPMENT INDICATORS

1.1 TABLE SHOWING DEVELOPMENT INDICATORS OF WESTERN REGION

DISTRICTS	IMR	PER CAPITA NSDP IN ₹ { At current prices (base year 2011-12)}[2014-15]	NUMBER OF LITERATES PER THOUSANDS POPULATION [2011]	NUMBER OF PERSONS LIVING IN URBAN AREAS PER THOUSAND POPULATION [2011]	PER CAPITA ELECTRICITY CONSUMPTION(IN kWh) [2015-16]
SAHARANPUR	76	46,325	705	308	316.2
MUZAFFARNAGAR	51	51,404	691	287	714.57
SHAMLI	NA	50,188	NA	NA	NA
BIJNOR	62	45,597	685	251	231.23
MORADABAD	64	41,970	568	330	300
SAMBHAL	NA	41,299	NA	NA	NA
RAMPUR	60	54,431	533	252	169.86
JYOTIBA PHULE NAGAR	72	57,142	638	249	230.33
MEERUT	50	85,421	728	511	501.3
BAGHPAT	52	50,984	720	211	383.52
GHAZIABAD	46	59,119	781	675	1086.66
HAPUR	NA	73,523	NA	NA	NA
GAUTAM BUDDHA NAGAR	57	3,76,781	801	591	1893.68
BULANDSHAHR	68	53,441	689	248	259.31
ALIGARH	70	45,368	675	331	318.66
MAHAMAYA NAGAR	57	58,803	716	213	348.52
MATHURA	44	51,964	704	297	376.49
AGRA	51	85,496	716	458	832.06
FIROZABAD	56	45,245	719	333	272.29
ETAH	67	57,837	708	151	161.19
KASGANJ	NA	64,553	610	201	113.45
MAINPURI	50	37,782	760	154	192.21
BADAUN	NA	35,283	513	175	104
BAREILLY	78	58,866	585	353	172.65
PILIBHIT	73	48,585	615	173	75.9
SHAHJAHANPUR	80	39,976	595	198	90.64
FARRUKHABAD	78	42,115	690	221	110.48
KANNUAJ	79	32,269	627	169	121.28
ETAWAH	56	40,685	784	232	220.8
AURAIYA	58	26,949	789	170	286.6
WESTERN REGION	62	59,737	675	313	357.41
UTTAR PRADESH	68	43,861	677	223	252.42

1.2 TABLE SHOWING DEVELOPMENT INDICATORS OF CENTRAL REGION

DISTRICTS	IMR	PER CAPITA NSDP IN ₹ { At current prices (base year 2011-12)}[2014-15]	NUMBER OF LITERATES PER THOUSANDS POPULATION [2011]	NUMBER OF PERSONS LIVING IN URBAN AREAS PER THOUSAND POPULATION [2011]	PER CAPITA ELECTRICITY CONSUMPTION(IN kWh) [2015-16]
KHERI	78	37,808	606	115	84.4
SITAPUR	80	34,416	611	118	59
HARDOI	81	29,349	646	132	68.88
UNNAO	58	35,233	664	171	164.57
LUCKNOW	44	65,450	773	662	722.57
RAE BARELI	53	30,251	672	90	154
RAMABAI NAGAR	65	35,030	758	97	362.53
KANPUR NAGAR	37	58,148	796	658	502.2
FATEHPUR	55	33,783	674	122	213.11
BARABANKI	68	31,514	617	101	101.4
CENTRAL REGION	62	40,676	683	260	252.52
UTTAR PRADESH	68	43,861	677	223	252.42

1.3 TABLE SHOWING DEVELOPMENT INDICATORS OF BUNDELKHAND REGION

DISTRICTS	IMR	PER CAPITA NSDP IN ₹ { At current prices (base year 2011-12)}[2014- 15]	NUMBER OF LITERATES PER THOUSANDS POPULATION [2011]	NUMBER OF PERSONS LIVING IN URBAN AREAS PER THOUSAND POPULATION [2011]	PER CAPITA ELECTRICITY CONSUMPTION{IN kWh} [2015-16]
JALAUN	65	46,607	737	248	214.03
JHANSI	41	60,007	750	417	334.24
LALITPUR	73	43,313	635	144	142.96
HAMIRPUR	45	40,073	688	190	372.58
MAHOBA	46	55,472	653	211	144.25
BANDA	55	32,793	667	153	170.81
CHITRAKOOT	67	39,445	650	97	152.97
BUNDELKHAND REGION	56	45,700	693	227	225.53
UTTAR PRADESH	68	43,861	677	223	252.42

1.4 TABLE SHOWING DEVELOPMENT INDICATORS OF EASTERN REGION

DISTRICTS	IMR	PER CAPITA NSDP IN ₹ { At current prices (base year 2011-12)}[2014-15]	NUMBER OF LITERATES PER THOUSANDS POPULATION [2011]	NUMBER OF PERSONS LIVING IN URBAN AREAS PER THOUSAND POPULATION [2011]	PER CAPITA ELECTRICITY CONSUMPTION{IN kWh} [2015-16]
PRATAPGARH	84	22,124	701	55	104.63
KAUSHAMBI	82	28,724	613	78	134.31
ALLAHABAD	81	49,475	723	247	408.11
FAIZABAD	88	31,692	687	138	148.97
AMBEDKAR NAGAR	63	24,650	722	117	168.21
SULTANPUR	45	34,138	693	52	127.74
AMETHI	NA	41,126	NA	NA	150.34
BAHRAICH	66	28,825	494	81	77.97
SHRAWASTI	96	28,850	467	35	54.18
BALRAMPUR	87	21,415	495	77	52.71
GONDA	71	29,960	587	65	74.1
SIDDHARTH NAGAR	87	23,375	592	63	54.58
BASTI	81	35,410	672	56	102.67
SANT KABIR NAGAR	63	21,269	667	75	90.92
MAHRAJGANJ	78	28,407	628	50	64.78
GORAKHPUR	62	29,825	708	188	234.78
KUSHINAGAR	80	31,307	652	47	55.36
DEORIA	70	24,917	711	102	93
AZAMGARH	74	24,499	709	85	110.43
MAU	73	31,053	731	226	237.1
BALIA	69	23,833	709	94	115.1
JAUNPUR	72	24,390	715	77	124.52
GHAZIPUR	77	26,959	718	76	164.24
CHANDALI	77	26,474	715	124	222.65
VARANASI	72	40,482	756	434	394
SANT RAVIDAS NAGAR	82	28,743	690	145	135.67
MIRZAPUR	80	34,826	685	139	183.85
SONBHADRA	69	47,866	640	169	158.58
EASTERN REGION	75	30,192	674	122	157.64
UTTAR PRADESH	68	43,861	677	223	252.42

## 2. TABLE SHOWING SOCIAL INFRASTRUCTURE INDICATORS

2.1 TABLE SHOWING SOCIAL INFRASTRUCTURE INDICATORS OF WESTERN REGION

DISTRICTS	NUMBER OF PHCs PER LAKH POPULATION [2015-16]	NUMBER OF MHCs PER LAKH POPULATION [2015-16]	NUMBER OF JBS PER LAKH POPULATION [2015-16]	NUMBER OF HSS PER LAKH POPULATION [2015-16]
SAHARANPUR	1.65	11.56	78.88	4.7
MUZAFFARNAGAR	1.78	11.58	64.61	7.32
SHAMLI	2.54	12.94	77.03	4.56
BIJNOR	1.69	10.66	104.01	6.82
MORADABAD	1.23	9.84	62.62	6.94
SAMBHAL	1.77	11	46.61	4.68
RAMPUR	1.39	10.23	87.85	3.58
JYOTIBA PHULE NAGAR	1.86	10.76	109.24	10.86
MEERUT	1.52	12.38	63.58	6.93
BAGHPAT	2.52	12.89	64.24	10.97
GHAZIABAD	0.6	5.13	40.01	5
HAPUR	2.04	13.49	37.95	5.48
GAUTAM BUDDHA NAGAR	1.39	726	62.03	4.7
BULANDSHAHR	2.19	13.06	74.56	5.74
ALIGARH	1.51	11.06	75.44	7.53
MAHAMAYA NAGAR	2.36	11.6	111.45	10.21
MATHURA	1.78	11.84	89.05	9.7
AGRA	1.6	10.5	69.49	8.02
FIROZABAD	2.46	12.01	82.13	6.58
ETAH	2.81	15.72	116.6	18.1
KASGANJ	2.7	14.1	85.57	4.55
MAINPURI	3.24	13.87	122.63	9.01
BADAUN	1.7	9.93	70.85	2.62
BAREILLY	1.6	10.69	72.09	5.11
PILIBHIT	1.59	10.82	76.13	4.05
SHAHJAHANPUR	1.97	12.19	101.31	6.33
FARRUKHABAD	1.98	12.05	83.13	9.67
KANNUAJ	2.55	13.64	101.56	7.42
ETAWAH	2.5	13.4	122.49	7.74
AURAIYA	2.68	14.13	107.58	11.87
WESTERN REGION	1.83	11.27	79.06	6.78
UTTAR PRADESH	2.00	12.03	78.85	6.66

2.2 TABLE SHOWING SOCIAL INFRASTRUCTURE INDICATORS OF CENTRAL REGION

DISTRICTS	NUMBER OF PHCs PER LAKH POPULATION [2015-16]	NUMBER OF MHCs PER LAKH POPULATION [2015-16]	NUMBER OF JBS PER LAKH POPULATION [2015-16]	NUMBER OF HSS PER LAKH POPULATION [2015-16]
KHERI	1.91	10.99	81.79	3.12
SITAPUR	1.95	11.45	77.88	3.76
HARDOI	1.71	11.82	89.58	5.86
UNNAO	1.96	12.97	92.55	6.32
LUCKNOW	0.88	9.17	52.48	11.25
RAE BARELI	2	10.38	76.12	6.35
RAMABAI NAGAR	2.5	14.23	114.52	10.3
KANPUR NAGAR	1.13	10.8	69.2	8.76
FATEHPUR	2.07	13.56	98.06	6.29
BARABANKI	2.39	12.61	77.15	3.76
CENTRAL REGION	1.76	11.49	79.56	6.48
UTTAR PRADESH	2.00	12.03	78.55	6.66

2.3 TABLE SHOWING SOCIAL INFRASTRUCTURE INDICATORS OF BUNDELKHAND REGION

DISTRICTS	NUMBER OF PHCs PER LAKH POPULATION [2015-16]	NUMBER OF MHCs PER LAKH POPULATION [2015-16]	NUMBER OF JBS PER LAKH POPULATION [2015-16]	NUMBER OF HSS PER LAKH POPULATION [2015-16]
JALAUN	2.58	19.38	110.25	8.48
JHANSI	2.39	18.93	89.92	6.41
LALITPUR	2.56	17.36	100.56	2.93
HAMIRPUR	4.4	24.22	106.56	7.09
MAHOPA	2.32	18.75	85.2	3.79
BANDA	3.21	18.5	93.31	4.47
CHITRAKOOT	3.55	16.58	117.96	5.92
BUNDELKHAND REGION	2.93	19.03	99.82	5.74
UTTAR PRADESH	2.00	12.03	78.55	6.66

2.4 TABLE SHOWING SOCIAL INFRASTRUCTURE INDICATORS OF EASTERN REGION

DISTRICTS	NUMBER OF PHCs PER LAKH POPULATION [2015-16]	NUMBER OF MHCs PER LAKH POPULATION [2015-16]	NUMBER OF JBS PER LAKH POPULATION [2015-16]	NUMBER OF HSS PER LAKH POPULATION [2015-16]
PRATAPGARH	2.74	13.54	81.74	10.59
KAUSHAMBI	2.48	12.45	74.9	7.96
ALLAHABAD	1.55	10.53	57.75	8.74
FAIZABAD	1.87	12.08	87.78	7.96
AMBEDKAR NAGAR	1.61	11.07	85.31	7.3
SULTANPUR	2.55	12.5	90.41	10.53
AMETHI	3.69	18.4	118.69	6.59
BAHRAICH	1.96	8.88	76.82	2.72
SHRAWASTI	2.24	17.98	100.15	3.63
BALRAMPUR	1.78	11.04	81.64	2.71
GONDA	2.2	11.42	75.77	4.05
SIDDHARTH NAGAR	3.15	13.07	86.72	2.72
BASTI	2.03	12.46	87.54	6.46
SANT KABIR NAGAR	1.74	11.91	79.92	2.94
MAHRAJGANJ	2.06	11.72	74.12	3.47
GORAKHPUR	1.98	12.17	58.19	6.14
KUSHINAGAR	2.1	11.02	82.48	4.28
DEORIA	2.87	14.31	72.38	10.64
AZAMGARH	2.3	12.5	68.91	6.81
MAU	2.17	12.04	65.2	10.9
BALIA	2.95	13.74	76.1	7.18
JAUNPUR	2.4	13.18	71.86	7.15
GHAZIPUR	2.31	12.7	83.31	13.01
CHANDAULI	1.83	13.85	63.79	5.48
VARANASI	0.98	10.06	48.68	6.25
SANT RAVIDAS NAGAR	1.62	11.05	61.49	6.79
MIRZAPUR	2.26	12.53	80.96	5.59
SONBHADRA	1.86	10.17	113.34	4.5
EASTERN REGION	2.16	12.16	75.82	6.74
UTTAR PRADESH	2.00	12.03	78.85	6.66

## 3. TABLE SHOWING ECONOMIC INFRASTRUCTURE INDICATORS

3.1 TABLE SHOWING ECONOMIC INFRASTRUCTURE INDICATORS OF WESTERN REGION

DISTRICTS	LENGTH OF PUCCA ROAD PER THOUSANDS SQ. KM [2015-16]	PERCENTAGE OF ELECTRIFIED VILLAGES TO TOTAL INHABITED VILLAGES [2015-16]	NUMBER OF SCHEDULED COMMERCIAL BANKS PER LAKH POPULATION [2015-16]	NET IRRIGATED AREA TO NET SOWN AREA [2014-15]
SAHARANPUR	1525.6	98.2	7.38	93.04
MUZAFFARNAGAR	1119.57	100	8.01	98.88
SHAMLI	NA	NA	6.73	99.95
BIJNOR	738.32	84.97	6.61	94.57
MORADABAD	3201.22	99.18	8.2	93.82
SAMBHAL	NA	NA	5.44	74.04
RAMPUR	1136.46	99.24	7.13	96.43
JYOTIBA PHULE NAGAR	1182.3	99.26	8.15	89.38
MEERUT	1508.4	100	11.53	100
BAGHPAT	829.49	100	8.59	99.97
GHAZIABAD	5264.63	99.76	10.93	99.96
HAPUR	NA	NA	8.43	100
GAUTAM BUDDHA NAGAR	869.49	NA	24.13	99.97
BULANDSHAHR	1238.7	96.98	6.04	100
ALIGARH	1149.04	100	7.03	88.21
MAHAMAYA NAGAR	1325.36	95.97	7.55	87.15
MATHURA	707.69	100	9.52	82.27
AGRA	1662.4	100	10.19	66.96
FIROZABAD	1568.76	98.77	5.32	74.35
ETAH	1152	100	7.65	92.6
KASGANJ	1237.34	NA	5.2	84.52
MAINPURI	1532.72	99.15	5.32	97.64
BADAUN	NA	94.11	4.01	74.68
BAREILLY	1548.97	96.46	7.67	93.79
PILIBHIT	895.55	100	6.45	97.85
SHAHJAHANPUR	1101.19	100	6.86	93.13
FARRUKHABAD	973.38	99.74	5.9	88
KANNUAJ	1329.67	98.85	6.45	89.28
ETAWAH	1713.55	100	6.73	79.75
AURAIYA	1136.08	100	5.59	85.07
WESTERN REGION	1292.84	94.09	6.59	89.37
UTTAR PRADESH	1221.95	91.14	7.48	80.18

3.2 TABLE SHOWING ECONOMIC INFRASTRUCTURE INDICATORS OF CENTRAL REGION

DISTRICTS	LENGTH OF PUGCA ROAD PER THOUSANDS SQ. KM [2015-16]	PERCENTAGE OF ELECTRIFIED VILLAGES TO TOTAL INHABITED VILLAGES [2015-16]	NUMBER OF SCHEDULED COMMERCIAL BANKS PER LAKH POPULATION [2015-16]	NET IRRIGATED AREA TO NET SOWN AREA [2014-15]
KHERI	606.6	100	5.63	90.29
SITAPUR	1103.78	99.95	5.63	88.3
HARDOI	747.04	100	5.25	83.57
UNNAO	893.81	100	6.13	81.95
LUCKNOW	3267.41	100	17.8	91.75
RAE BARELI	NA	100	8.17	89.18
RAMABAI NAGAR	962.03	100	9.56	69.52
KANPUR NAGAR	2339.14	100	12.43	68.64
FATEHPUR	907.76	100	6.62	75.01
BARABANKI	1276.3	100	6.89	92.86
CENTRAL REGION	1035.85	99.99	8.68	84.4
UTTAR PRADESH	1221.95	91.14	7.48	80.18

3.3 TABLE SHOWING ECONOMIC INFRASTRUCTURE INDICATORS OF BUNDELKHAND REGION

DISTRICTS	LENGTH OF PUGCA ROAD PER THOUSANDS SQ. KM [2015-16]	PERCENTAGE OF ELECTRIFIED VILLAGES TO TOTAL INHABITED VILLAGES [2015-16]	NUMBER OF SCHEDULED COMMERCIAL BANKS PER LAKH POPULATION [2015-16]	NET IRRIGATED AREA TO NET SOWN AREA [2014-15]
JALAU	713.53	100	7.08	59.26
JHANSI	642.24	100	9.03	57.64
LALITPUR	801.94	100	6.39	53.61
HAMIRPUR	474.03	100	8.61	40.69
MAHOBA	503.5	100	6.32	38.41
BANDA	631.96	100	7.04	47.76
CHITRAKOOT	537.31	99.59	6.47	41.32
BUNDELKHAND REGION	629.83	99.95	7.41	50.07
UTTAR PRADESH	1221.95	91.14	7.48	80.18

3.4 TABLE SHOWING ECONOMIC INFRASTRUCTURE INDICATORS OF EASTERN REGION

DISTRICTS	LENGTH OF PUGCA ROAD PER THOUSANDS SQ. KM [2015-16]	PERCENTAGE OF ELECTRIFIED VILLAGES TO TOTAL INHABITED VILLAGES [2015-16]	NUMBER OF SCHEDULED COMMERCIAL BANKS PER LAKH POPULATION [2015-16]	NET IRRIGATED AREA TO NET SOWN AREA [2014-15]
PRATAPGARH	1677.53	100	6.89	91.26
KAUSHAMBI	1177.5	100	6.69	75.93
ALLAHABAD	1844.14	100	7.96	83.21
FAIZABAD	1880.39	100	6.82	91.11
AMBEDKAR NAGAR	1922	NA	6.16	95.9
SULTANPUR	3009	100	5.52	85.34
AMETHI	NA	NA	11.28	88.78
BAHRAICH	554.64	100	4.58	45.33
SHRAWASTI	1057.51	100	6.24	48.2
BALRAMPUR	718.63	100	5.41	33.55
GONDA	1049	100	5.66	88.09
SIDDHARTH NAGAR	1158.55	100	4.76	89.51
BASTI	1257.29	100	5.81	92.64
SANT KABIR NAGAR	1207.46	100	6.31	53.48
MAHRAJGANJ	1022	100	4.85	49.1
GORAKHPUR	1729	100	7.92	69.49
KUSHINAGAR	1465	100	4.74	88.88
DEORIA	1444	100	6.2	91.05
AZAMGARH	1637	100	6.09	94.74
MAU	1669	100	6	97.07
BALIA	1144	100	5.86	81
JAUNPUR	1799.76	100	6.37	83.18
GHAZIPUR	1781	100	6.43	89.23
CHANDAULI	1391	100	7.12	89.86
VARANASI	2449	100	11.21	83.91
SANT RAVIDAS NAGAR	1948	100	6.79	80.84
MIRZAPUR	1119.14	100	6.53	71.03
SONBHADRA	1077.46	100	6.94	26.17
EASTERN REGION	1458.29	98.71	6.51	77.65
UTTAR PRADESH	1221.95	91.14	7.48	80.18

**SYSTEMATIC INVESTMENT PLAN (SIP): AN INSTRUMENT FOR ECONOMIC GROWTH**

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**LUCKNOW**

**ABSTRACT**

*The mutual fund sectors are one of the fastest growing sectors in Indian Economy and have awesome potential for sustainable future growth. From the last decade, Mutual funds and its various instruments like SIP, equity funds, debt and hybrid fund instrument have given lots of economic growth to the industry as well as an individual also. This present study is based on Systematic investment plan (SIP), which has emerged as an alternative investment plan for a large number of investors interested in high returns but less risk with investments in instalments. These funds make saving and investment simple, accessible and affordable. The benefits of SIP include professional management, diversification, variety, liquidity, affordability, convenience and ease of record keeping – as well as strict government regulation and full disclosure. This paper especially studies about various saving and investment and how the investment in mutual funds through Systematic Investment Plan (SIP) can gain momentum and increase percentage of income. In the present study has studied the various factors of investment and also considered by investors in selecting a Systematic Investment Plan. The purpose of the study is to find out the motivating factor to invest in a systematic investment plan and it also aims at exploring the potential of SIP in India with all problems, complexities and variables and suggesting the means and ways of meeting the challenges for developing the mutual funds in tandem with its potential of economic growth. This study is based on secondary data which also identify and analyze the challenges and opportunities for a systematic investment plan.*

**KEYWORDS**

systematic invest plan (SIP), mutual funds, risk.

**JEL CODES**

G2, G11, R42.

**1.0 INTRODUCTION**

People always want to save some money for their future. For this purpose, they invest their precious amount in various types of investment schemes. Sometimes these investments gave a good return of amount but sometimes they feel that their investment was useless. At the final stage of their return on investment, they realize it's too late. But presently in the market, various traditional and modern investment schemes are there which are definitely helpful to provide a good return as well as secured future also. In the present time, various methods are available for saving and investment, for example, bank fixed deposit, investment in gold, insurance schemes, real estate, PPF, recurring deposit, mutual funds, systematic investment plan, RBI bonds, National Pension Schemes etc. In these various methods, mutual fund or systematic investment plan is very progressive in terms of the return on investment. It's proving the utility in the present.

In the present scenario, we are hearing more and more about mutual funds as a means of investment. Actually, these mutual funds set up in the form of a trust and these trust has the sponsors, trustees, asset management company (AMC) and custodian. Every Mutual Fund registers with the Securities Exchange Board of India (SEBI) and which is regulated under the SEBI (MF) Regulation, 1996. These help to people to invest their money easily. Most investors want to make investments in such a way that they get sky-high returns as fast as possible without the risk of losing the principal money they have invested. So, while selecting an investment avenue, the investor should have to match their own risk profile with the risks associated with the product before investing. There are some investments that carry high risk but have the potential to generate high inflation-adjusted returns than other asset class in the long term while some investments come with low-risk and therefore lower returns. As a comparison to various modes of investment Systematic Investment Plan through mutual funds plays an important role, its higher return with proper security and risk is a major feature. From the last two decades, everyone wants a better future for which SIP is definitely is providing its valuable stand.

**2.0 CONCEPT OF MUTUAL FUND**

A Mutual Fund is a common pool of money where investors invest their contributions and which has to be invested in accordance with a stated objective. The ownership of the fund is thus joint or mutual which belongs to all investors. An investor's ownership of the fund is in the same proportion as the amount of the contribution made by him. A mutual fund is an investment vehicle, a company or a Trust that polls the resources of thousands of its shareholders or unitholders and invests on behalf of them in diversified securities to achieve the objectives of the scheme.

**DEFINITIONS**

SEBI (Mutual Fund) Regulation 1993 defines Mutual Fund as, "A fund established in the form of a Trust by a sponsor to raise money by the Trustees through the sale of units to the public under one or more schemes for investing in securities in accordance with these regulations."

The VNR Dictionary of Business and Finance defines mutual fund as "An investment fund that pools the invested funds of others and invests those funds on their behalf, usually in a specific kind of investment. Such as money market instruments. Municipal bonds or common stock."

**3.0 HISTORY OF THE INDIAN MUTUAL FUND INDUSTRY**

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank. The history of mutual funds in India can be broadly divided into four distinct phases which are as follows:

**TABLE 1**

Phases	Year	Enter
First Phase	1964 – 1987	
Second Phase	1987 – 1993	Entry of Public Sector Funds
Third Phase	1993 – 2003	Entry of Private Sector Funds
Fourth Phase	Since February 2003	Global Scenario

**4.0 OBJECTIVES OF THE STUDY**

Indian mutual fund industry is featured by a plethora of mutual fund schemes consisting of varying portfolio mix, investment objectives and expertise of professional fund managers. For the small investor, choosing a suitable one is, therefore, a complex decision. The main objectives of the study include various factors that affect investment in the Systematic Investment Plan (SIP). Following hypothesis were framed for the purpose of the study. The specific objectives of the study are as follows:

1. To analyze SIP's strength, weakness, opportunity and the threat (SWOT).



2. To analyze the benefits of SIP.
3. To analyze the purpose of the investment in SIP.
4. To analyze the returns earned by various methods or schemes and it compares to SIP.
5. To analyze the various feature that influences the respondents in selecting the SIP.
6. To analyze the various methods which influence the investor's investment.

## 5.0 NEED FOR THE STUDY

This study conducts systematic investment planning in mutual funds and it helps to reduce risk through the collection of fund from different securities and invest in different stocks. The benefit of diversification to the investor because it can make an investment in different securities diversifying the investment. Moreover, it helps to maximize the return of the portfolio because a mutual fund is managed by the professional and expert team and opportunity about to reinvest the return. The investor feels safety because mutual funds operation and management are closely observed by the stock exchange center.

## 6.0 RESEARCH METHODOLOGY

- 6.1 Research Design: The present study is descriptive in nature. The study has been done through secondary sources.
- 6.2 Source of Data: The present study is based on secondary data. The maximum information collected from secondary data will be collected through websites and from various books, magazines and journals, websites of AMFI, SEBI, government publications and other websites.
- 6.3 Tools of Analysis: The data collected for the study was analyzed logical and meaningfully to arrive at a meaningful conclusion.
- 6.4 Scope of the study: The study is confined to the factors considered by investors by selecting mutual funds for their various investments. The level of awareness about SIP, Source of information, factors influencing decision making has studied. This is the comparison of various factors such as investing methods, risk, return etc. of respondents. It also analyzes "The awareness of investment opportunities in mutual funds- special Significance on SIP."

## 7.0 REVIEW OF LITERATURE

A large number of studies on the growth and financial performance of Mutual Fund have been carried out during the past, in the developed and developing countries. Brief reviews of the following research works reveal the wealth of contributions towards the performance evaluation of Mutual Fund systematic investment plan. The following works of literature are related to this research topic.

Amarnath, B., Dr. Reddy, R. S. & Krishna, K. T (2012) have observed that if there is broad agreement that appropriately regulated Mutual Fund activity can play a large part in financial development in all its dimensions, these barriers can surely be addressed in a collaborative way between the three stakeholders – the investors, the fund managers and the regulators.

Kandpa, V, &Kavidayal, P.C. (2013) have given the information for restriction of mutual fund investment in top cities or urban areas is the lack of awareness level in the rural and semi-urban areas. The absence of product diversification and confusion in the market has been enlarged by the lack of marketing initiatives for Mutual Funds. The role of mutual fund agents or distributors is to educate the investor community. Therefore, the spread of Mutual Fund market has been limited. Goswami, A. G. (2014) have observed mutual fund investment is a diversified portfolio of securities, which can include equity securities (such as common and preferred shares), debt securities (such as bonds and debentures) and other financial instruments issued by corporation and government, according to the stated investment objectives of the fund. The benefit to the investor in buying shares of the mutual fund comes primarily from diversification, professional money management and capital gain and dividend reinvestment at relatively low cost.

Joseph, G., Telma M. & Romeo, A. (Feb 2015) have observed that Systematic Investment Plan (SIP) will reduce risk when the market is volatile and SIP works more advantageously only on the bearish market whereas, Lump sum gives high returns in a bullish market. From this study, it can be concluded that in order to get better results from SIP, invest for a minimum period of 5 years is necessary.

Anich Uddin (2016) studied that Systematic investment plan (SIP) has emerged as an alternative investment plan for a large number of investors interested in high returns but less risk with investments in installments. With the help of primary data, results of the study found that for higher return with low risk the investor motivates to invest in systematic investment plan on the other hand knowledge and the operational platform is one of the main barriers that investor is facing of the scheme.

## 8.0 SYSTEMATIC INVESTMENT PLAN

A systematic investment plan is a method of investing in mutual funds. It is not a product, investment option or instrument in itself. It is just a process through which an investor can contribute small but regular amounts to build a good corpus. It is usually considered a good method if the investor has a long-term investment goal.

DIAGRAM 1



SIPs are considered to be the most effective means of investment since they allow the investor to invest in mutual funds for their future, without disturbing present lifestyle and expenditure pattern. SIP allows investors to invest a certain pre-determined amount at a basis either weekly, fortnightly or monthly as their convenience. A SIP is a planned approach towards investments and helps investor inculcate the habit of saving and building wealth for the future.

With SIPs, a specified amount is auto-debited from an investor's account at a particular time. An investor can also invest in a plethora of financial instruments like equity mutual funds, debt mutual funds, etc. based on their risk horizon and financial goals. Investments through SIPs usually gives better returns, in the long run, i.e. if invested for a longer period. Investing in SIPs also encourages and helps investors to develop a habit of investing since a fixed sum is to be invested at regular

intervals. The investor can benefit out of cost averaging, i.e. buy more units in a low market and fewer units when the market is high, thus reducing the investor's average cost of purchasing.

TABLE 2: COMPARISON BETWEEN VARIOUS SAVING/INVESTMENT METHODS

Sr. No.	Various methods for saving and investment	Rate of Interest	Tenure	Security	Liquidity	Return on Investment	Taxation	Risk factor/ theft / fraud
1.	Bank Fixed Deposit	Varies	7 days to 10 years	High	Premature exit	Varies	Interest taxable as per tax slab	No risk
2.	Gold / Silver	Market-linked	Can be sold any-time	Medium	Varies	Market-linked	STCG – Added to income LTCCG – 20% **	Low - moderate
3.	Insurance Schemes	Varies	10 – 20 years	Medium	Low	Moderate	u/s 80C deductions available	No risk
4.	Real Estate	Market-linked	Can be sold any-time	Moderate	High	Market-linked	STCG – Added to income LTCCG – 20% **	High
5.	PPF	Moderate	15 Years	High	Partial withdrawal	Moderate	Interest tax free (EEE) status	No risk
6.	Recurring Deposit	Varies	7 days to 10 years	High	Premature exit	Varies	Interest taxable as per tax slab	No risk
7.	Saving Deposit	Low	Open or end any-time of life	High	Easily withdrawal	Low	Low	No risk
8.	SIP / Mutual funds	Market linked / high	Can be sold any-time	High	High	High	Tax applicable	No Risk
9.	RBI Bonds	Moderate	7 Years	High	Low	Moderate	Tax applicable	No Risk
10.	NPS	Moderate	3 locking period	High	Tier I & Tier II options	Moderate	u/s 80C deductions available	No Risk

On the basis of above table, here is a look at the top 10 investment avenues where investors look at while savings for their financial goals.

- Bank Fixed Deposit (FD):** In India it is a very popular method of investment. Through a bank or post office, fixed deposit (FD) is a safe choice for investors. Under the deposit insurance and credit guarantee corporation (DICGC) rules, each depositor in a bank is insured up to a maximum of Rs 1 Lakh for both principal and interest amount. As per the need, one may opt for monthly, quarterly, half-yearly, yearly or cumulative interest option in them. The interest rate earned is added to one's income and is taxed as per one's income slab. The main drawback of this scheme is liquidity because in an emergency investor can not withdraw lump sum or full amount before maturity. In some circumstances, if the investor withdraws their money he loses his good return on it.
- Gold:** India is a country where people more appreciate this precious metal. For this purpose, they invest more and more in this metal. Possessing gold in the form of jewellery has its own concerns like safety (purity and theft) and high cost. Then there are some 'making charges', which typically range between 6-14 percent of the cost of gold (and may go as high as 25 percent in case of special designs). For those who would want to buy gold coins, there's still an option. One can also buy ingeniously minted coins. In this investment, no doubt to say that liquidity is there but lots of risks (i.e., the purity of gold, theft or loss, etc.) is also there.

An alternate way of owning paper gold in a more cost-effective manner is through gold ETFs. Such investment (buying and selling) happens on a stock exchange (NSE or BSE) with gold as the underlying asset. Investing in Sovereign Gold Bonds is another option to own paper-gold. In Sovereign Gold Bond have some liquidity issue, it means an investor cannot withdraw before locking period or otherwise ready to bear the loss.

- Insurance Schemes:** Sometimes people think if they invest in insurance schemes they will be benefited from two sides. The first side, they secure the future's misfortune or any type casualty and the second side they would found some money for future. This is a nightmare who thinks that the insurance schemes are good for their investment. It was a traditional approach where investor invest their money in insurance schemes. In reality, through insurance schemes, nobody can get a good return.
- Real Estate:** It is a very demanding investing method in investor's point of view. No doubt real estate gives a higher return but some points are also important to know about that. The house that a person lives in is for self-consumption and should never be considered as an investment but an investor does not intend to live in it and buy the second property will be the real investment of an investor. The location of the property is the single most important factor that will determine the value of property and also the rental that it can earn. Investments in real estate deliver returns in two ways - capital appreciation and rentals. However, unlike other asset classes, real estate is highly illiquid. The other big risk is with getting the necessary regulatory approvals, which has largely been addressed after coming of the real estate regulator.
- Public Provident Fund (PPF):** The Public Provident Fund is also one of the most demanding investment schemes. The PPF has a long tenure of 15 years so as a result of the compounding of tax-free interest is huge, especially in the later years. Further, since the interest earned and the principal invested is backed by sovereign guarantee, it makes it a safe investment. The main drawback of this scheme is liquidity because in an emergency investor can not withdraw lump sum or full amount before maturity. In some circumstances, an investor can only partial withdraw their money and also loses his good return on it.
- Recurring Deposit (RD):** Recurring Deposit is also an investing method which provides a person with an opportunity to build up saving through regular monthly deposits of fixed sum over a period of time. Recurring Deposit is a special kind of Term Deposit offered by banks in India which help people with regular incomes to deposit a fixed amount every month into their Recurring Deposit account and earn interest at the rate applicable to Fixed Deposits. Minimum Period of Recurring Deposit is 6 months and the maximum is 10 years. Tax Deducted at Source (TDS) is applicable on Recurring deposits. As a comparison to other schemes, the main demerit is its return rate which is low. If the interest earned on recurring deposits exceeds Rs. 10,000 a year, TDS at the rate of 10% would be deducted by the bank. Income tax is to be paid on interest earned from a Recurring Deposit at the rate of tax slab of the RD holder.
- Saving Deposit:** It is not a proper investment scheme. It is a savings account or deposit account held at a retail bank which pays interest and these accounts holder can set aside a portion of their liquid assets while earning a monetary return. This is not an investment method. Some people held their lots of money in this account it is the biggest mistake from them. This deposit gives only 4 to 5 percent return. So it is not a method of investment.
- SIP/Mutual Fund:**
  - Direct equity:** Investing in stocks may not be everyone's cup of tea as it's a volatile asset class and there is no guarantee of returns. Further, not only is it difficult to pick the right stock, timing of entry and exit is also not easy. The only silver lining is that over long periods, equity has been able to deliver higher than inflation-adjusted returns compared to all other asset classes.

At the same time, the risk of losing a considerable portion of capital is high unless one opts for the stop-loss method to curtail losses. In stop-loss, one places an advance order to sell a stock at a specific price. To reduce the risk to a certain extent, investor could diversify across sectors and market capitalizations. Currently, the 1, 3, 5 year market returns are around 13, 8 and 12.5 percent, respectively. To invest in direct equities, one needs to open a Demat account (An account that is used to hold shares and securities in electronic format is called a Demat account).

- Equity mutual funds:** Equity mutual funds predominantly invest in equity stocks. As per current Securities and Exchange Board of India (SEBI), Mutual Fund Regulations, an equity mutual fund scheme must invest at least 65 percent of its assets in equities and equity-related instruments. An equity fund can be actively managed or passively managed.

In an actively traded fund, the returns are largely dependent on a fund manager's ability to generate returns. Index funds and exchange-traded fund (ETFs) are passively managed, and these track the underlying index. Equity schemes are categorised according to market-capitalisation or the sectors in which they invest.

They are also categorised by whether they are domestic (investing in stocks of only Indian companies) or international (investing in stocks of overseas companies). Currently, the 1, 3, 5 year market return is around 15, 18 and 20 percent, respectively.

- C. Debt mutual funds:** Debt funds are ideal for investors who want steady returns. They are less volatile and, hence, less risky compared to equity funds. Debt mutual funds primarily invest in fixed-interest generating securities like corporate bonds, government securities, treasury bills, commercial paper and other money market instruments. Currently, the 1, 3, 5-year market return is around 6.5, 8 and 7.5 percent, respectively.
- 9. RBI Taxable Bonds:** It had decided by the Government of India to issue 7.75% Savings (Taxable) Bonds, 2018 with effect from January 10, 2018, in terms of Gol notification F. No. 4 (28) – W & M / 2017 dated January 03, 2018. These bonds come with a tenure of 7 years. There is no maximum limit for investment in the Bonds. According to age, these bonds have locking periods for withdrawal. The Bonds held to the credit of Bonds Ledger Account of an investor do not transferable.
- 10. National Pension System:** The National Pension System (NPS) is a long term retirement - focused investment product managed by the Pension Fund Regulatory and Development Authority (PFRDA). NPS provides two types of accounts - Tier I and Tier II. Tier I is a non-withdrawable account till retirement and is meant for savings for retirement while in Tier II accounts the subscriber is free to withdraw savings whenever he wishes. Tier II account is like a voluntary savings facility. In terms of income-tax benefits, contribution by government employees under Tier-II of NPS is covered under Section 80C for deduction up to Rs. 1.50 Lakh, provided that there is a lock-in period of 3 years. The minimum annual (April - March) contribution for an NPS Tier-1 account to remain active has been reduced from Rs 6,000 to Rs. 1,000. It is a mix of equity, fixed deposits, corporate bonds, liquid funds and government funds, among others. Based on investor risk appetite, an investor can decide how much money can be invested in equities through NPS.

So on the basis of the above methods or schemes, an investor can invest their money. Now it is necessary to understand more about the systematic investment plan (SIP).

**How does SIP work?**

A SIP is an easy and flexible investment plan. The money is auto-debited from the investor's bank account and invested in a specific mutual fund scheme. The investor is allocated a certain number of units based on the ongoing market rate (called NAV or net asset value) for the day.

Every time investor invests money, additional units of the scheme are purchased at the market rate and added to the investor's account. Hence, units are bought at different rates and investors benefit from Rupee-Cost Averaging and the Power of Compounding.

**Rupee-Cost averaging**

With volatile markets, most investors remain skeptical about the best time to invest and try to 'time' their entry into the market. Rupee-cost averaging allows an investor to opt out of the guessing game. Since the investor is a regular investor, investor's money fetches more units when the price is low and lesser when the price is high. During a volatile period, it may allow the investor to achieve a lower average cost per unit.

**Power of Compounding**

Albert Einstein once said, "Compound interest is the eighth wonder of the world. He, who understands it, earns it... he who doesn't... pays it." The rule for compounding is simple - The sooner you start investing; the more time your money has to grow.

**TABLE 3: SWOT ANALYSIS OF SYSTEMATIC INVESTMENT PLAN (SIP)**

Strengths	Weaknesses	Opportunity	Threat
<ol style="list-style-type: none"> <li>1. In Systematic Investment Plan (SIP) one can invest a very small amount as their convenience. SIP reduces the average cost.</li> <li>2. SIP helps to avail the power of compounding.</li> <li>3. SIP avoids the pitfalls of market timings.</li> <li>4. SIP makes one present in the market over a period of time.</li> <li>5. SIP helps to accumulate wealth in a disciplined manner by rupee cost averaging.</li> </ol>	<ol style="list-style-type: none"> <li>1. In SIP Companies charge entry and exit fees.</li> <li>2. The same amount of money is to be invested at a regular interval over a period of a specified time span.</li> </ol>	<ol style="list-style-type: none"> <li>1. The emphasis on averaging out in a SIP makes it more useful in case of an equity fund.</li> <li>2. As the volatility is greater, a SIP is useful for a debt fund as well to build a pool of savings.</li> <li>3. In the long run investment, SIP can give higher returns.</li> </ol>	<ol style="list-style-type: none"> <li>1. SIP is totally market-based so there is a threat of risk of loss.</li> <li>2. As a comparison to the long term, the short time investment does not give proper return to the investors.</li> </ol>

**9.0 FINDINGS**

A systematic investment plan is a fully hassle free investment. A small number of the amount is allowed to invest in a systematic investment plan and it is a big opportunity for small and medium income group category's investor. The investor always wants to get a higher return at a minimum risk. For this purpose, investors or people use the internet to be aware of the mutual fund so that their investment become more effective. In other words, the maximum investors are using the internet for any kinds of information about the mutual fund whereas in the second stage people use Television, and then broker intermediaries and newspaper. Most of the Investors perception is direct equity investment is riskier than the mutual fund investment and remaining respondent accepted. Those investors have no depth knowledge about the risky asset and how to operate, these investors also can get the opportunity to invest in a systematic investment plan. Basically, most of all investor in a mutual fund make their investment for a specific objective such as retirement plan, marriage, child education, buy car or property etc. Maximum investor motivates to invest in mutual fund SIP because Mutual funds SIP gives to the investor a good number long term return and its Cost averaging process. The selection of a debt or equity plan depends on the client's age. If the client is young they prefer debt plan but as their experience in investing increases year by year, they start to prefer an equity plan.

**10.0 SUGGESTIONS**

- Dealers can create more awareness regarding SIP to increase investor's attitude towards SIP.
- Dealers can have a friendly approach with investors to promote investor's decision making power on mutual funds.
- Investor education is a very important factor for investors. Research and awareness programmers' should be conducted for investors. Seminars, conferences and training programs should be arranged for this purpose. Adequate publicity through newspapers, magazines, T.V., radio, pamphlets and brochures should be done.
- More awareness about SIP can be made to the general public through advertisements promotional programmes etc.
- More awareness programme to be given to low-income groups (up to 10000) to promote investment in mutual fund through SIP.
- More awareness programme to be given to lower education level people (That is Higher Secondary, SSLC and Below SSLC).
- Proper guidelines must be provided to Business, agricultural people for improving their awareness regarding investments.

**11.0 CONCLUSION**

The study was based on the awareness of investment opportunities in mutual funds – with special significance on SIP. On the basis of this study, I can conclude that Mutual Fund SIP is a monthly based investment plan through which an investor could invest a fixed sum into mutual funds every month at pre-decided dates. As a comparison to other methods or schemes, SIP is much better to others. SIP hedges the investor from market instability and derives maximum benefit as the

investment is done at a regular basis irrespective of market conditions. SIP is a feature specially designed for investors who wish to invest small amounts on a regular basis to build wealth over the long term. It inculcates the habit of regular savings and does not encourage timing and speculation in the markets. The study would be helpful for the small investors by entering into capital market by using the Systematic investment plan. Like every investment avenue, SIP also suffers from various disadvantages but it still seems to be one of the best investment option available to a long term investor especially First-time investors, Salaried people etc.

#### REFERENCES

1. Anand, S. and Murugaiah, V. (2006). Analysis of Components of Investment Performance – An Empirical Study of Mutual Funds in India. 10<sup>th</sup> Indian Institute of Capital Markets Conference. ICFAI: Hyderabad.
2. Joseph, G., Telma, M., and Romeo, A. (2015). "A study of sip & lip of selected large cap stocks listed in NSE". International Journal of Management Research & Review, Vol.5, No.2, Art. No- 8, pp 117-136
3. Juwairiya, P.P. (2014). "Systematic investment plan-the way to invest in mutual funds". Sai Om Journal of Commerce & Management, Vol.9, No. 1, pp. 2347-7563
4. Paul, T. (2012). "An assessment of gap between expectations and experiences of mutual fund investors" International Journal of Marketing, Financial Services & Management Research, Vol.1, No.7, pp-2277-3622.
5. Raja Rajan (1998), Stages in life cycle and investment pattern, The Indian Journal of Commerce, 51 (2 and 3), pp. 27-36.
6. Rajarajan (2003), "Determinants of Portfolio choice of Individual Investors", The Indian Economic Journal, Vol. 50 (1), pp. 81-84.
7. Sala Abdusand Kulsm, (2003), "Savings Behaviour in India: An Empirical Study", The Indian Economic Journal, Vol. 50 (1) pp 77-80.
8. Sharma, S. (2015). "ELSS Mutual Funds in India: Investor Perception and Satisfaction", International Journal of Finance and Accounting, 4(2): 131-139
9. Sindhu, K.P., & Kumar, S. R. (2014). "Investment horizon of mutual fund investors", Ge international journal of management research, Vol. 2, No.8
10. Soni, P., Khan, I. (2012). "Systematic investment plan v/s other investment avenues in individual portfolio management – A comparative study", International Journal in Multidisciplinary and Academic Research, Vol. 1, No. 3.
11. Vyas, R. (2013). "Factors influencing investment decision in mutual funds" ZENITH International Journal of Business Economics & Management Research, Vol.3, No.7. pp-2249- 8826.

#### WEBSITES

12. [www.amfiindia.com](http://www.amfiindia.com)
13. [www.indianresearchjournals.com](http://www.indianresearchjournals.com)

**ECONOMIC BENEFITS OF EMERGING DEMOCRATIC RULE IN AFGHANISTAN**

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**ABSTRACT**

*The study reveals that the state of democracy in the Afghanistan is very poor. People generally do not trust their rulers and are waiting to get rid of terror of Talibans, undemocratic ways of Pashtuns who treat every other ethnicity lesser than themselves. Despite of all these weak points of democracy, whatever little freedoms people have got has shown that people are being benefited from increased economic activity. The survey has shown that all among categories, the standard of living of people has improved under the present brief democratic rule. The existing ruling party should plan to conduct the free and fair elections to strengthen the faith of people in democracy.*

**KEYWORDS**

Afghanistan, economic benefits, democratic rule.

**JEL CODE**

P21, P24, P30.

**1. INTRODUCTION**

The democracy in Afghanistan has been rated as an authoritarian regime with an index value (2.97) in 2018 on scale between zero to ten by Economist Intelligence Unit (EIU) UK- Based Company. The low score of the country in democracy index is accounted for weak electoral process, poor functioning of Govt., low political participation, absence of political culture and less civil liberty. In a sample of 167 countries Afghanistan is ranking at 143<sup>rd</sup> position on democracy index. In this paper, we have analyzed the impact of democracy on the economic development of Afghanistan on the basis of the responses of people collected through a primary survey. The democracy, although in a very nascent state in Afghanistan and still struggling to emerge may have been beneficial to common people, that has been examined in this paper.

**2. REVIEW OF LITERATURE**

A number of studies are available on the relationships between democracy and economic development. Some of them have been reported here. **Heo and Tan (2001)** have observed that that economic development leads to democratization. Theoretically, however, more democratized political systems can also stimulate economic growth and development. Therefore, democracy may lead to economic growth, while economic development may also lead to democratization. To investigate, direction between the above mentioned two variables - the Granger causality analysis was used, the analysis drawn on data for thirty-two developing countries for the period from 1948 to 1982. The results of the analysis revealed that the causal direction between democracy and economic development cannot be generalized in either way.

**Gerring et al. (2005)** found that democracy has no robust association with economic growth. Yet all such work assumed that the causal effect of democracy can be measured by a country's regime status in a particular year (t), which is correlated with its growth performance in a subsequent period (t +1). The authors argued that democracy must be understood as a stock, rather than a level measure, which means a country's growth performance is affected by the number of years it has been democratic, in addition to the degree of democracy experienced during that period. In this fashion, democracy is re-conceptualized as a historical, rather than a contemporary, variable with the assumption that long-run historical patterns may help scholars to understand present trends. Also, it has been speculated that these secular-historical influences operate through four causal pathways, each of which may be understood as a type of capital i.e. physical capital, human capital, social capital and political capital. This argument has been tested in a cross-country analysis and is shown to be robust in a wide variety of specifications and formats.

**Feng (1997)** investigated the interactions between democracy, political stability and economic growth. Two aspects of the study differentiate it from previous research. First, a simultaneous approach was adopted which combines the study of economic growth and political stability with that of economic growth and democracy. Secondly, a distinction is made between types of political instability, because different kinds of government change have different effects on economic growth and democracy. This analysis employed three-stage least-squares (3SLS) estimation, and utilized aggregate data covering ninety-six countries from 1960 to 1980. The results indicated that democracy has a positive indirect effect upon growth through its impacts on the probabilities of both regime change and constitutional government change from one ruling party to another. In addition, the evidence indicates that the two kinds of political change mentioned above have significant and opposite effects on growth; that growth has a negative effect on regime change and a positive effect on the probability of the ruling party remaining in power; and that long-run economic growth tends to exert a positive effect upon democracy.

**Drury et al. (2006)** have long suspected that political processes such as democracy and corruption are important factors in determining economic growth. Studies showed, however, that democracy has only indirect effects on growth, while corruption is generally accepted by scholars as having a direct and negative impact on economic performance. It was argued that one of democracy's indirect benefits is its ability to mitigate the detrimental effect of corruption on economic

growth. Although, corruption certainly occurs in democracies, the electoral mechanism inhibits politicians from engaging in corrupt acts that damage overall economic performance and thereby jeopardize their political survival. Using time-series cross-section data for more than 100 countries from 1982-97, it was observed that corruption had no significant effect on economic growth in democracies, while non-democracies suffer significant economic harm from corruption. **Ernesto López-Córdova et al. (2008)** examined the likely endogeneity between democracy and trade with an instrumental variables strategy to know about whether international trade fosters democracy. A measure of natural openness was used to obtain estimates of the causal impact of openness on democratization in three separate samples spanning the last 130 years. A positive impact of openness on democracy was apparent in the data over the long run. The post-World War II results suggested that with a rise in trade with other countries equal to a one standard deviation increase, countries such as Indonesia, Russia, and Venezuela could eventually become as democratic as the U.S., Great Britain, or France. There is some variation in the impact of openness by region that may be because trade seems to have a positive impact only when the capital-to-labor ratio is sufficiently high. It was consistent with the idea that openness promotes democracy when it strengthens the economic fortunes of the middle class.

**Clague et al. (2001)** conducted a statistical study of the determinants of democracy in the postwar period. Important variables were found to be former status as a British colony, island status, the share of the population professing Islam, the share of the population that is of European descent, penetration of the English language during British colonial rule, and a measure of ethnic homogeneity. The evidence suggested that cultural beliefs and institutional inheritances are important determinants of the viability of democracy in poor countries, even when controlling for literacy and socioeconomic development.

**Doucouliagos et al. (2008)** observed that despite a sizeable theoretical and empirical literature, no firm conclusions have been drawn regarding the impact of political democracy on economic growth. The study challenged the consensus of an inconclusive relationship through a quantitative assessment of the democracy-growth literature. It applies meta-regression analysis to the population of 483 estimates derived from 84 studies on democracy and growth. Using traditional meta-analysis estimators, the bootstrap, and Fixed and Random Effects meta-regression models, it derives several robust conclusions. Taking all the available published evidence together, it concluded that democracy does not have a direct impact on economic growth. However, democracy has robust, significant, and positive indirect effects through higher human capital, lower inflation, lower political instability, and higher levels of economic freedom. Democracies may also be associated with larger governments and less free international trade. There also appear to be country- and region-specific democracy-growth effects. Overall, democracy's net effect on the economy does not seem to be detrimental.

**Huber (1993)** suggested that any account of the social and economic conditions of democracy must come to terms with the central finding of the cross-national statistical research: a sturdy (though not perfect) association between economic development and democracy. To tackle these questions of causation, the study adopted a strategy of analytic induction based on comparative historical research. The comparative historical research confirmed the conclusion of the cross-national statistical analyses of the correlates of political democracy: the level of economic development is causally related to the development of political democracy. However, the underlying reason for the connection, in our view, is that capitalist development transforms the class structure, enlarging the working and middle classes and facilitating their self-organization, thus making it more difficult for elites to exclude them politically. In addition to this, development weakened the landed upper class, democracy's most consistent opponent.

**Baeg Im (2011)** examined that Koreans have worked hard to improve the quality of their democracy. They have promoted the rule of law, accountability, control of corruption, freedom, and responsiveness, and made an effort to make government more effective. The study also committed to economic freedom. In relation to the rule of law, significant attention has been devoted to reducing terrorism and violence, making government more effective, and enhancing regulatory quality. However, with regard to accountability, control of corruption, and transparency, Korea has still a long way to go. The analysis of democratization and improvements in the quality of democracy to date suggested that Korea has adapted to the changing economic environment and is sustaining its economic growth. This has been accompanied by social and economic polarization and a consequent demand for more and better welfare services.

**Moehler (2010)** analyzed very important question i.e. Can field experiments be productively employed to study the impact of development assistance on democracy and governance (D-G) outcomes? A small but growing number of practitioners and scholars, often working in partnership, are inventing a new research domain at the intersection of evaluation and political science. The study reviewed recent and ongoing D-G field experiments, and it offered lessons about the prospects and obstacles to the future development of a useful body of experimental evidence on the political economy of development.

**Baviskar (2004)** found in many recent studies that democracy means different things to different people. For some, democracy is a method of selecting leaders, protecting civil liberties and political rights, and upholding the rule of law. Other citizens have more expansive views of democracy, viewing it as a mechanism for promoting social equality and economic growth, for example. While such studies provide strong evidence that the concept 'democracy' is multidimensional, to date scholars have not explained why citizens think of democracy in myriad ways, and whether such differences matter. The aim of the study was to address these issues using data gathered from field research in Argentina, Brazil, Chile, and Guatemala in 2001. Through open-ended questions, it was asked from diverse groups of respondents what democracy meant to them. Relying upon answers to these questions, the study attempted to explain why respondents had such varying views of democracy, and examine the implications these conceptualizations of democracy have for regime stability.

**Acemoglu (2008)** observed a strong cross-country correlation between income and democracy but do not control for factors that simultaneously affect both variables. The study revealed that controlling for such factors by including country fixed effects removes the statistical association between income per capita and various measures of democracy. The study has used instrumental-variables estimates that also show no causal effect of income on democracy. The cross-country correlation between income and democracy reflects a positive correlation between changes in income and democracy over the past 500 years. This pattern was consistent with the idea that societies embarked on divergent political-economic development paths at certain critical junctures.

**Biddle et al. (2010)** observed that after the overthrow of the Taliban in 2001, the West has tried to build a strong centralized government in Afghanistan. But such an approach fits poorly with Afghanistan's history and political culture. A range of alternative models are possible, of which the two most realistic and acceptable in terms of U.S. security interests are decentralized democracy and a system of internal mixed sovereignty.

### 3. IMPORTANCE OF THE STUDY

Very few studies are available on Afghanistan economy in the absence of data. In this poor, underdeveloped country the data collection methods, procedures and infrastructure required for this purpose is non-existent. It is very difficult to make any policy recommendation without data and studies. Therefore, the present study is important to understand the feelings, expectations and perception of Afghan people about democracy. The level and quality of democracy in Afghanistan should be measured so that it could be used as an input for achieving desired socio-economic outcomes. This paper is devoted to the analysis of perception of Afghan people about the democracy. This analysis has been conducted with a view to identify the democratic forces so that the same can be strengthened with suitable strategies.

### 4. STATEMENT OF THE PROBLEM

The specific problem before us is to understand and measure the perception of Afghan people about existing democratic system, level of their faith in democracy and its institutions, perceived social or economic gains at personal/family/national level during the recent democratic rule.

### 5. OBJECTIVES OF THE STUDY

Considering the above stated problem, the specific objectives of this paper have been outlined to study the followings:

- The perception about election process in Afghanistan.
- The attitude of people towards democracy in Afghanistan.
- The level of trust in National institutions.
- The perception about seriousness of existing problems.
- The general direction of Afghan economy and society.
- The particular economic benefits at family level.

## 6. HYPOTHESES

The general hypothesis underlying the present study is that under democratic rule people get more opportunities to realize their economic goals. The particular null hypotheses chosen to be tested in this paper are given as below:

- The election process is not perceived as fair across provinces and ethnicities.
- People do not have a favorable attitude towards democracy.
- People do not have high trust in national institutions.
- The general socio economic condition in Afghanistan have not improved during democratic rule.
- There have been no economic benefits to individual families during democratic rule.

These hypotheses have been tested with the research methodology given in next section.

## 7. RESEARCH METHODOLOGY

In this study, we have mainly used the primary data to analyze the aforementioned objectives. A schedule of questions was developed to measure the perception about election process (PAEP), faith in democracy, accessibility of leaders to public and perception about future, the confidence in national institutions, the impact of democracy on socio-economic conditions, connectivity, economic benefits at family level and in general. All primary data was collected in person.

The primary data of 1200 respondents from five provinces of Afghanistan, namely - Balkh, Herat, Kabul, Jawzjan and Kandahar was collected. The equal numbers of 240 respondents have been chosen from each of the five provinces which have been selected to represent all ethnic groups. The respondents were chosen randomly in each province but to ensure that we get sufficient number across areas, languages, family types and land ownership so as to get significant results. All the data in the study, has been analyzed using software packages SPSS and Excel. We have used independent samples t-test for the significance of difference in statement-mean and assumed mean and F-test for One-Way ANOVA.

## 8. RESULTS, FINDINGS & DISCUSSION

Before analyzing the primary data collected from sample survey with schedule of questions, let us have a look at the change in some socio-economic variables during 2008-2018 given in Table-1 & 2.

**TABLE 1: SELECTED DEMOGRAPHIC VARIABLES OF AFGHANISTAN**

Variables	2008	2018	Growth Rate (%)
Population	27294000	34940837	2.5
<15	44.60%	40.90%	-0.37
65+	2.40%	2.60%	0.02
Population density (no /sq miles)	128	138.70	1.07
Urban Population	22.90%	25.50%	0.26
LE (M)	43.6	50.6	0.70
LE (F)	44	53.6	0.96
BR per Thousand	46.2	37.5	-0.87
DR per Thousand	20	13.2	-0.68
IMR per Thousand	157.4	108.5	-4.89
HIV	<0.1%	<0.1%	
LR	28%	38.20%	1.02

Source: Book of Facts 2019, The World ALMANAC Books, New York

Afghanistan's ranking in term of democracy in 2018 is 143 and in terms of Human Development Index, it stands at 168<sup>th</sup> rank. Afghanistan has been witnessing a high population growth rate 2.51 during 2008 to 2018. We see that the young generation i.e. below 15 years has decreased during the said period which can be the effect of decrease in negative growth of birth rate (0.87). People above 65 years age are increasing at the rate of 2.6 percent. It is good to see that birth rate, death rate and Infant mortality rate (IMR) are decreasing. The Life Expectancy and Literacy Rates have shown marginal improvement in the selected period. The per capita income has shown remarkable improvement in the said period as we see that budget of the government has gone up more than three and a half times. We also observe the structural changes in the Afghan economy, as it seems that the labour is being shifted from the agriculture to industry. The growth rates of electricity generation, tourism and internet users show that the service economy in Afghanistan is expanding fast.

**TABLE 2: SELECTED ECONOMIC VARIABLES OF AFGHANISTAN**

Variables	2008	2018	Growth Rate
GDP(2004)	21.5	69.6	8.753
Per Capita GDP (2004)	\$800	\$2000	6.764
Budget (2005)	\$561million	\$ 5300 million	<b>364.538</b>
USD Rate (2007)	49.28 Afg	73.82Afg	<b>2.929</b>
Exports to India	22.10 %	56.50 %	<b>2.646</b>
Exports to Pakistan	21.10 %	29.60 %	<b>0.654</b>
Share of Labour in Agriculture	80.00 %	62.20 %	1.780
Share of Labour in Industry	10 %	31.10 %	2.110
Electricity Production	0.73 BKWH	1 BKWH	36.986
Tourism(1998)	\$ 1 million	\$49million	
Internet Users	535000	1465227	10.60

Source: Book of Facts 2019, The World ALMANAC Books, New York

The main export partners are India (46%), Pakistan (41%), Iran (3.1%), Iraq (2.1%), Turkey (1.9%) with total exports in 2018 was \$784 million and total imports was \$7.616 billion leading to a weak exchange rate. After this brief glimpse about the developments in last ten years, we shift our focus to the analysis of primary data.

### 8.1 Nature of Sample Data

Out of the total 1200 respondents 283 have been selected from rural areas and 917 are from urban areas. The share of urban population in Afghanistan is 26.7 per cent whereas in our sample the share is 76.2 per cent. It is reported that in the present study more number of respondent have been selected from urban area because of serious security, transport difficulties and boarding-lodging problems in rural areas. It can be justified on the ground that the democratic forces get better nurtured in the urban areas in initial phases. However, it is assumed that the disproportionate representation of rural-urban areas will not affect the quality of the study because the democracy process originates and develops mainly in urban areas.

There are 14 ethnic groups in Afghanistan namely, - Pashtun, Tajik, Hazara, Uzbek, Aymaq, Turkman, Baloch, Pashai, Nuristani, Gujjar, Arab, Brahui, Pamiri & others. The sample of this study comprises of five groups taking first four ethnicities and others as one group. It is estimated that the first four ethnicities have more than 75 per cent share in population. Although authentic data on ethnicities are not available, yet there are 483 Tajik, 407 Pashtun, 204 Uzbek, 58 Hazara and 48 others as respondents in our sample.

The official languages of Afghanistan are Dari (Farsi or Persian) and Pashto. Besides these, Uzbeki, Turkmani, Balochi and Pashayi are other dominant regional languages. In our sample, the respondents speaking Persian, Pashto, Uzbeki and Turkmani are 578, 408, 203 & 11 respectively.

The schedule used in the study was filled by me seeking information from two kinds of respondents such a head of the family and member of the family. In our sample 570 heads of the family responded and rest 630 were the members of families.

We have observed that the family structure also has an influence on the democratic thinking and beliefs. Therefore, in our sample three types of families have been taken. There are 860, 292 and 48 respondents from nuclear, joint, and extended families respectively. Out of 1200 respondents, 783 possess land and the rest have no land.

With this profile of the respondents, in the next section we shall discuss the analysis of the survey data with a view to understand the thoughts, feelings and perception of Afghan people about democracy.

Before, discussing the results it should be understood that a cross-section sample survey is a non-experimental data because there is no control group and there is no way to collect data like a before-after research design. Therefore, the present study measures the attitudes of the people after initiation of democratic process.

**8.2 Analysis of Perception about Election Process in Afghanistan**

Observing Table 3 and 4, it is found that the mean values of all the statements related with election process in Afghanistan are significant except the first one. These statements measure the perception of people with their level of agreement. From the first statement it's very clear that most people are confused whether Afghanistan is going in right direction. Even the province Kabul which is having the highest mean (3.46) is less than **Agree**.

**TABLE 3: AVERAGE LEVEL OF AGREEMENT RELATED WITH ELECTION PROCESS STATEMENTS**

Statement/Name of Province	BALKH	HEART	JAWZJAN	KABUL	KANDAHAR	Total
Generally Afghanistan is going in right direction	2.85 (1.29)	2.90 (1.29)	2.89 (1.55)	3.46 (1.32)	3.06 (1.34)	3.03 (1.38)
I take a lot of interest in local election	3.52 (1.02)	3.12 (1.31)	3.75 (1.11)	3.40 (1.24)	3.17 (1.34)	3.39 (1.23)
I take a lot of interest in national assembly elections	3.44 (1.00)	3.33 (1.30)	4.27 (0.83)	3.42 (1.26)	3.47 (1.34)	3.58 (1.21)
I take a lot of interest in presidential election	3.35 (1.13)	3.55 (1.30)	3.80 (1.29)	3.79 (1.23)	3.45 (1.45)	3.59 (1.29)
The election process is very satisfactory in our country	2.58 (1.30)	2.03 (1.18)	3.13 (1.46)	2.44 (1.29)	2.37 (1.21)	2.51 (1.34)
I will not cast my vote in next local/Assembly/Presidential elections.	2.81 (1.31)	1.91 (1.15)	2.39 (1.13)	1.69 (0.95)	1.63 (0.89)	2.09 (1.18)
Election is a good method for selecting leaders.	3.76 (1.41)	4.27 (1.05)	4.30 (1.02)	3.64 (1.32)	3.99 (1.24)	3.99 (1.24)
The elections are free and fair in Afghanistan.	2.73 (1.36)	2.14 (1.18)	3.18 (1.48)	2.50 (1.37)	2.36 (1.32)	2.58 (1.39)
Secrecy of votes and security of voters is very much ensured.	2.99 (1.38)	2.33 (1.08)	2.88 (1.34)	2.73 (1.17)	2.41 (1.15)	2.67 (1.26)
There is no influence of foreign powers on election process	2.61 (1.42)	2.09 (1.10)	2.12 (0.84)	2.37 (1.30)	2.08 (1.36)	2.25 (1.24)
Reduced foreign troops will affect the political situation	3.90 (1.10)	3.74 (1.18)	4.47 (0.90)	3.63 (1.27)	3.75 (1.23)	3.90 (1.18)
Afghanistan has very capable civil servants to implement policies.	3.34 (1.24)	3.16 (1.25)	3.66 (1.25)	3.57 (1.18)	3.06 (1.31)	3.36 (1.27)

Source: Computed by the researcher based on primary data

# Figures in parentheses are standard deviations.

**TABLE 4: AVERAGE AND SIGNIFICANCE LEVEL OF ELECTION PROCESS STATEMENTS (N=1200), d.f. =1199**

Statements related with Election Process	Mean	t-ratio	Sig. (2-tailed)
Generally Afghanistan is going in right direction	3.033	0.816	0.414
I take a lot of interest in local election	3.393*	11.060	0.000
I take a lot of interest in national assembly elections	3.584*	16.724	0.000
I take a lot of interest in presidential election	3.591*	15.815	0.000
The election process is very satisfactory in our country	2.511*	-12.655	0.000
I will not cast my vote in next local/Assembly/Presidential elections.	2.086*	-26.768	0.000
Election is a good method for selecting leaders.	3.992*	27.611	0.000
The elections are free and fair in Afghanistan.	2.583*	-10.364	0.000
Secrecy of votes and security of voters is very much ensured.	2.668*	-9.168	0.000
There is no influence of foreign powers on election process	2.253*	-20.885	0.000
Reduced foreign troops will affect the political situation	3.896*	26.311	0.000
Afghanistan has very capable civil servants to implement policies.	3.358*	9.779	0.000

Source: Computed by the researcher based on primary data

\*shows significant at 1% level

In this section, 14 statements have been included to understand the expected role of democracy by Afghan masses. Observing Table 5, we find that the mean values of all the statements related with attitude towards democracy in Afghanistan are significant except the 8<sup>th</sup> one (insignificant mean 3.028). We must respect the confusion of Afghan people regarding the way democracy works and their feeling about performance of democratically elected presidents (mean 2.933).



TABLE 5: AVERAGE AND SIGNIFICANCE LEVEL OF ATTITUDE TOWARDS DEMOCRACY (N=1200), d.f. =1199

Statements related with Attitude towards Democracy	Mean	t-value	Sig. (2-tailed)
Political parties can be a source of unity in the country.	3.327*	9.091	0.000
Political parties create division & confusion among public of Afghanistan.	3.496*	14.759	0.000
The members of Assembly should make laws even if president disagree.	3.850*	27.298	0.000
Commander in war should be kept away from public offices.	4.053*	19.977	0.000
Religious leaders should be given important role in government decisions.	3.451*	12.828	0.000
People need more protection from government.	4.356*	48.967	0.000
The democratic presidents perform satisfactorily.	2.933**	-1.849	0.065
We are very satisfied with the way democracy works.	3.028	0.614	0.539
Sometimes use of violence is justified for a good cause in our country.	3.278*	7.924	0.000
Competition among political leaders/parties is very high.	4.158*	39.458	0.000
Populism level during election is very high	3.850*	23.095	0.000
We feel that democracy will get stronger in future.	3.551*	15.613	0.000
There is a threat of dictatorship to our country.	3.464*	13.574	0.000
Repression in the society is increasing	3.568*	17.321	0.000

Source: Computed by the researcher based on primary data

\*shows significant at 1% level

\*\*shows significant at 10% level

This is one of the most important question before us to peep inside the mind of people in Afghanistan and try to know by whom they want to be ruled. The underlying hypothesis is that if most of the population shows the preference for elected leaders as compared to tribal leaders then strong tendency for democracy must exist in the Afghan society. Four options were presented to the respondents as shown in Table 6. It is found that most of the people in Afghanistan want their leaders to be chosen through formal elections (47.7 %). This is quite soothing and gives us a strong hope about the future of democracy. It is also observed that slightly less number of persons want that their rulers should be experts like Educationists, Scientists, Engineers, Doctors, Lawyers etc. It is not known in what way these experts should be involved in ruling. One can only presume that people want a greater role of experts in democratic process in Afghanistan through selection in bureaucracy.

TABLE 6: PERCEPTION ABOUT WHO CAN RULE BETTER IN AFGHANISTAN

Who Can Rule Better in Afghanistan According to You	Frequency	%
Strong Leaders without Election	83	6.9
Experts like Educationists, Scientists, Engineers, Doctors, Lawyers etc.	502	41.8
Elders & Tribal Leaders	43	3.6
Leaders through Formal Elections	572	47.7
Total	1200	100.0

Source: Computed by the researcher based on primary data

The hopes, expectations and apprehensions of common people about future events reveal the reality of the present situation. It is heartening to know that people have little hope about good things to happen in future. On a scale of 1-5, the mean value is significantly slightly above (3.2792) the indeterminate towards agreement only for the last statements in Table 7. It means people have little hope that the next president will come through regular scheduled elections. It can be concluded that people are somewhere in between from agreement to indeterminate level for the statements about end of most serious fighting and settlement of issues with Taliban. The only ray of hope comes from the result of first statement which shows that people do not agree that the Taliban will be influential in the next elections.

TABLE 7: PERCEPTION ABOUT TALIBAN, CONFLICTS AND STABILITY (N=1200)

Statement	Mean	t-test	Sig. (2-tailed)	Mean Difference
Taliban will be influential in Afghan politics in next five years.	2.4937	-15.4628	0.0000	-0.5063
Most serious fighting will end in Afghanistan in next three years.	2.4542	-17.6664	0.0000	-0.5458
The government will settle all issues with Taliban in next three years.	2.3575	-21.2960	0.0000	-0.6425
Next president will come through regular scheduled elections.	3.2792	8.0196	0.0000	0.2792

Source: Computed by the researcher based on primary data

These results should be taken with a pinch of salt because recently, the Taliban have been found changing their position from extreme to center.

One of the important features of a democracy is the faith of people in its institutions. The objectives of brotherhood, equality, harmony and peace cannot be achieved without the faith in the institutions which itself depends upon the justice, impartiality, concern and sympathy practiced by the institutions. The general level of confidence and trust of the people in national institutions of Afghanistan is low. As we observe in the Table 8, on a scale of 1-3, people have shown **some confidence** and trust in national institutions. The trust and faith is high for Afghan national army and police as the mean value is significantly high for both these forces (2.649 and 2.441). People have shown some confidence and trust in community development councils with high significance level. The significance level of the trust for provincial councils local customary leaders is poor. People pose some confidence in local commanders which is a part of the state. The credibility of President, Supreme Court and parliament is more than the political parties and Independent Election Commission. (Mean value 1.588). People generally don't trust the Taliban (1.230).

TABLE 8: LEVEL OF CONFIDENCE AND TRUST IN NATIONAL INSTITUTIONS (N=1200)

	Mean	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)	Mean Difference
President	2.004	0.838	0.024	0.172	0.863	0.004
Parliament	1.809	0.740	0.021	-8.928	0.000	-0.191
Supreme Court	1.881	0.783	0.023	-5.269	0.000	-0.119
Independent Election Commission	1.588	0.768	0.022	-18.576	0.000	-0.412
Political Parties	1.653	0.823	0.024	-14.595	0.000	-0.347
District Governors	2.044	0.757	0.022	2.022	0.043	0.044
Provincial Councils	2.005	0.774	0.022	0.224	0.823	0.005
Local Customary Leaders	2.036	0.784	0.023	1.583	0.114	0.036
Community Development Councils	2.183	0.732	0.021	8.633	0.000	0.183
Afghan National Army	2.649	0.645	0.019	34.848	0.000	0.649
Afghan National Police	2.441	0.726	0.021	21.037	0.000	0.441
Local Commanders	1.956	0.857	0.025	-1.785	0.074	-0.044
Taliban	1.230	0.558	0.016	-47.805	0.000	-0.770

Source: Computed by the researcher based on primary data

In Table 9, the level of Accessibility of leaders to public has been measured on a scale of 1-5. We can see that people have only somewhat accessibility to the leaders. Only in the case of religious leader, a mean of 3.512 has been observed showing little higher accessibility. The situation of democracy is dismal on this parameter.

**TABLE 9: LEVEL OF ACCESSIBILITY OF LEADERS TO PUBLIC**

	Mean	Std. Deviation	Std. Error Mean	T	Sig. (2-tailed)	Mean Difference
Religious Leaders	3.512	1.195	0.034	14.834	0.000	0.512
Members of national assembly	3.227	1.148	0.033	6.839	0.000	0.227
Community Development Council Members	3.181	1.036	0.030	6.045	0.000	0.181
Provincial Councils	3.295	1.174	0.034	8.707	0.000	0.295
District Government (Woluswali)	2.951	1.097	0.032	-1.553	0.121	-0.049
Province Officials	3.324	1.232	0.036	9.112	0.000	0.324

Source: Computed by the researcher based on primary data

In Table 10, we have developed the average ranking of the problems according to their perceived seriousness by the respondents. The issues related with security, violence, terrorism, unemployment, poverty and poor economy have been considered most serious. The issues related with weak government and crime has been perceived as medium serious. The issues related with hard infrastructure like electricity, roads, health care, education and drinking water have been ranked as low serious.

**TABLE 10: RANKING OF THE PROBLEMS IN AFGHANISTAN ACCORDING TO PERCEIVED SERIOUSNESS**

Problem	Mean	Median	Mode	Sum	Average Rank
Security issues/violence/terrorism.	8.779	10	10	10535	1
Unemployment	7.920	8	9	9504	2
Poor economy and Poverty	7.279	8	8	8735	3
Government/weak authority/corruption	6.903	7	7	8283	4
Crime	5.079	5	6	6095	5
Lack of electricity	4.694	5	3	5633	6
Education/schools	4.679	5	5	5615	7
Roads	3.913	4	3	4695	8
Health care	3.612	3	2	4334	9
Drinking Water	2.270	1	1	2720	10

Source: Computed by the researcher based on primary data

We have enquired whether specific opportunities have emerged for the individual families due to democracy. The results are giving in Table 11.

**TABLE 11: ECONOMIC BENEFITS TO FAMILIES IN AFGHANISTAN UNDER DEMOCRACY (All figures in %)**

Economic Benefits	Yes	No	Can't Say
Our family member got a government job.	53.10	38.70	8.20
Our family member got a job in private sector.	54.20	38.80	7.00
Our family member got a new business opportunity in last 10 years.	34.10	58.00	7.90
Our family member got a new government contract in last 10 years.	20.70	70.80	8.60
Approval of loan from bank/Government in last 10 years.	20.90	70.60	8.50
God rid of private money lender.	50.80	36.20	12.90
Opportunity for individual development have emerged in last 10 years.	62.10	29.40	8.50

Source: Computed by the researcher based on primary data

The Socio-economic conditions after starting of democracy, on scale of 1-3 showing from worsened to improved, we have got a significant mean 2.343 indicating little but significant improvement. People have agreed that improvement has taken place in availability of water for drinking & irrigation; education of children & female; and electricity supply.

The conditions of all other parameters like freedom of movement, access to natural resources, domestic violence, violence by fundamentalists towards women, family stability, crime control, rule of law, control on bribery & corruption, justice and security have remained same after initiation of democracy as observed from the Table 12. Even the optimism and hope about future have remained same.

**TABLE 12: IMPROVEMENT IN SOCIO-ECONOMIC CONDITIONS IN AFGHANISTAN IN DEMOCRACY (All figures in %)**

Socio-economic Condition Variable	Improved	About Same	Worsened
Generally economic condition in the country	58.6	17.1	24.3
Control on Bribery & corruption	29.1	29.3	41.6
Justice	20.0	40.3	37.7
Crime control	31.7	31.8	36.5
Availability of drinking water.	56.6	29.0	14.4
Water for irrigation	49.2	36.7	14.2
Supply of electricity	57.9	24.7	17.4
Security situation	22.3	27.8	49.9
Education for children	67.7	22.8	9.5
female education	69.2	18.8	12.0
Freedom of movement	47.1	25.2	27.7
Family stability	31.8	32.8	35.4
Domestic violence	36.8	32.8	30.4
Violence by fundamentalists towards women.	30.3	37.6	32.1
Rule of law	31.3	30.1	38.6
Hope/optimism for future.	36.6	28.2	35.2
Access to natural resources (pistachio/minerals/sand....etc)	42.2	32.2	25.5

Source: Computed by the researcher based on primary data

TABLE 13: IMPROVEMENT IN ECONOMIC CONDITIONS IN AFGHANISTAN UNDER DEMOCRACY

Economic Condition	Improved	About Same	Worsened
Annual income	64.4	22.1	13.5
Annual saving.	50.3	32.9	16.8
Investment(land/property/shop/working capital/insurance)	50.8	35.6	13.6
Living standard	64.8	20.9	14.3
Availability of food Grains	61.8	25.0	13.2
Availability of Nutritious food(Milk or meet products)	65.2	22.3	12.5
Purchasing of clothes	68.8	22.2	9.0
Purchasing of shoes	66.9	21.8	11.2
Ownership of private vehicle.	69.7	22.2	8.1
Ownership of agriculture machines	46.6	63.7	9.8
Expenditure on marriage /social functions	65.0	18.8	16.2
Ownership of cattle (cow, sheep, goat)	44.0	42.9	13.1
Housing condition	62.2	25.8	12.1
Consumer durables (AC/TV/FRIDGE/WASHING MACHINE etc	78.8	13.8	7.3
Education of children	78.7	16,2	5.1
Health of family members	66.2	23.3	10.5
Entertainment	66.6	27.2	8.2
Status of family in society.	65.2	12.9	12.9

Source: Computed by the researcher based on primary data

## 9. CONCLUSIONS

The state of democracy in the Afghanistan is very poor. People generally do not trust their rulers and are waiting to get rid of terror of Talibans, undemocratic ways of Pashtuns who treat every other ethnicity lesser than themselves. Despite of all these weak points of democracy, whatever little freedoms people have got has shown that people are being benefited from increased economic activity. The survey has shown that all among categories, the standard of living of people has improved under the present brief democratic rule. The existing ruling party should plan to conduct the free and fair elections to strengthen the faith of people in democracy.

## 10. RECOMMENDATIONS AND SUGGESTIONS

The faith of the people in election process along with safety of voters and secrecy need to be built up. Experts need to be engaged in various administrative processes who have rational, impartial, just and objective approach to the problems and are also viewed by common people in same image. The Taliban need to be shown their place in society by creative moral methods not by force and simultaneously need to be engaged in economic processes. The information dissemination to illiterates has to be done cautiously and selectively to build the nation.

## 11. LIMITATIONS

The present paper has successfully outlined the opinions, attitudes and perceptions of people regarding democracy and economic developments in Afghanistan. The study is mainly exploratory and descriptive. To analyze the relationships of two sets of variables belonging to two different disciplines, a more exhaustive framework is required which has been beyond the scope of this study. Despite of these limits, the study is important to gauge the behavior of Afghan people.

## 12. SCOPE FOR FURTHER RESEARCH

In future, one can study which ideology or which of their some of the components are closer to the ethos of people. What should be the strategy to establish a true people's democracy in Afghanistan which is compatible with their existing value system? How the economic systems and particularly market mechanism help in the development of democratic institutions? What should be done by Afghan society to avoid playing in the hands of unscrupulous international forces?

## REFERENCES

1. A. Cooper Drury, Jonathan Kriekhaus and Michael Lusztig (2006), Corruption, Democracy, and Economic Growth, *International Political Science Review / Revue internationale de science politique*, Sage Publications, Ltd., Vol. 27, No. 2, pp. 121-136.
2. Christopher Clague, Suzanne Gleason and Stephen Knack (2001), Determinants of Lasting Democracy in Poor Countries: Culture, Development, and Institutions, *The Annals of the American Academy of Political and Social Science*, Sage Publications, Inc. in association with the American Academy of Political and Social Science, Vol. 573, pp. 16-41.
3. Daron Acemoglu, Simon Johnson, James A. Robinson and Pierre Yared(2008), Income and Democracy, *The American Economic Review*, American Economic Association, Vol. 98, No. 3, pp. 808-842.
4. Devra c. Moehler (2010), Democracy, Governance, and Randomized Development Assistance, *The Annals of the American Academy of Political and Social Science*, Sage Publications, Inc. in association with the American Academy of Political and Social Science, Vol. 628, pp. 30-46.
5. Evelyne Huber (1993), The Impact of Economic Development on Democracy, *Journal of Economic Perspectives*, VOL. 7, NO. 3, pp. 71-86.
6. Hristos Doucouliagos and Mehmet Ali Ulubaşoğlu (2008), Democracy and Economic Growth: A Meta-Analysis, *American Journal of Political Science*, Midwest Political Science Association, Vol. 52, No. 1, pp. 61-83.
7. Hyug Baeg Im (2011), Better democracy, better economic growth? South Korea, *International Political Science Review / Revue internationale de science politique*, Sage Publications, Ltd., Vol. 32, No. 5, pp. 579-597.
8. J. Ernesto López-Córdova and Christopher M. Meissner (2008), The Impact of International Trade on Democracy: A Long-Run Perspective, *World Politics*, Cambridge University Press, Vol. 60, No. 4, pp. 539-575.
9. Johan Gerring (2005), Philip Bond, William T. Barndt and Carola Moreno, Democracy and Economic Growth. A Historical Perspective, *World Politics*, Cambridge University Press, Vol. 57, No. 3, pp. 323-364.
10. Sarah Janssen, "The World Almanac and Book of Facts", US-published, World Almanac Books, 2019, pp. 745-46
11. Siddhartha Baviskar and Mary Fran T. Malone(2004), What Democracy Means to Citizens — and Why It Matters, *European Review of Latin American and Caribbean Studies / Revista Europea de Estudios Latinoamericanos y del Caribe*, Centrum voor Studie en Documentatie van Latijns Amerika (CEDLA), No. 76, pp. 3-23.
12. Stephen Biddle, Fotini Christia and J Alexander Their(2010), Defining Success in Afghanistan: What Can the United States Accept?, *Foreign Affairs*, Council on Foreign Relations, Vol. 89, No. 4, pp. 48-60.
13. UK Heo and Alexander C. Tan (2001), Democracy and Economic Growth. A Causal Analysis, *Comparative Politics*, Comparative Politics, Ph.D. Programs in Political Science. City University of New York, Vol. 33, No. 4, pp. 463-473.
14. Yi Feng (1997), Democracy, Political Stability and Economic Growth, *British Journal of Political Science*, Cambridge University Press, Vol. 27, No. 3, pp. 391-418.

**ECONOMIC IMPACT OF CRIME ON DEVELOPING ECONOMIES: NIGERIA AS CASE STUDY**

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**ABSTRACT**

*Crime is a global issue that needs urgent attention, the rate of crime is growing on a very high speed mostly in developing countries where poverty and unemployment are deeply rooted. This paper aims at finding the relationship between economic growth and crime in a developing country such as Nigeria by using time series analysis, it uses ordinary least square to run the model. The main finding is crime has a negative impact on economic growth of a country.*

**KEYWORDS**

Nigeria, economic impact of crime.

**JEL CODES**

K42, K49.

**INTRODUCTION**

Crime has a negative impact on the economic development of a nation. It poses hindrances on the trust and bilateral relations between two countries. The dominance of uncontrollable crime occurrence in the country could be a stumbling stone to both human and property right. Though crime has a subjective utility to the committee, the social cost of it is always greater than its benefits which an individual might be willing to achieve.

However, Economists over the years tries to pinpoint the rational motive behind a crime in relation to economic perspectives. (Baker, 1968) in the journal of the political economy of 1968 pioneer the study of crime in relation to the economic thinking. Backer argued that criminal behave just like every rational individual in an attempt to maximised utility subject to a budget constraint. Thereafter, several intellectual works have been published indicating that crime has an economic explanation in terms of income, unemployment, poverty, lack of basic needs, illiteracy and overpopulation. At this juncture, it's imperative to know what is a crime, according to advanced learner dictionary crime is defined as activities that involve breaking the law, it could be an act harmful not only to some individual but also to a community, society and the state, such act is punishable by law.

Over the years there are various categories of crime being perpetrated in the countries of the world, the rate of crime has actually gone up today compared to 1950s. Crime such as child trafficking, homicide, genocide, terrorism, stealing and harm rubbery. Also, a financial crime called (419) in Nigeria is gaining more popularity amongst the nations and individuals. Bribery and corruption have spread it tentacle more than what we can ever imagine.

All these crimes hinder the flow of foreign direct investment and its misrepresentation of the image of the nation as a whole in such a way that it impacts negatively the mutual relations between nations. In the case of Nigeria, the activities of the corrupt bureaucracy over the years promotes the growth of crime in the nation. Nigeria, been one of the oil producing countries has nothing to show for the exploration of the oil that has started since 1950's when compared to her counterpart oil producing nations around the globe. The majority of the citizens are wallowing in poverty and living below poverty line why just five percent of the population is richer than the whole nation. Thus, this work will help the nation to retrace its value.

**THE LITERATURE REVIEW**

There are several economists and researchers who have pioneer the field economics of crime. In this section of literature review examines series of the theories that have been propounded, as well as the recent literature, the review is divided into three parts. Firstly, the theories which are the basis of this work. secondly, the empirical studies such as the determinants of economic growth, the costs of crime on the economy in respect of personal and aggregate levels. Subsequently, it discusses the possible association of crime with different determinants of economic growth.

**THE ECONOMIC THEORY OF CRIMINAL BEHAVIOUR**

From the inception, economists have left no stone unturn in search of the relationship between economic and crime. It has shown that crime has an economic explanation (e.g in terms of income and unemployment levels as well as poverty and inequality).

Baker's work played a significant role in the field of economics of crime, there are other valuable works such as that of Ehrlich (1973), Heineke (1975), Sandmo (1972), Kolm (1973) and Singh (1973). Each of these articles explores crime on tax evasion. Though, we pay more attention to the time allocation models of Becker, Ehrlich, and Block and Heineke. The qualitative predictions of these models are used as a basis. But focus more the recent trends in the field of economics of crime. Becker developed his 'economic' theory of criminal behaviour as a direct response to the various sociological, criminological and psychological theories based on skull types, biological inheritance, differential association, anomie and family upbringing. He wished to build a rather more general theory of criminal participation, which could incorporate such non-economic theories as special cases. His view was that an individual's decision to act criminally could be analysed by exactly the same kind of tools used for other individual decisions, i.e. by the use of utility theory. His basic contention was that all individuals were rational utility maximizers and so decided whether or not to commit a particular crime by comparing the utility they would gain from acting illegally with that which they would gain by using their time and other resources in the pursuit of legal endeavours. The decision of course depends upon the expected rewards from the alternative activities and, because crime is an inherently risky activity, the attitude to risk on the part of the individual concerned. Individuals may participate in a criminal activity if the risk outweighs the reward and it also depends on individual risk tolerance. The matter of choice came into play, individual may choose to participate in a criminal activity on the basis of how the person sees the crime.

Ehrlich's Model uses a sophisticated model in his analysis, he formulated the decision-making problem in terms of the state-preference theory. The state preference is more useful in the area where all the possible outcome can be attached to monetary values.

Ehrlich defined an individual's wealth to include assets, earnings within the period and the real wealth equivalent of non-pecuniary returns from the legitimate and illegitimate activities (Ehrlich, 1973, p.525) Ehrlich considered two possible outcomes (a) the individual is caught and punished and (b) the individual is not caught and, therefore, not punished. Other states of the world are, of course, perfectly possible, e.g. that (i) individuals are caught, but not punished, or (ii)

innocent individuals are wrongfully arrested and punished. Ehrlich adopted a one-period choice-theoretic framework, in which the individual considers how to allocate his time and resources between crime and legal employment for each period in turn. The individual is assumed to maximise expected utility, which is given by the following expression

$$EU = Pu(Xa) + (1-p)U(Xb)$$

where  $p$  is the probability of capture and punishment and  $U()$  is a von Neumann-Morgenstern utility index. In what follows we assume that  $p$  is independent of  $t$ , the amount of time spent in the criminal activity. The argument that  $p$  may instead depend upon  $t$  has a certain plausibility.

Block and Heineke's Model, It was argued by Block and Heineke that the decision to engage in crime could not be considered only in terms of its effect on the individual's level of monetary wealth. They argued that psychic costs of crime and employment need to be considered explicitly. They restricted the analysis to property crimes. Each individual is faced with the problem of allocating his time between a legitimate activity (labour) and an illegal activity (theft). Denoting the amount of time devoted to each of these activities as  $L$  and  $T$  respectively, Block and Heineke wrote the individual's von Neumann-Morgenstern utility function as,  $U = U(L, T, W)$  where  $W$  is his actual level of wealth.  $W$  is in turn given by  $W = W_0 + WLL + (W - pF)(T)$  where  $W_0$  is his endowed wealth,  $WL$  is the rate of return from legal activity,  $WI$  is the rate of return from crime,  $F$  is the fine per offence,  $p$  is the stochastic probability of arrest/conviction and  $()$  is the number of offences he commits. Block and Heineke devoted some time to a consideration of the impact upon the amount of time spent in illegal activity of changes in (i) wealth, (ii) illegal payoffs, (iii) penalties and (iv) the arrest rate, for the case where individuals display decreasing absolute risk aversion in wealth, i.e. they become increasingly willing to take a gamble of a given size as wealth increases. Whether or not the illegal activity is a normal or inferior activity could not be determined. As increased illegal payoffs have both a substitution and a wealth effect, then unless we can assume that crime is a normal activity the effects of increased payoffs cannot be determined. If crime is normal (in the sense of having a positive wealth elasticity) than an increase in illegal returns will increase the amount of time spent in the criminal activity.

## EMPIRICAL STUDIES

### DETERMINANTS OF ECONOMIC GROWTH

Kazeem (2014) examines the Determinants of Economic Growth in Nigeria. The paper investigates the role of Frazer Economic Freedom Index on FDI-growth relationship over the period spanning 1980 through 2010 using annual time series data. A Multivariate Regression approach was employed to estimate augmented growth models. Quite interestingly, the impact of disaggregated economic freedom over aggregated composite index was found profoundly revealing. Emanated results show that the same set of variables like labour, life expectancy, the degree of openness and economic freedom are factors affecting the level of economic growth in both but at different levels of significance. However, the estimates of disaggregated components of economic freedom data show that the size of government (negative effects) and freedom to trade internationally (positive effects) appears as significant out of five variables making the composite (aggregated) index, therefore suggested for policy applications: curbing unfettered liberalization in the degree of openness, improving and strengthening of the components of economic freedom index, specifically, through a reduction in excessive government intervention and that more budgetary allocations should be channelled towards health delivery schemes and education promoting activities since the likelihood of elongating life expectancy are in tandem with such exercises. Some of the recent paper examines the major economic growth determinants as well as the direction of causality that exists between economic growth and some selected economic growth indicators in Nigeria see Uwakaeme (2015) Leaning on the newer endogenous growth structure and based on the empirical evidence, the results demonstrate that a positive and significant long-run relationship exists between economic growth (GDP) and some selected economic growth- indicators namely: productivity index (industrial), stock market capitalization and FDI indicating that they are major growth determinants. However, the impact of trade openness, although positive, is not quite impressive as reflected in the size of its regression coefficient. Others (inflation and excessive Government fiscal deficit) show a significant inverse relationship with economic growth, implying that they constitute an impediment to the growth of the economy. The directions of causality between economic growth and the selected determinants are mixed – unidirectional, bilateral and independent. Overall, the speed of the equilibrium adjustment (as indicated by well- defined negative ECM coefficient) is slow and suggests that economic growth process in Nigeria tends to adjust slowly to the disequilibrium changes in those determinants suggesting policy lag effect., Based on these findings, the study recommends that the government should strive to achieve sustainable price stability, fiscal discipline, economic efficiency driven by infrastructural support and enhanced technological capabilities, strong institutional and economic reforms to increase production capacity. The stable policy should also be highly emphasised in order to promote trade, domestic and foreign investments, there is also need for the policy makers to take cognizance of the policy lag effect and design policies in line with the expected magnitude of expected changes.

Anthony Orji et al (2015) enumerates the financial liberation and economic growth in Nigeria: an empirical evidence. He examines the financial liberation status from 1981 to 2012 in his investigation on the impact of financial liberation on economic growth in Nigeria using McKinnon-Shaw framework. The result reveals that the financial liberation and private investment have significant positive impact on economic growth in Nigeria. However, real lending rate proved to be negatively related to the economic growth in Nigeria within the period under review. It was concluded that monetary authorities and policies makers need to support liberation process at the larger perspective. There are some internal issues within the Nigeria context that stand as constraints to liberation and foreign direct investment such as insecurity of life and property, corruptions, Justice delay of the judiciary process, because of the above-mentioned factors most of the policies fail to work as expected.

F. T. Kolapo et al (2012) discuss Nigeria economic growth and capital flight determinants between 1985 and 2010. The indicator of economic growth used in the study is the Gross Domestic Product (GDP) while the determinants of capital flight variables adopted are Foreign Direct Investment (FDI), Inflation Rate (INF), Exchange Rate (EXGR) and Fiscal Deficit (FISD). The ordinary least square (OLS) and the co-integrating analytical technique were used for analysis and the result shows that both the parameters and the model were significant. Specifically, the short run analysis shows that capital flight is mostly caused by inflation while the long run shows that both inflation rate and exchange rate significantly determines capital flight which in turn adversely affects economic growth. Capital flight could mean unemployment since the resource that would have been reinvested has found its way out of the economy. Though, there is an adverse relationship between inflation and unemployment. Since the paper considered exchange rate and inflation as the major factors responsible for the capital flight which invariably leads to unpleasant economic growth in the short run.

Leonor Coutinho (2012) examine the determinants of growth and inflation in Southern Mediterranean countries. It analysed the differences in growth performance and macroeconomic stability across Mediterranean countries, to draw lessons for the future. The main findings are that Southern Mediterranean countries should benefit from closer ties with the EU that result in higher levels of trade and FDI inflows, once the turbulence of the 'Arab Spring' is resolved, and from the development of financial markets and infrastructure. They will also benefit in keeping inflation under control, which will depend in great the part on their ability to maintain fiscal discipline and sustainable current accounts. One of the main challenges for the region will be to implement structural reforms that can help them absorb a large pool of unemployed without creating upward risks to inflation.

### THE COSTS OF CRIME

Ross Anderson (2012) writes about Measuring the cost of cybercrime, the most widely committed crime these day is a cyber crime, a lot of lives has been messed with. In the view of the cost of cybercrime, for each of the main categories of cybercrime, it was analysed that there is direct costs, indirect costs and defence costs – both to the UK and to the world as a whole. It was clearly distinguished carefully between traditional crimes that are now 'cyber' because they are conducted online (such as tax and welfare fraud); transitional crimes whose modus operandi has changed substantially as a result of the move online (such as credit card fraud); new crimes that owe their existence to the Internet; and what we might call platform crimes such as the provision of botnets which facilitate other crimes rather than being used to extract money from victims directly. As far as direct costs are concerned, it found that traditional offences such as tax and welfare fraud cost the typical citizen in the low hundreds of pounds/Euros/dollars a year; transitional frauds cost a few pounds/Euros/dollars; while the new computer crimes cost in the tens of pence/cents. However, the indirect costs and defence costs are much higher for transitional and new crimes for the former they may be roughly comparable to what the criminals earn, while for the latter they may be an order of magnitude more. As a striking example, the botnet behind a third of the spam sent in 2010 earned its owners around US\$2.7m, while worldwide expenditures on spam prevention probably exceeded a billion dollars. We are extremely inefficient at fighting cyber crime, or to put it another way, cyber crooks are like terrorists or metal thieves in that their activities impose disproportionate costs

on society. Some of the reasons for this are well-known: cyber crimes are global and have strong externalities, while traditional crimes such as burglary and car theft are local, and the associated equilibria have emerged after many years of optimisation. As for the more direct question of what should be done, our figures suggest that we should spend less in anticipation of cybercrime (on antivirus, firewalls, etc.) and more in response – that is, on the prosaic business of hunting down cyber-criminals and throwing them in jail. The financial cyber crime has gone more sophisticated, most of the financial institutions are victims of hackers which invariably led to the failure of some of the financial institutions performing theirs to the depositors. Such, has both direct and indirect cost, on the part of the bank it was a direct cost because the depositors want their money back and the institution also wants to remain in business. Spending on defence is part of the indirect cost on the affected institutions or the individual. Some of the recent literature considered the cost of building security. See Anifowose (2016) Building security is acquiring greater importance against this backdrop of a rise in criminal activities. Provision of security measures in buildings is left to the discretion of private individuals. Architects' interest in designing protective building is minimal due to inadequate government policy and specific criteria on building security. Now are days in Nigeria the cost of building securities is on the high, therefore, it is imperative to explore the security cost determinants based on built environment professionals' perceptiveness on building security cost as well as examining the predictive capability of the security cost determinants within the built environment. The cost of building security in urban centres are more than that of rural area as most houses in the urban centres are prone to attacks by hoodlums.

Sylvia Walby (2004) emphasised on the cost of domestic violence, domestic violence has devastating consequences for both the individual victim and wider society. It drains the resources of public and voluntary services and of employers and causes untold pain and suffering to those who are abused. Domestic violence causes loss of life and property as the case may be. While considerations of justice and fairness provide a sufficient basis for public intervention into domestic violence, a better understanding of the full cost of domestic violence provides the basis for action within an additional policy framework, that of finance. Adding a financial dimension increases the range of ways in which policy interventions can be articulated, measured and evaluated. In particular, it may assist in addressing spending priorities. The estimates of the extent and nature of domestic violence are derived from four sources: the 2001 British Crime Survey self-completion module on Inter-Personal Violence (BCS IPV) (Walby and Allen 2004); the Criminal Statistics for homicides; reports from agencies; and a review of previous research. Domestic violence costs the state around £3.1 billion and employers around £1.3 billion. The cost of the human and emotional suffering is estimated to be around £17 billion. The total cost is estimated at around £23 billion.

Stephen et al (2014) talk about the cost of crime in Canada, in 1998, Canada spent over \$42.4 billion on the crime of which \$15.5 billion was associated with what is known as the direct cost of crime and the remainder associated with the less easily measured consequences for the victims. Current more detailed estimates reveal that Canadians spend over \$85 billion being victimised by, catching, and punishing crime. Victims' losses through criminal acts committed against them amount to over \$47 billion and constitute more than half of the total. While the crime rate has been falling since the early 1990s, our current measure of the cost of crime is more detailed than previous estimates in 1998. See Ting Zhang (2008) the total (tangible) social and economic costs of Criminal Code offences in Canada were approximate \$31.4 billion, this amounted to a per capita cost of \$943 per year.

However, this is likely to be a conservative estimate due to the unavailability of data in many areas. Despite best efforts to account for all the financial impacts of crime, only a partial picture of the true range of costs is ever available. The costs outlined herein were borne by the criminal justice system, victims of crimes and third parties in general. A paradox associated with the decline in the crime rate could be linked to the fact that the cost of crime protection has gone up and the government has made more fund available for the police and other security agencies. The judiciary process has become more formidable in order to protect the right of the Canadians. The supreme court of Canada has imposed a set of evolving requirements on the police and prosecution that makes it manifestly efficient in protecting the right of the citizens and this has reduced the rate of crimes greatly.

Russell Smyth (2011) discusses the Costs of Crime in Victoria. The costs of crime in Victoria in 2009-2010 were \$9.8 billion. This amount is equivalent to \$1678 per person in Victoria or 3.4% of Gross State Product in Victoria in 2009-2010. Costs attributable to specific crimes against the person represent 8.2% of the total cost. Costs attributable to specific crimes against property represent 46.8% of the total. Costs associated with drug offences represent 4.8% of the total. Other costs, including costs associated with administering criminal justice (27.4%), victim assistance (2.2%), the security industry (8.5%) and insurance administration (1.7%), represent 40.7% of total costs. These other costs<sup>4</sup> are associated with both crimes against the person and property crime. Deception accounts for the highest the dollar value of all crime types (21.8%), followed by arson (11.1%). The least expensive crime in terms of total dollar value was sexual assault followed by robbery (as distinct from burglary). Costs specifically attributable to property crime are just over six times higher than costs specifically attributable to crimes against the person.

#### **THE RELATIONSHIP BETWEEN CRIME AND ECONOMIC GROWTH**

Asif Islam (2014) considers economic growth and crime against small and medium-sized enterprises in developing economies, it uses data for about 12,000 firms in 27 developing countries. Economic growth is negatively associated with crime. This relationship is stronger for small and medium firms than large firms. The study also explores several economy-wide factors and their influence on the growing crime relationship for small and medium enterprises. There is the negative relationship between firm losses due to crime and economic growth. There is a consensus that an increase in real GDP per capita growth by 1 percent is associated with a 0.30 percent reduction in the losses due to crime as a percentage of total sales experienced by firms. This figure is larger for small and medium firms (0.33 percent) than larger firms (0.21 percent). The suggested mechanism for this effect is that economic growth increases opportunities elsewhere and thus increasing the opportunity cost of crime. Furthermore, economic growth may result in small and medium firms growing faster and increasing performance, thus allowing them to better protect themselves from criminal activity.

Chua Hui Yun et al (2015) investigates the long-run relationship between corruption and growth in Malaysia over the period from 1984 to 2013. It examines the effect of corruptions on economic growth of Malaysia through various channels of transmission such as trade openness, government spending, investment and human capital. Autoregressive Distributed Lag (ADRL) approach is used to examine whether a long run relationship exists between corruption and growth in Malaysia while taking into account of other macroeconomic variables such as trade openness, investment, human capital and government spending. By using this approach, a negative relationship is found between corruption and growth in the long run but it will have a positive impact on economic growth through channels of trade openness and government spending. However, FDI and human capital are statistically insignificant to affect Malaysia's economic growth. This finding suggests that corruption is detrimental to Malaysia's economic growth in the long run and for policy-wise, the main concern of policymakers should be reducing corruption and increasing awareness of Malaysian to against the corruption in order to achieve high economic growth in Malaysia.

Benjamin Jonathan (2014) considers effects of GDP on violent crime, The main dependent variable, GDP per capita, was proven to be significant, but in a way contrary to the original hypothesis. Considering that violent crime rates, to the 1% level, are positively dependent on GDP per capita, it would seem that the growth of individual wealth would have negative impacts on society, but a less cursory look at the models presented show this to be otherwise. The coefficient for GDP per capita is very low, less than 0.01, which makes sense, as GDP per capita has a mean value of 43096.75, and a 1 dollar increase or decrease has little bearing on an individual's decisions. When looking at the other variables, all of which are percentages except for the dummy variable of the death penalty (which only takes values of 1 or 0), and their coefficients, it's easy to see that the variable dominating the total crime rate is GDP per capita. Even knowing this, GDP per capita effects certain variables, in ways that cannot be accounted for in this linear regression model. Since poverty rates, graduation rates, and unemployment rates are controlled for in the model, GDP per capita's effects on those variable are not accounted for, nor are other positives of GDP increases. As GDP per capita increases, on average, personal wealth increases, which can only have a positive effect on poverty, and the increased GDP means higher tax inflows, allowing for higher expenditure on public services, such as crime prevention. It is possible that, as GDP per capita increases, real violent crime rates aren't increasing, but reported violent crime rates are increasing, as more law enforcement expenditure allows for more police to enforce the law. This study provides interesting conclusions that provoke further study. Many variables that could explain some of the effects GDP per capita has on violent crime, such as expenditure on law enforcement, or firearm sales, rather than manufacture. However, because this data is very fragmented over local levels, it is very difficult to obtain. Another factor that may also explain some of the effects of GDP on violent crime is a price index for each state for each year, in order to get a more realistic picture of individual wealth.

Surender Kumar (2013) examines the causality between crime rates and economic growth using state-level data in India. A reduced form equation has been estimated using instrumental variable approach to correct for joint endogeneity between crime and economic growth. Higher crimes may reduce the level of per capita income and its growth rate. Controlling intentional homicide and robbery rates in each of the states to the minimum level they observed during the 1991-

2011 period, the predicted annual growth in per capita income could have been higher by 1.57 and 1.2 percentage points, respectively. The average annual gain in growth rate by bringing down the homicide rate at a level of national minimum could be 0.62 percentage points. Note that the loss in growth rate is lower or negative in the states that have higher per capita income. The empirical results show that crime has had a significant and negative effect on the economic performance of Indian states. As crime rates, especially the homicide rates, are higher in most of the northern and north-eastern states relative to their counterpart western and southern states, this may explain to some extent persistent regional economic inequalities. Therefore, it would be useful to compare the existing growth rate to a hypothetical scenario in which the crime rate, for each year over the 1991-2011 period, is fixed at some level.

## RESEARCH ISSUE

Various studies have tried to explore the relationship between economic growth and crime in different ways, this research work is considering the impact of crime on Nigeria economy. It's very relevant at this point of time when Nigeria is facing a lot of economic hullabaloo due to accumulated mistakes of our leader and politicians. This research tries to see the impact of crime on Nigeria economy using a different variable in order to see the impact of crime on Nigeria economy in a larger perspective.

## RESEARCH QUESTION

Does crime have a negative impact on GDP?

Does the total crime have a statistically significant negative impact on economic growth when included in the augmented Solow growth model adjusted to technological progress?

Does unemployment promote crime?

## RESEARCH OBJECTIVES

1. To examine the relationship between economic growth and crime.
2. To find out whether the total crime has not statistically significant impact on economic growth when included in the augmented Solow growth model adjusted to technological progress.
3. To deduce the relationship between Total crime and unemployment.

## METHODOLOGY

This paper intends to investigate the effect of crime on economic growth in using time series analysis In order to ensure that the error term of the independent variable is not correlated with the error terms of other control variables and that the coefficients are independent, Ordinary least squares method (OLS) is going to be used run the model. OLS is a method used in statistics that estimate the unknown parameters in a linear regression model and which has the following expression:

$$Y_t = \alpha + \beta_1 X_{1t} + U_t$$

where  $y$  is the dependent variable,  $x$  is the independent variable,  $\alpha$  and  $\beta$  are the unknown parameters, being also the constant term and  $u$  is the error term. To find the impact of crime on economic growth and other control variables. The simple regression analysis is performed in order to check statistically significant linear relationships between the variables. The indices for the year represented via  $t$  (1987.....2017) respectively and  $e$  is the error term. a regression analysis will be performed in order to check the relationship between the dependent variable, the independent ones and the control variables. The aforementioned actions are expressed below:

- 1) Economic Growth $_t = \alpha + \beta_1$  (Population Growth $_t$ ) +  $\beta_2$  (Unemployment $_t$ ) +  $\beta_3$  (Foreign Direct Investment $_t$ ) +  $\beta_4$  (Armed Robbery $_t$ ) +  $\beta_5$  (Burglary $_t$ ) +  $\beta_6$  (Kidnapping $_t$ ) +  $\beta_7$  (Murder $_t$ ) +  $\beta_8$  (Rape $_t$ ) +  $\beta_9$  (Suicide $_t$ ) +  $u$

## RESULTS AND DISCUSSION

### MULTIPLE LINEAR REGRESSION ANALYSIS FOR ECONOMIC CRIMES

Regression is the determination of the statistical relationship between two or more variables. In simple regression two variables are used. One variable (independent) is the cause of the behaviour of another one (dependent). When there are more than two independent variables the analysis concerning relationship is known as multiple correlations and the equation describing such relationship is called as the multiple regression equations. Regression analysis is concerned with the derivation of an appropriate mathematical expression is derived for finding values of a dependent variable on the basis of the independent variable. It is thus designed to examine the relationship of a variable  $Y$  to a set of other variables  $X_1, X_2, X_3, \dots, X_n$ . the most commonly used linear equation is  $Y = b_1 X_1 + b_2 X_2 + \dots + b_n X_n + b_0$

Here  $Y$  is the dependent variable, which is to be found.  $X_1, X_2, \dots$  and  $X_n$  are the known variables with which predictions are to be made and  $b_1, b_2, \dots, b_n$  are the coefficient of the variables.

### MODEL

In this study, the dependent variable as Real GDP Growth in percentage and the Independents variables are Population in percentage, Unemployment in percentage, Foreign Direct Investment (FDI), Armed Robbery, Forgery, Burglary, Kidnapping, Murder, Rape and Suicide. The researcher tries to find out how the Economic Crimes in Nigeria will affect the Real GDP Growth of the country by using the multiple linear regression analysis for over the period of 30 years from 1987 to 2017. The researcher analysis the below regression model to find out the cause and effect relationship between various economic crime factors affecting the real GDP Growth of the countries like Nigeria.

#### Dependent Variable

Real GDP Growth in % ( $Y_{it}$ )

#### Independent Variables

1. Population in % ( $X_{1t}$ )
2. Unemployment in % ( $X_{2t}$ )
3. Foreign Direct Investment (FDI) ( $X_{3t}$ )
4. Armed Robbery ( $X_{4t}$ )
5. Forgery ( $X_{5t}$ )
6. Burglary ( $X_{6t}$ )
7. Kidnapping ( $X_{7t}$ )
8. Murder ( $X_{8t}$ )
9. Rape ( $X_{9t}$ )
10. Suicide ( $X_{10t}$ )

TABLE 1.1: REGRESSION OUTPUT FOR EQUATION 1

R	.958			
R Square	.918			
Adjusted R Square	.782			
F – Value	6.732	Sig: .015		
Variables	Co-efficient	Std. Error	T-value	Sig
Constant	-42.104	16.333	-2.578	.042**
Population in%	.383	.107	3.586	.012**
Unemployment in %	-.132	.228	-.577	.585
FDI	-.324	.447	-.725	.496
Armed Robbery	-.002	.001	-1.400	.211
Forgery	.019	.009	2.102	.080***
Burglary	.002	.001	1.533	.176
Kidnapping	-.025	.008	-3.252	.017**
Murder	-.006	.004	-1.615	.158
Rape	.019	.005	3.803	.009*
Suicide	-.107	.028	-3.787	.009*

Source: Secondary Data from cleen, World Bank, Central Bank of Nigeria.

#### Notes:

\*\*\* Significant at 10% level

\*\* Significant at 5% level

\* Significant at 1% level

The multiple R is also called as Multiple Correlation Co-efficient value is 0.958 measures the degree of relationship between the actual values and the predicted values of the Real GDP Growth in the percentage of the country. Because the predicted values are obtained as a linear combination of the following independent variables such as Population in percentage ( $X_{1t}$ ), Unemployment in percentage ( $X_{2t}$ ), FDI ( $X_{3t}$ ), Armed Robbery ( $X_{4t}$ ), Forgery ( $X_{5t}$ ), Burglary ( $X_{6t}$ ), Kidnapping ( $X_{7t}$ ), Murder ( $X_{8t}$ ), Rape ( $X_{9t}$ ) and Suicide ( $X_{10t}$ ). The co-efficient value of 0.958 indicates that real GDP growth in percentage and the independent variables is quite strong and positive.

The Coefficient of Determination R-square measures the goodness-of-fit of the estimated Sample Regression Plane (SRP) in terms of the proportion of the variation in the dependent variables explained by the fitted sample regression equation. Thus, the value of R square is 0.918 simply means that about 91.8% of the variation in the real GDP Growth in percentage of the country is explained by the estimated SRP such as Population in percentage, Unemployment in percentage, FDI, Armed Robbery, Forgery, Burglary, Kidnapping, Murder, Rape and Suicide and the R square value significant at 1% level.

#### The Multiple Regression Equation for the model

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \beta_6 X_{6t} + \beta_7 X_{7t} + \beta_8 X_{8t} + \beta_9 X_{9t} + \beta_{10} X_{10t} + U_t$$

$$Y_t = -42.104 + (.383)Pop_t \text{ in } \% + (-.132)Unemp_t \text{ in } \% + (-.324)FDI_t + (-.002)Robbery_t + (.019)Forgery_t + (.002)Burglary_t + (-.025)Kidnaping_t + (-.006)Murder_t + (.019)Rape_t + (-.107)Suicide_t + U_t$$

The above regression analysis shows that except  $\beta_{1t}$ ,  $\beta_{5t}$ ,  $\beta_{6t}$  and  $\beta_{9t}$ , the remaining variables are negatively influencing the dependent variable such as real GDP Growth in percentage of the country. The variables such as population in percentage, forgery, kidnapping, rape and suicide are statistically significant at 1% and 5% level of significance. Remaining variable is statistically not influencing the real GDP Growth of the countries like Nigeria. The table concludes that population in percentage are statistically influencing the real GDP Growth of the country. When the unemployment rate is negative then the people involved in several actives such as forgery, kidnapping, rape and suicide also leads to increase the real GDP Growth of the country.

#### SUMMARY OF FINDINGS AND CONCLUSION

Most of developing countries have high records of crime because of poverty, unemployment and personal aggrandisement, the inability of the government to address most of the fundamental issues that could instigate people to commit a crime such as unemployment thereby aggravating inequality of income. There is a positive relationship between crime and unemployment, when people are unemployed they engage in crime as a means of survival. The most crime committed in Nigeria are Armed robbery, Kidnapping, Forgery, Burglary, Rape, Suicide. The findings show that when the rate of unemployment is high, the rate of crime also increases drastically since there is nothing like social security to keep the unemployed meeting their daily needs.

Lately, Kidnapping is on the alarming rate, the perpetrator sees it as a means of quick wealth because they made their victims pay a high ransom before they could be released. Unfortunately, due to the rampant corruption in Nigeria, you cannot assume every uniformed officer intends to protect and serve. Some might be looking for some easy money. There are "419 scams", involving in upfront payment or money transfer which was referred to in the section of the Nigerian Criminal Code forbidding the practice.

The total crime committed in Nigeria grown consistently from 16237 in 1988 to about 17108 in 1992, out of which the most committed crime is Burglary and Armed robbery probably because of lack of security. The rate of total crime reduced drastically in 2000 probably, because the then administration has zero tolerance for criminals, both burglary and armed robbery rate became low. It is predicted by the researcher that the total crime will reduce to 8291 and 8021 in 2016 and 2017 respectively because of the action of this present government of president Buhari and Osunbanjo against crime.

Apart from the government failure in structural adjustment that aids criminal activities, most of the criminal activities could be the indicator of loss of moral value and cultural overhauling. The research scholar was informed by my grandparent that in those days' people do buy physical items putting by the roadside with the inscription of how much the owner is willing to sell and the buyer will drop the exact amount there and parted with the good and the owner will meet the money there without it being stolen. The system is so corrupt that nobody asks questions on how people get their sudden wealth without having tangible job doing, not even the parents.

The flamboyant lifestyle of the politician and their ill behaviour is not helping the matter as most of their boys that they armed and use to win election turn out to become a criminal shortly after the election because most of the arms are not withdrawn from these hoodlums.

These are the list of findings

1. Unemployment is influencing crime. In a situation where most people who are able and willing to work could not lay their hand on any job, this may influence them to go into criminal activities.
2. Armed robbery and Kidnapping are committed in a very high magnitude in Nigeria probably it gives quick money.
3. Lack of investment also influences crime and it leads to unemployment which in turn gives birth to crime.
4. Lack of social amenities such as power which could be used for some gainful economic activities leads to crime as most of the youth are not actively engaged in economic activities and an unengaged mind is the workshop of the devil.
5. Loss of social and family value are the major causes of crime because people worship the wealthy people whose source of wealth are criminal activities such as human trafficking, kidnapping, armed robbery and so on.
6. The corruption in Nigeria has affected virtually every sector of the economy; even most uniformed officers give in at the detriment of the society.
7. The process of economic development is influenced by the total crime, the crime affects the flow of investment to Nigeria as the safety of life and property is not guaranteed.
8. Lack of proper security and monitoring makes it easy to commit and go without being punished; most of the people engaging in scams are not apprehended.



**SUGGESTIONS AND WAYS TO REDUCE CRIME**

The set of the above findings are influencing crime in Nigeria. Suggestions are enlisted below so as to reduce the rate of crime in Nigeria could be reduced to the barest minimum.

1. The government should put in place the measure which could ensure the safety of life and property so as to attract more investors to Nigeria and the more investor to Nigeria, the more jobs for the jobless people and this will help in reducing the rate of crime in Nigeria.
2. There is a need for the government to improve the depiction state of infrastructure in Nigeria, as this will strengthen the indigenous industries, and will indirectly lead to the generation of employment opportunity to the unemployed.
3. The government spending should be towards capital expenditure that could lead to more production and increase the aggregate demand.
4. The government should put in place a measure to detect the illegal transaction to Nigeria in order to bring to control scammers.
5. Education curriculum must be immediately revised to incorporate skills acquisitions exercise, Entrepreneurship Development, the teaching of moral value. An exceptional program should be designed for low-skilled youth in vocational centres. Incentives should be provided to SMEs that promote student internships.
6. Agriculture could be a source of investments for young people. There should be a swift transition from subsistence to commercialize farming. Farm and non-farm activities should be packaged in a better way in order to make them really attractive to the youth.
7. The security agents should be well-equipped with the latest technology to curb crime and they also need to be trained.

**SUMMARY AND CONCLUSION**

The illegal activities are not computed in the GDP calculation, but the money made in illegal activities influences the economy of a country in its own way. Some of the illegal activities, for example, suppose armed robbers visit a bank and check away with a large sum amount of money belonging to the depositors, directly or indirectly the money will find its way back to the economy, such money will have positive effect on one hand because the perpetrators will spend it on goods and services in such country, it will also have a negative impact on the bank and the depositors. Same way the scammer who scam a foreign citizen and then transfer the money to his own country, the fund will have positive impact on the recipient country because the money would be spent on goods and services of the recipient country of which it would aid the aggregate demand of such country, on the other hand, it would have negative impact on the country that paid the money as it would reduce their aggregate demand. Therefore, irrespective of who benefits from the act of a crime the cost of crime is always greater than the benefit. For example, a robbery carried out on a bank may affect the economy of the country on a micro level and it may make the bank insolvent. The cost of such crime is greater than what the perpetrator may stand to benefit. The scam carried out on the citizen of another country may have a negative impact on the image of a recipient country to the extent of hindering the foreign investors from coming into such country to invest their hard-earned income. So, the social cost of crime is far greater than it benefits in both short and the long run.

The rate of crime in Nigeria is soaring because the youth constitute more than half percent of the population and about 54% of the youth are unemployed. Most of these youths are engaging in criminal activities for survival. The government is not helping the matter as most of the government officials are prone to corruption and bribery. Most of the money that could have helped in the development of the country is lying in the foreign banks. The roads that government spent billion of money to construct can only last for two years because of substandard materials used in constructing the roads. There is no sincerity on the part of the government. Most of the loans taken from IMF and World Bank are diverted to irrelevant projects in order to embezzle the fund. Hence the progress of the country is stagnant due to predetermined human error. The electorate exercises their voting right only if they are given money in exchange for their vote. If all that the research mentioned above could be corrected Nigeria will resemble paradise on earth.

**REFERENCES****BOOKS**

1. Fritz.F. Heimem (1996) *Combatting International Corruption: The role of the Business Community*. Pg 147 – 161
2. Keith Panter-Brick. *Soldiers and Oil: The Political Transformation of Nigeria*, Pg70

**JOURNALS**

3. Asif Islam (2014) *Economic growth and crime against small and medium-sized enterprises in developing economies*. The World Bank.
4. Chua Huiyun et al (2015) *The relationship between corruption and economic growth in Malaysia*. University Tunku Abdul Rahman.
5. Damitu Ojog (2014) *The effect of crime on economic growth*. Erasmus University Rotterdam.
6. Eleftherios, Athina (2012) *Economic Growth and Crime: Does uncertainty matter?* The Rimini centre for economic analysis.
7. Laura Jaitman (2014) *The costs of crime and violence*. Inter. America Development Bank.
8. Oladapo Zainab (2014) *Impact of economic and financial crime commission on the economic development in Nigeria*. Turku University Applied Science.
9. Olajide Aluko (1977) *Nigeria and Britain after Gowon*, African Affairs. Vol. 76, No. 304 Jul. Pg 3
10. Olakunle F Odumosu (1999) *Social costs of property: the case of crime in Nigeria*. Michigan State University.
11. Patrick Edozor (2003) *the criminal in all of us: whose Ox have we not taken?* The University of Benin.
12. Richard Dubourg (2005) *The economic and social costs of crime against individuals and households*. Home Office Research.
13. Robert L. Tignor (1993) *Political Corruption in Nigeria before Independence*, The Journal of Modern African Studies Vol. 31, No. 2 Pg 7
14. Russell Smyth (2011) *Cost of crime in Victoria*. Monash University.
15. Stergios Skaperdas (2009) *The cost of violence*, The World Bank.
16. Surender Kumar (2013) *Crime and economic growth: Evidence from India*. The University of Delhi.
17. Sylvia Walby (2004) *The cost of domestic violence*. National Statistics.
18. Themba Gilbert (2000) *Impact of crime on socioeconomic development at Somopho*. The University of Zululand.
19. Viridiana Rios (2016) *The impact of crime and violence on economic sector diversity*. The Wilson centre.

**REPORTS**

20. *Abiodun (12 June 2015)*. "N1.9bn Ebola fund scam: Ministry staff stop arrest of officials" BBC NEWS (2012) Nigerians living in poverty.
21. *British banks linked to import swindles*", The Globe and Mail (Canada), December 3, 1985
22. *Chima, Obinna (4 December 2014)*. "Nigeria Records Improvement, Ranked 39th on Corruption Index". *This Day Live*. Archived from the original on 8 February 2015.
23. Chinua Achebe (1960) *No Longer at Ease* New York.
24. Chinua Achebe, *A Man of the People*, New York, 1966
25. David Pallister, "Comment & Analysis: Pennies from heaven: Many of Nigeria's missing millions were laundered through greedy banks in London", The Guardian (London), September 7, 2000
26. Gloria Okon, *The Story of Nigeria's Most Mysterious Drug Pusher*". 6 August 2015.
27. Hector Igbikiowubo, "TSKJ Saga: Swiss Govt Freezes \$ 100m Accounts", Vanguard, Nigeria, December 6, 2004
28. *Jonah, Kindness Innocent*. "Oil Bloc In Nigeria: Obasanjo, Ibb, Atiku Abubakar, T.Y. Danjuma, David Mark, Dangote And Adenuga Are Syndicates Of Corruption."
29. Leon Dash (1983) *Mysterious Fires Plague Nigerian Investigations*, The Washington Post, February 27.
30. *Rice Shortage In Nigeria Brings Charges Of Corruption*", The New York Times, January 18, 1981
31. The World Bank (2017) *crime, violence, and development: Trends, Cost, and Policy Opinions in Caribbean Report No: 37820*.
32. The World Bank (2017) *Nigeria faces of Fragile economic recovery in 2017*

33. Turner (1976) The Nigerian Cement Racket, Africa Guide, Pg 6
34. United Nations (2017) Genocide prevention and responsibility to protect, New York.
35. United Nations Office on Drug and Crime (2010) Crime and instability case studies of transactional threats.

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