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## A Comparative Study on the Growth of Information Technology Sector in All States of India for Last Ten Years.

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### ABSTRACT

A study summarizes a larger work about Information Technology, providing a concise overview of the research or project. The aim of the study is to To know the overall concept of Information Technology, to study the I.T. exports STPI registered unit for last ten years and STP wise software issued for last five years, To know the last ten years revenue collected from I.T. sector and to study the Fund received and how much utilized by each and every states of India. Applicable information has been collected from various research papers, journals and magazines of national publications and various websites from NASSCOM and GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY. The data has been presented in the form of a table, graphs, bar and interpretation has been made in light of the objectives of the study cited above. So we can say that all above states had increased by huge percentage except Bihar which record is gone in negative (93.04) and the most lowest sates is Sikkim i.e., 7.29. Total revenue had been increased by 139.8% and export revenue had been increased by 124%. No negative data or information got till now. We may conclude that in future I.T. sector will increase and it will be grab all markets share by adopting several software.

**KEYWORDS:-** I.T., STPI, NASSCOM, Govt. of India, Revenue, Software, Fund, Websites, etc.

### INTRODUCTION

Information Technology (IT) encompasses the use of computer systems, software, networks, and other technologies to manage, process, store, and exchange information. It's a broad field with applications across various sectors, from business and finance to healthcare and entertainment. IT professionals work with hardware, software, and data to solve problems and improve efficiency. (Google.co.in)

"IT" redirects here. For the customer service colloquially referred to as "IT", see [Tech support](#). For other uses, see [It \(disambiguation\)](#). "InfoTech" redirects here and is not to be confused with [InfoTech Enterprises](#). For the political group, see [Information Technology \(constituency\)](#).

Information technology (IT) is a set of related fields within [information and communications technology](#) (ICT), that encompass computer systems, [software](#), [programming languages](#), [data](#) and information processing, and storage. Information technology is an application of [computer science](#) and engineering. The term is commonly used as a [synonym](#) for computers and [computer networks](#), but it also encompasses other information distribution technologies such as [television](#) and [telephones](#). Several products or services within an economy are associated with information technology, including [computer hardware](#), [software](#), electronics, semiconductors, [internet](#), [telecom equipment](#), and [e-commerce](#). An information technology system (IT system) is generally an [information system](#), a [communications system](#), or, more specifically speaking, a [computer system](#) — including all [hardware](#), [software](#), and [peripheral](#) equipment — operated by a limited group of IT users, and an IT project usually refers to the commissioning and implementation of an IT system IT systems play a vital role in facilitating efficient data management, enhancing communication networks, and supporting organizational processes across various industries. Successful IT projects require meticulous planning and ongoing maintenance to ensure optimal functionality and alignment with organizational objectives. Although humans have been storing, retrieving, manipulating, analyzing and communicating information since the earliest writing systems were developed,<sup>[5]</sup> the term information technology in its modern sense first appeared in a 1958 article published in the [Harvard Business Review](#); authors [Harold J. Leavitt](#) and Thomas L. Whisler commented that "the new technology does not yet have a single established name. We shall call it information technology (IT)." Their definition consists of three categories: techniques for processing, the application of [statistical](#) and mathematical methods to [decision-making](#), and the simulation of higher-order thinking through computer programs. (Wikipedia)

Advancing the state-of-the-art in IT in such applications as cyber security and biometrics, NIST accelerates the development and deployment of systems that are reliable, usable, interoperable, and secure; advances measurement science through innovations in mathematics, statistics, and computer science; and conducts research to develop the measurements and standards infrastructure for emerging information technologies and applications.

**INFORMATION TECHNOLOGY INTRODUCTION:** Information technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data or information. IT is typically used within the context of business operations as opposed to personal or entertainment technologies. IT is considered to be a subset of information and communications technology (ICT). Information System An information system is a set of interrelated components that collect, manipulate, store data and disseminate information and provide a feedback mechanism to monitor performance. An Information system (IS) is a formal, sociotechnical, organizational system designed to collect, process, store, and distribute information. In a sociotechnical perspective, information systems are composed by four components: task, people, structure (or roles), and technology. Computer and System A computer system is a set of integrated devices that input, output, process, and store data and information. Computer systems are currently built around at least one digital processing device. There are five main hardware components in a computer system: Input, Processing, Storage, and Output and Communication devices. Software and Data Software. Software is a set of instructions, data or programs used to operate computers and execute specific tasks. Opposite of hardware, which describes the physical aspects of a computer, software is a generic term used to refer to applications, scripts and programs that run on a device. Data Data is a set of values of subjects with respect to qualitative or quantitative variables. Data is raw, unorganized facts that need to be processed. When data is processed, organized, structured or presented in a given context so as to make it useful, it is called information. **IT IN BUSINESS & INDUSTRY** Information technology fosters innovation in business. Innovation results in smarter apps, improved data storage, faster processing, and wider information distribution. Innovation makes businesses run more efficiently. And innovation increases value, enhances quality, and boosts productivity. IT in banking Information technology in banking sector refers to the use of sophisticated information and communication technologies together with computer science to enable banks to offer better services to its customers in a secure, reliable and affordable manner and sustain competitive advantage over other banks. Banking without computers can't be imagined. A lot of work is done in the computers from transactions to maintaining records. Recurring deposits (e-RD), fixed deposits (e-FD), money transfer from one account to another (NEFT, RTGS), online transactions are done using the Internet. IT in insurance Insurance companies use a computer to store data of their clients. It manages their data and gives them timely notifications for their premium. It allows the user to get a good knowledge over their policy. IT in marketing the computer is very much needed in marketing. The computer is used to create sell advertisements. It is used to monitor the performance of the product in the market. Different illustrations can be made to present the product in an effective and decorative way. □ Advertising - With computers, advertising professionals create art and graphics, write and revise copy, and print and disseminate ads with the goal of selling more products. □ Home Shopping - Home shopping has been made possible through use of computerized catalogues that provide access to product information and permit direct entry of orders to be filled by the customers. IT in BPO services Business Process Outsourcing (BPO) services mean those business operations which are performed by an outside service provider. In other words, you can say that some industries take help from other service providers to facilitate their work. They hire some outsourcing companies for that work and those outsourcing companies is called BPO (Business Process Outsourcing). (Swami Keshwananda Rajasthan University, Bikaner Sem-2 EECM)

### **Rise of the I.T. Industry in India**

#### **Evolution of I.T. Sector in India**

The evolution of the IT sector can be studied in 4 states as follows.

**Stage 1 Prior to 1980:** In the first stage of evolution, Indian IT sector was basically started with hardware products and software industry did literally not exist in India until 1960. Government protected the hardware sector through high tariff barriers and licensing. In the west, there was a greater demand for software development because the inbuilt software with the systems was insufficient to perform all the operations accurately. So, to earn more foreign exchange, the Indian Government found out the potential of software sector. In 1972, the government formulated a new software export scheme, in which it was decided to import hardware and export software. TCS Ltd. became the first company to accept such scheme. In 1974, the software export was started in India.

**Stage 2 1980 to 1990:** During this stage, in spite of government initiatives, the software exports could not be reached at the expected level because of two reasons. First, the export of software was dependent on the imports of hardware and the procedural aspects were too cumbersome. Second, there were no proper infrastructural facilities for software development. In order to encourage more participants in this sector, it was mandatory to reduce import duty and to simplify import and export procedure. To overcome the above problem, a new software policy was formulated. According to this policy, the import procedure was simplified and the import duty for import on hardware for software developers was reduced. In 1986, the government took some healthy corrective steps to develop IT sector. As a result, Indian Government software policy and liberalized the IT sector. According to this policy, the imports of hardware were de-licensed and were also made duty free for exporters. This policy has reduced a number of entry barriers making the growth in this sector inevitable.

**Stage 3 1990 to 2000:** This period has witnessed intensified competition in the IT sector. During this stage, there were some significant changes in Indian economy, including trade liberalization, relaxation in the entry barriers, opening up of Indian economy for foreign investments and devaluation of rupee. Due to the liberalization, a flow of foreign investments was come in India and MNCs in India were introduced. "Offshore Model", "Onsite Model" and "Global Delivery Model (GDM)" were also introduced as part of their distinguished services.

**Stage 4 Post 2000:** The global problems like Y2K, the dotcom crash and the recession in the US economy has forced many US firms to utilize the services of the Indian firms. This has resulted in placing the Indian IT industry on the global map. Post 2002-2003, the industry had registered a robust growth rate. During this stage, there was an increase in the Indian client base, large sized contracted and a strong global delivery model. (IT sector in India

– Evolution, Growth and a Tool of Economic Development IDRISH ALLAD Research Scholar, Rai University, Saroda, Ahmedabad. DR. MAHENDRA H. MAISURIA Research Supervisor, Rai University, Saroda, Ahmed Vol. 4, Issue 2, And Feb.-March: 2015 (IJRMP) ISSN: 2320-0901 NASSCOM)

### Future Threats

Threat of new emerging service economies.

Emergence of China as substitute.

Poor Infrastructure.

Concentrated market and Anti-outsourcing Exchange rate.

Note: GDP figures are at market prices. According to NASSCOM, India can reach \$ 130 Billion in IT revenue by 2015, with CAGR of 14%. With this, it would be contributing to 7% of annual GDP and creating 14.3 million employment opportunities. (IT sector in India – Evolution, Growth and a Tool of Economic Development IDRISH ALLAD Research Scholar, Rai University, Saroda, Ahmedabad. DR. MAHENDRA H. MAISURIA Research Supervisor, Rai University, Saroda, Ahmed Vol. 4, Issue 2<sup>nd</sup> Feb.-March: 2015 (IJRMP) ISSN: 2320-0901 NASSCOM)

### IT a Tool of Economic Development

The IT has potential to raise the long-term growth prospects through increased productivity in almost every sector of the economy. The information technology can play a major role in overall economic development of the country. India has a comparative advantage in the global IT sector at least in terms of cost. With large pool of workers having software and language skills, it is in a position to move toward producing higher value-added goods and services. In fact, it has just started to move towards higher value added goods and services. IT service companies have included new service lines such as package software implementation, system integration, R&D engineering and remote network management whereas, ITES-BPO companies have started offering more complex services such as financial research and analytics, actuarial modelling and corporate and business research. The availability of large number of workers with a combination of engineering and managerial skills will definitely be helpful to move towards higher value-added goods and services. There are strong complementarities between IT and rest of the economy. IT can enhance the productivity and efficiency in other industries. It can improve efficiency in areas such as accounting, procurement, inventory management, and production and operations management. Moreover, IT implementation may increase the productivity and/or quality more than that is feasible otherwise. The use of IT in rural banking and micro-finance may enhance efficiency in informal sector and can impact broader cross-section of population. Information access to farmers could benefit agriculture sector as well. Farmers can receive weather forecasts, market price quotes, advice on farming practice, offers to buy and sell livestock, and specific trainings. Even basic education could be enhanced in rural areas by the use of IT. The IT sector is one of the largest employers of women, and therefore, can play a crucial role in women empowerment and the reduction of gender inequalities. The sector provides flexibility to its employee of operating from home and in working time, which enables women to carry on with jobs with family life. From the analysis, it is clear that the IT has potential of not only accelerating the growth in the Indian economy but also promoting the broad-based economic development. (IT sector in India – Evolution, Growth and a Tool of Economic Development IDRISH ALLAD Research Scholar, Rai University, Saroda, Ahmedabad. DR. MAHENDRA H. MAISURIA Research Supervisor, Rai University, Saroda, Ahmed Vol. 4, Issue 2, and Feb.-March: 2015 (IJRMP) ISSN: 2320-090 NASSCOM)

The presence of a nascent IT industry could be found during the early years of post-independence India, although it remained an insignificant sector for long. As may be surmised from Figure 1 that even by the early 1990s the sector had achieved little to underscore its contribution to the national industrialisation process. This was despite the fact that the state had made immense efforts to build and nurture a knowledge infrastructure, which enabled the IT industry to prosper post the 1990s. This exemplary role played by the state early on must not be undermined. Nevertheless, it has been argued that in keeping with the growing pace of Trans nationalisation of business and trade the state had played a proactive role from the mid-1980s to the mid-1990s (Evans 1995; Heeks 1996; and Joseph 1997). A particular mention may be made of the strong emphasis placed on the discipline of electronics and telecommunications which picked up rapidly from 1980 onwards, leading to an increase in the number of seats in the discipline in public engineering and technical education/training institutions. Moreover, with the economic reforms formally in place by the early 1990s, India's position as the preferred business process outsourcing (BPO) and knowledge process outsourcing (KPO) destination in the world had been established. India entered the global IT market by capitalising on the demand for low-cost but high-quality programming skills (Parthasarathy 2004a). The establishment of a series of software technology parks (STPs) across several cities in India during the 1990s (and beyond) was an exemplary initiative of the state, akin to affirmative action, in promoting an industry. Besides a favourable domestic policy climate and highly attractive export promotion schemes, a host of external factors were crucial for the growth of the software industry (Sharma 2015). Several state-promoted technical and other professional institutes of higher learning contributed to the massive rise in the number of IT/ITES trained graduates and professionals by introducing various relevant courses in their curricula. The import-export policy of 1983–84 and subsequent foreign trade policies of 2004–09 and 2009–14 laid a clear emphasis on the promotion of exports from the IT sector. Also, the foreign direct investment (FDI) policies adopted in the early 1990s and encouragement offered to IT companies to set up operations in special economic zones (SEZs) indirectly incentivised the IT industry. The deregulation of the telecom sector gave a big boost to the IT revolution in India. Moreover, labour reforms introduced during the post-liberalisation period facilitated easy hiring and firing, thereby benefiting the firm's owners in the sector. Figure 1 depicts the impressive performance of the sector in terms of the exports from the Indian IT/ITES sector since the turn of the millennium. This remarkable transformation of the sector is attributable in a large measure to the Indian IT sector's matchless solution to the unprecedented global IT crisis, best known as the "Y2K problem" or the "Millennium bug."<sup>2</sup> It is widely acknowledged that the Indian IT business grew manifold on the basis of the competence displayed in solving this crisis, and subsequently prominent multinational companies (MNCs) started outsourcing financial, legal, logistics, retail, and health services in large volumes to the Indian IT sector. In a sense, the Indian strategy and experience with software

services is not very different from that of Taiwan or South Korea in manufacturing (Parthasarathy 2004a). However, the global financial crisis that precipitated in 2007–08 had an adverse impact on the Indian IT industry's prospects; the major MNCs, particularly from the United States (US) and United Kingdom (UK), scaled down their orders. This was in addition to the fact that the US government, as a matter of policy, was not keen that large-scale BPO assignments be awarded to the Indian IT firms. Despite these external challenges, the Indian IT services have performed impressively even during the recent years. For instance, in 2015 alone, the IT and BPO/business process management (BPM) business had generated a revenue worth \$148 billion (amounting to 8.1% of the GDP), and its exports had amounted to approximately \$98 billion. The Indian IT companies have set up over 600 delivery centres across 78 countries, thus maintaining their leadership position in the global sourcing arena.<sup>3</sup> Notwithstanding the moving up of India in the value chain over the last one and a half decades, the Indian IT sector is still viewed by major MNCs from the industrialised nations as a destination where cheap labour is available. This is because a significant portion of Indian outsourcing industry still comprises low-end IT services.

## Literature Review:

1. AN OVERVIEW OF GROWTH OF I.T. SECTOR IN INDIA Darsana MHSST, Govt. Higher Secondary School, Anchali mmoodu. Abstract: The last two decades show enormous development in IT sector and it ensures an upward trend since the 1990's. The highly talented human resources with excellent infrastructure facilities, the IT sector achieved significant growth in major parts of the country. IT industries contribute a very large percentage to the economy and agriculture occupies the position of predominant player and main employer of the nation. In new millennium this industry is the country's significant growth engine by achieving significant milestones in revenue growth, employment generation and foreign exchange earnings.

2. Factors affecting Information & Communication Technology (ICT) adoption among

By panel Shailendra Kumar <sup>a</sup>, Utkarsh Goel <sup>a</sup>, Parikshit Joshi <sup>b</sup>, Amar Johri

The purpose of this study is to determine the factors influencing the Information & Communication Technology (ICT) adoption by the managers or owners of Micro, Small, and Medium Enterprises (MSME) operating in India. Based on two established theories of technology adoption - Technology acceptance model and Unified Theory of Acceptance and Use of Technology - the factors influencing ICT adoption behaviour were hypothesized. The adequate sample was selected through the combination of random, judgmental and snowball sampling. Using structural equation modelling approach, the proposed model was tested. Findings reflect that perceived usefulness and social influence emerged as the dominating factors influencing ICT adoption decision. The study has also highlighted the barriers encountered by MSMEs in adopting ICT. The obtained barriers were categorized into three categories: resource/infrastructure, human resource, and technological environment. Government, MSME owners and ICT Industry can benefit from the findings of this study.

3. CONTRIBUTION OF INFORMATION TECHNOLOGY IN GROWTH OF INDIAN ECONOMY

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India being a highly connected and digital ready economy remains a high potential market worldwide offering multiple opportunities. India presents a large and burgeoning end user market being world's second largest population in world. India is all set to leapfrog into the digital world with 937 million mobile subscribers, 278 million internet users, an USD 14 billion e-Commerce market. Indian IT industry has grown many manifold since 1980s. The industry has contributed considerably to the economy in terms of GDP, employments and foreign exchange earnings. IT industry is also responsible for increasing the competence and productivity of almost all sectors of the economy like services at banks, post offices, railways, airports etc. e-governance has increased the efficiency of government offices. In this paper we have analyzed different ways in which IT industry has contributed to India's growth.

4. Role of ICT Technology in Modern Education for Growth of Indian Economy Sandeep Lopez Regional Institute of Education Mysuru Dr. Prashant Mishra

Pramod Ram Ujagar Tiwari Saket Institute of Management (PRUTSIM) Because of advancements in information and communication technology (ICT), higher education in India has accelerated. The ICT is the primary driver behind the efficient delivery of value education in higher education. ICT advancements have been taken into account in higher education frameworks around the world for the past twenty years. In this cutting edge worldwide culture, the demand for smart and skilled workforce is growing steadily. Information and communication technology (ICT) is currently changing how higher education is organized in all nations. The study anticipates that India would pick the viability of ICT in sustaining the system of high level training structure in this nation. Accessibility, use, information, and cost are the four aspects that have been adequately identified from various supplementary sources. The exploration is seeking to analyze the impact of ICT by looking into these four elements. The models from various colleges and schools have been collected using the accommodation testing technique. To put the theory to the test and determine the result Different relapse analysis and exploratory variable analysis have been used. The study's findings demonstrate that one of the factors most influencing ICT feasibility is cost.

5. Technological Efforts, Firm Ownership and Productivity: A Study of Information Technology Service Firms in India of Information Technology Service Firms in India Asmita Goswami K. Narayanan The article presents differences in firm-level total factor productivity in the information technology (IT) service firms in India over the period 2000-2016. It is an attempt to study whether technological efforts contribute to productivity differences in the firms in conjunction with several other firm specific characteristics. Controlling for endogeneity in inputs, the estimation of productivity through semi-parametric techniques indicates considerable heterogeneity in productivity across firm types. Technological efforts of firms have a significant impact on the productivity of IT firms. Both embodied technology imports and in-house R&D contribute to higher productivity. While the Indian firms are observed to be more productive compared to their foreign counterparts, the technological efforts also differ due to ownership factors and that contributes to changes in productivity.
6. The Evolution and Growth of IT Sector in India Rahul Chattopadhyay GlobSyn Business School, Kolkata, National Campus. Abstract: The paper explains the rise and growth of India's IT industry. In general, information technology covers all aspects of managing and processing information. The last decade of 20th century has witnessed information technology to have revolutionary effect on the lives of people. In the last two decades there is 20 times increase in export revenues for the IT industry, employing over two million people. Today the whole IT industry is playing a major role in the growth of Indian economy. The paper shows how to analyse the growth and performance of information technology industry in India. Various aspects of information technology industry like composition, revenue, exports, wealth creation, size and share, localization etc. are studied.
7. Indian Information Technology Industry: Past, Present and Future & a Tool for National Development Somesh K. Mathur<sup>1</sup> Abstract India's software and services exports have been rising rapidly. The annual growth rate ranges between 20 -22% in IT services and nearly 55 % in IT-enabled services (ITES), such as call centres, Business Process Outsourcing (BPO) and other administrative support operations. Together they are predicted to grow at 25% pa till 2010. The IT industry is highly export oriented and the exporters are predominantly Indian. The Indian BPOs (ITES) are moving up the value chain, handling high end data for airline information, insurance, banking sector and mortgage companies, enterprise resource planning, among others. Some of the companies have already moved into significantly higher value added segments such as mission-critical applications, development and support, product design, HR Management, knowledge process outsourcing for pharmaceutical companies and large complex projects.
8. CONTRIBUTION OF INFORMATION TECHNOLOGY AND GROWTH OF INDIAN ECONOMY Mohit Dubey Director, CRC, IFTM University, Moradabad Aarti Garg Assistant Professor, SBM, IFTM University, Moradabad. Information technology is an important emerging sector of the Indian economy. The Government of India has identified IT industry as one of the major industries in India and it plays an important role in achieving the policy objectives like economic development. The IT industry has mellowed over the years and has emerged to be a chief contributor to the global economic growth. The IT sector, constituted by the software and services, Information Technology Enabled Services (ITES) and the hardware segments, has been on a gradual growth trajectory with a steady rise in revenues as witnessed in the past few years. The size of this sector has increased at a rate of 35% per year during the last 10 years. The share of information technology industry is 7 percent of gross domestic product (GDP) in Indian economy according to NASSCOM ([www.imdr.edu](http://www.imdr.edu); [www.nasscom.org](http://www.nasscom.org)). The prime aim of this paper is to analyse the growth and performance of information technology industry in India.
9. Indian IT industry: a performance analysis and a model for possible adoption Mathur, Somesh Kumar RIS. INDIAN IT INDUSTRY: A PERFORMANCE ANALYSIS AND A MODEL FOR POSSIBLE ADOPTION SOMESH K MATHUR<sup>1</sup> Synopsis India's software and services exports have been rising rapidly. The annual growth rate ranges between 20 -22% in IT services and nearly 55 % in IT-enabled services (ITES), such as call centres, Business Process Outsourcing (BPO) and other administrative support operations. Together they are predicted to grow at 25% pa till 2010. The IT industry is highly export oriented and the exporters are predominantly Indian. The Indian BPOs (ITES) are moving up the value chain, handling high end data for airline information, insurance, banking sector and mortgage companies, enterprise resource planning, among others. Some of the companies have already moved into significantly higher value added segments such as mission-critical applications, development and support, product design, HR Management, knowledge process outsourcing for pharmaceutical companies and large complex projects.
10. A STUDY OF IMPACT OF INFORMATION TECHNOLOGY IN INDIAN BANKING INDUSTRY Ibha Rani Research Scholar, VTU Bangalore, India Email: [ibharani2006@gmail.com](mailto:ibharani2006@gmail.com). Indian banking industry is in midst of IT revolution. Banking industry is backbone of Indian financial system and it is afflicted by many challenging forces. One such force is revolution of information technology. In this Globalized era, technology support is very important for the successful functioning of the banking sector. This research paper focuses on the impact of technology in Indian banking sector. Without information technology and communication we cannot think about the success of banking industry, it has enlarged the role of banking sector in Indian economy. Information technology refers to the acquisition, processing, storage and communication of all types of information by using computer technology and telecommunication system. Information technology is an integrated framework for acquiring and evolving of IT to achieve certain strategic goal.

**The main factors of information technology (IT)** can be broadly categorized into technological, organizational, and human factors. These factors interact to influence the adoption, implementation, and success of IT systems within organizations and society.

#### 1. Technological Factors:

**Hardware:** This includes computers, servers, networking equipment, storage devices, and other physical components that form the infrastructure for IT systems.

**Software:** This encompasses operating systems, applications, databases, and other programs that enable users to interact with and utilize the hardware.

**Networks:** Wired and wireless technologies that facilitate communication and data transfer between different devices and systems.

**Data:** The raw facts, figures, and information that are processed, stored, and transmitted by IT systems.

**Emerging Technologies:** Artificial intelligence, machine learning, block chain, cloud computing, and the Internet of Things are transforming the landscape of IT.

**Integration:** The ability of new technologies to seamlessly integrate with existing IT systems is crucial for smooth adoption.

**Security:** Protecting data and systems from unauthorized access, cyber threats, and other security breaches is a critical aspect of IT infrastructure.

**Scalability:** The ability of IT systems to handle increasing amounts of data, users, and transactions is essential for long-term success.

**Innovation:** On-going research and development in IT are crucial for driving advancements and improvements in technology.

## 2. Organizational Factors:

**Top Management Support:** Commitment and support from senior management are essential for successful IT implementation and adoption.

**Organizational Culture:** A culture that embraces change, innovation, and collaboration can foster the effective use of IT.

**IT Governance:** Establishing clear policies and procedures for managing IT resources and ensuring alignment with business objectives.

**IT Strategy:** A well-defined IT strategy that aligns with the overall business strategy is crucial for guiding IT investments and initiatives.

**Resource Allocation:** Ensuring adequate resources, including funding, personnel, and infrastructure, to support IT projects and operations.

**Change Management:** Effectively managing the organizational changes associated with IT implementation is crucial for minimizing resistance and maximizing adoption.

**Training and Support:** Providing adequate training and on-going support to users is essential for enabling them to effectively utilize new technologies.

**Integration with Business Processes:** Aligning IT systems with core business processes are crucial for improving efficiency and achieving business objectives.

## 3. Human Factors:

**User Competency:** Users' ability to effectively utilize IT systems and applications is a key factor in their success.

**User Acceptance:** Users' willingness to adopt and use new technologies is influenced by factors such as perceived usefulness, ease of use, and social influence.

**Collaboration:** Effective collaboration between users, IT professionals, and other stakeholders is essential for successful IT projects and operations.

**Communication:** Clear and open communication channels are crucial for keeping users informed about IT initiatives and addressing their concerns.

**Individual Differences:** Factors such as age, experience, and prior knowledge can influence individuals' adoption and use of IT.

**Task/Technology Fit:** The extent to which the technology meets the needs and requirements of the users and the tasks they perform.

**Social and Cultural Factors:** The social and cultural context in which IT is used can influence its adoption and impact.

**User Satisfaction:** The level of satisfaction users experience with IT systems can impact their willingness to use them.

### Objective:

1. To know the overall concept of Information Technology.
2. To study the I.T. exports STPI registered unit for last ten years and STP wise software issued for last five years.
3. To know the last ten years revenue collected from I.T. sector.
4. To study the Fund received and how much utilized by each and every states of India.

### Research Methodology:

This study is descriptive in character and is supported by secondary sources of information. Applicable information has been collected from various research papers, journals and magazines of national publications and various websites from NASSCOM and GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY. The data has been presented in the form of a table, graphs, bar and interpretation has been made in light of the objectives of the study cited above.

## Annexure

## State-wise IT exports reported by STPI registered units since 2014

(Rs. in crore)

Name of State/UT	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Andhra Pradesh	379.54	477.93	526.69	702.29	730.64	846.77	883.02	926.12	1,089.31	2,850.23
Assam	1.35	0.18	10.5	21.09	20.06	22.27	20.66	23.63	30.02	42.51
Bihar	10.63	7.25	4.65	0.03	0.03	0	o	1.56	3.08	0.74
Chandigarh	519.89	700.79	758.82	668.27	490.81	573.49	771.41	906.93	1,205.72	1,417.64
Chhatisgarh	18.63	23.29	36.79	36.75	63.03	86.77	124.91	111.59	73.55	81.28
Delhi	2,217.85	1,442.30	1,483.55	1,662.82	2,363.45	1,861.34	2,130.00	6,373.15	8,071.94	8,348.57
Goa	94.59	117.17	85.13	82.79	79.66	136.21	139.1	156.74	216.65	259.45
Gujarat	1,917.76	2,224.55	2,363.54	2,681.14	3,101.06	3,570.80	4,016.21	5,001.04	6,880.26	8,703.20
Haryana	17,857.69	19,265.44	20,873.79	22,182.85	24,220.32	25,478.77	24,140.46	32,338.99	46,871.42	53,172.07
Himachal Pradesh	8.35	5.16	6.97	7.58	5.82	5.13	3.66	4.68	13.38	12.03
Jammu & Kashmir	2.45	3.35	3.38	3.92	5.3	6.24	6.81	32.85	37.62	41.93
Jharkhand	7	49.16	2	6.64	11.57	14.24	29.57	42.65	46.13	53.14
Karnataka	1,09,797.67	1,25,418.53	1,41,846.13	1,52,280.16	1,69,699.08	1,94,473.38	2,12,085.00	2,58,240.14	3,55,169.17	4,09,095.04
Kerala	2,867.77	3,008.91	3,534.49	3,296.56	3,901.88	3,620.47	3,825.74	4,311.43	5,702.46	6,303.40
Madhya Pradesh	343.38	355	516.18	613.82	786.95	756.72	886.49	1,078.80	1,871.65	1,960.34
Maharashtra	61,314.29	64,063.59	69,010.02	74,580.15	85,595.37	91,513.90	1,01,581.40	1,25,684.47	1,65,701.52	1,83,847.52
Meghalaya	4.21	6.31	7.7	8.62	14.74	15	23.25	34.57	82.51	123.78
Odisha	1,940.00	2,179.72	2,493.35	2,503.88	2,510.40	2,496.33	2,401.32	2,539.43	3,010.79	3,302.87
Puducherry	153.26	182.55	239.21	253.01	252.7	341.77	294.73	292.89	323.75	301.88
Punjab	336.34	324.83	369.93	420.54	588.76	558.83	813.28	1,118.17	2,180.70	2,570.34
Rajasthan	712.27	803.97	997.32	989.22	1,255.85	1,211.87	1,498.50	1,610.58	2,695.47	3,217.82
Sikkim	0	0	38.29	19.2	22.31	19.43	18.19	11.39	8.24	7.29
Tamil Nadu	33,275.73	33,905.30	34,562.89	36,848.70	40,457.08	46,704.16	48,353.19	57,687.20	73,968.96	80,677.43
Telangana	39,185.84	41,480.47	46,428.90	50,795.82	57,527.45	64,525.90	71,574.19	89,846.67	1,19,886.47	1,21,116.62
Uttar Pradesh	13,740.34	16,450.68	17,237.36	18,508.46	20,098.88	22,118.66	25,642.29	31,312.63	40,293.24	42,416.13
Uttarakhand	74.67	82.57	89.88	130.42	150.1	137.85	165.95	191.35	213.49	241.11
West Bengal.	7,015.00	6,990.00	7,152.01	6,683.00	7,150.00	7,180.13	7,391.05	8,450.00	12,750.72	13,148.30
Total	2,93,796.50	3,19,569.00	3,50,679.47	3,75,987.73	4,21,103.30	4,68,276.43	5,08,820.38	6,28,329.65	8,48,398.22	9,43,312.66

\*Figures from NASSCOM

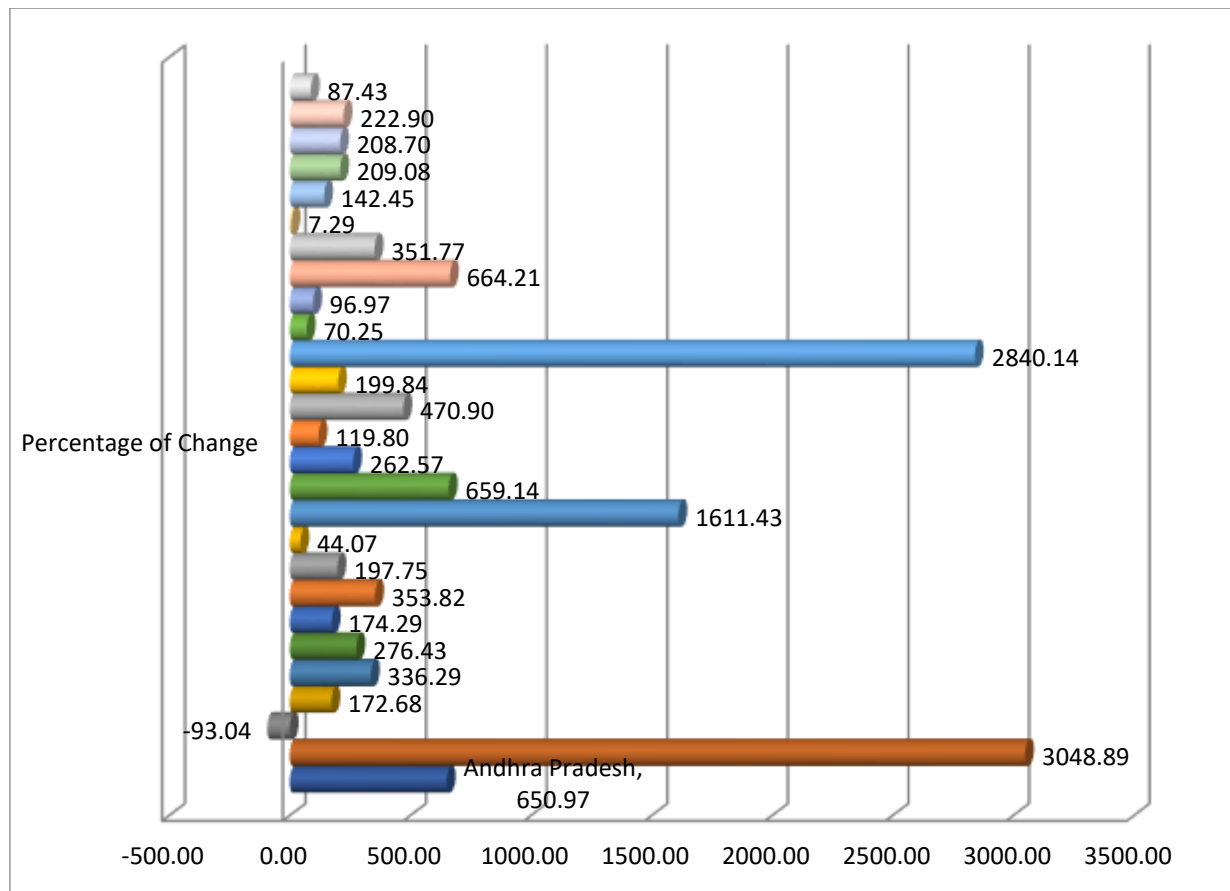
As per record we find from the State-wise IT exports reported by STPI registered units since 2014 to 2024.

We calculate the most number of I.T. registered unit increase or Decrease.

Name of State/UT	2014-15	2023-24	Difference	% of Change
Andhra Pradesh	379.54	2,850.23	2,470.69	650.97
Assam	1.35	42.51	41.16	3048.89
Bihar	10.63	0.74	-9.89	-93.04
Chandigarh	519.89	1,417.64	897.75	172.68
Chhatisgarh	18.63	81.28	62.65	336.29
Delhi	2,217.85	8,348.57	6,130.72	276.43
Goa	94.59	259.45	164.86	174.29
Gujarat	1,917.76	8,703.20	6,785.44	353.82
Haryana	17,857.69	53,172.07	35,314.38	197.75
Himachal Pradesh	8.35	12.03	3.68	44.07
Jammu & Kashmir	2.45	41.93	39.48	1611.43
Jharkhand	7	53.14	46.14	659.14
Karnataka	1,09,797.67	4,09,095.04	2,88,297.37	262.57
Kerala	2,867.77	6,303.40	3,435.63	119.80
Madhya Pradesh	343.38	1,960.34	1,616.96	470.90
Maharashtra	61,314.29	1,83,847.52	1,22,533.23	199.84
Meghalaya	4.21	123.78	119.57	2840.14
Odisha	1,940.00	3,302.87	1,362.87	70.25
Puducherry	153.26	301.88	148.62	96.97
Punjab	336.34	2,570.34	2,234.00	664.21
Rajasthan	712.27	3,217.82	2,505.55	351.77
Sikkim	-	7.29	7.29	7.29
Tamil Nadu	33,275.73	80,677.43	47,401.70	142.45
Telangana	39,185.84	1,21,116.62	81,930.78	209.08
Uttar Pradesh	13,740.34	42,416.13	28,675.79	208.70
Uttarakhand	74.67	241.11	166.44	222.90
West Bengal.	7,015.00	13,148.30	6,133.30	87.43
<b>Total</b>	<b>2,93,796.50</b>	<b>9,43,312.66</b>	<b>6,49,516.16</b>	<b>221.07</b>



Figure no. 01

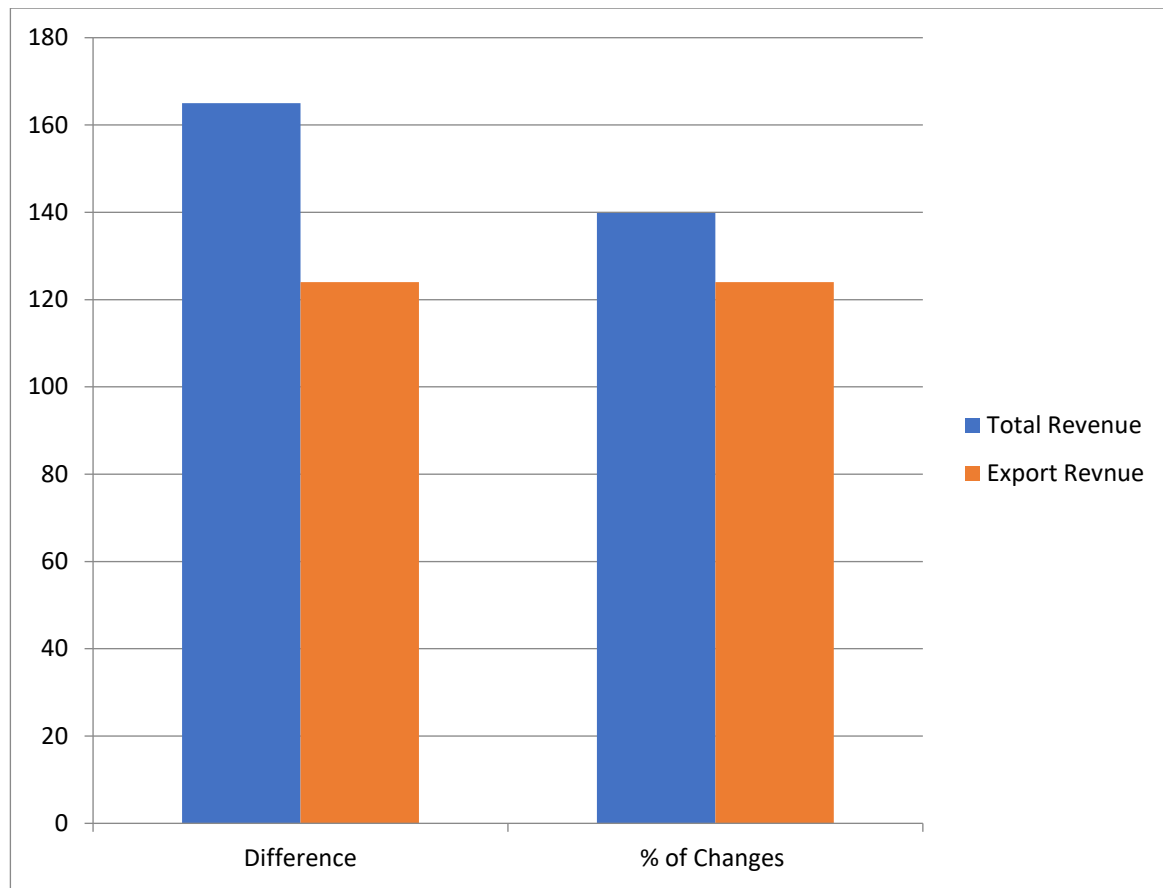


As per the above table shown the differences as well as how much percentage had been increased or decreased in each and every states of India for creating or establishing new I.T. unit.. So we can say that all above states had increased by huge percentage except Bihar which record is gone in negative (93.04) and the most lowest states is Sikkim i.e., 7.29.

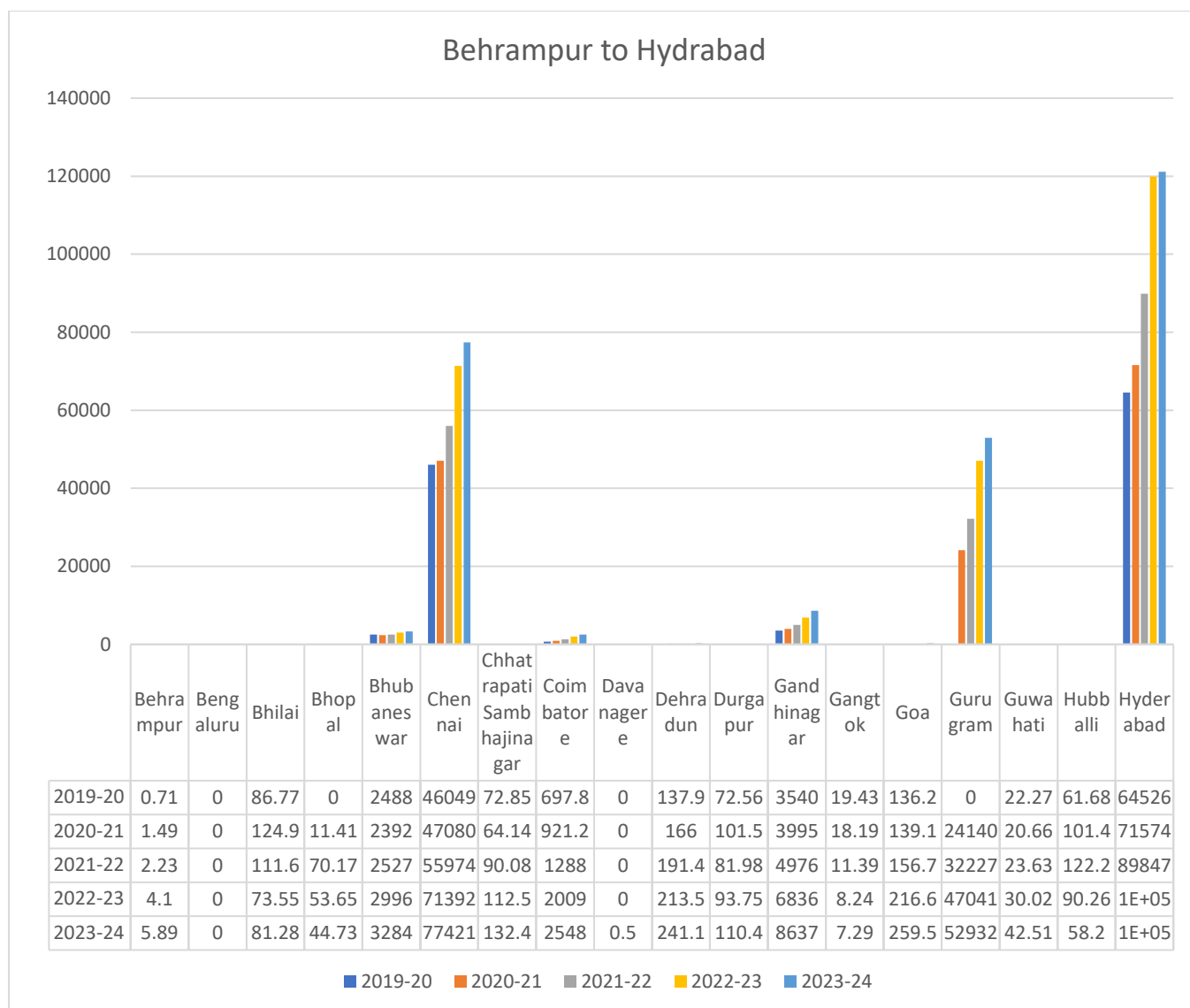
Financial Year	Total Revenue (USD Billion)*	Export Revenue (USD Billion)*
FY 2014-15	118	100
FY 2024-25(E)	283	224

Revenue	Difference	% of Changes
Total Revenue	165	139.83
Export Revenue	124	124

Figure no. 02

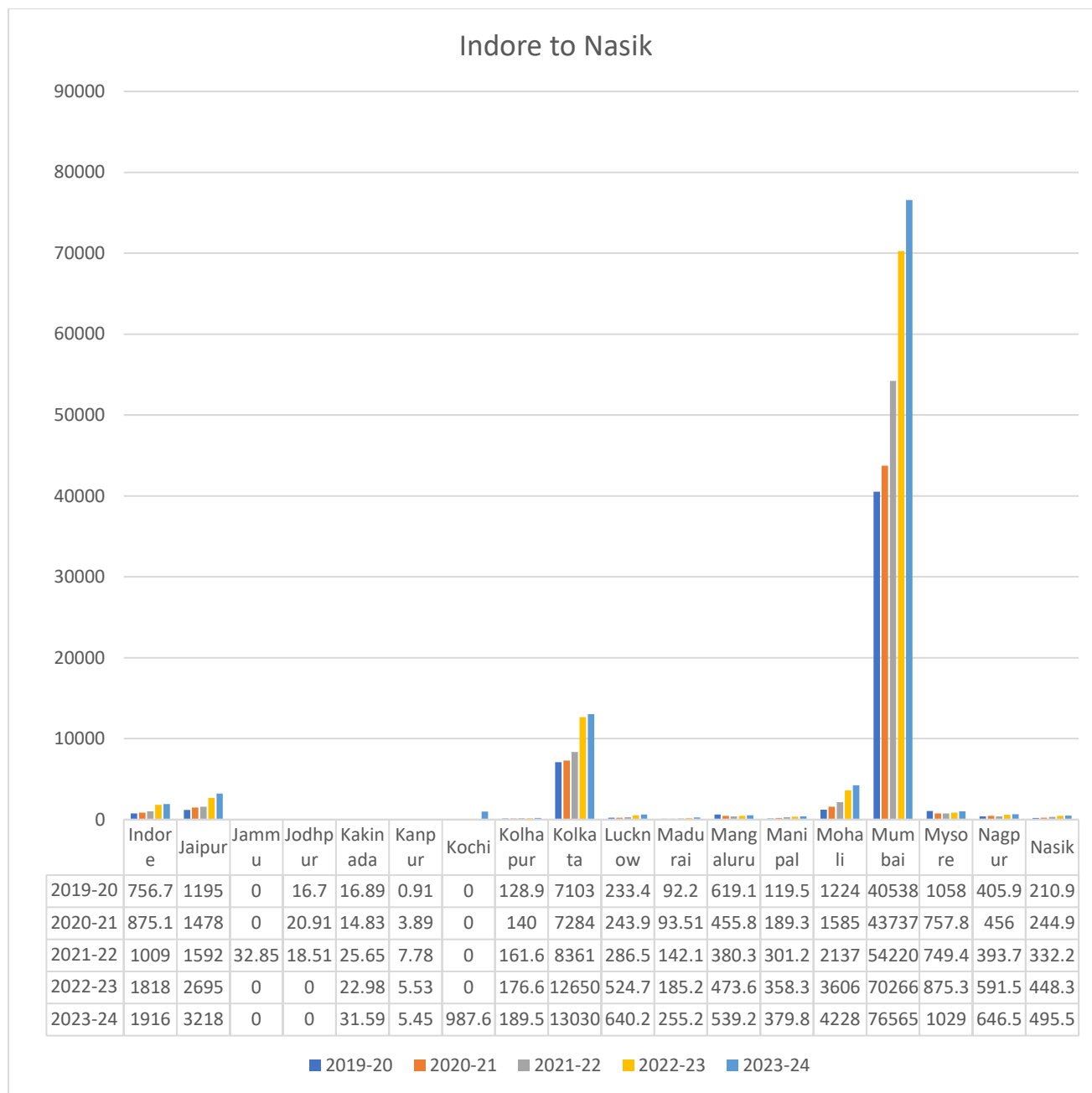


As per the above table shown the differences as well as how much percentage had been increased or decreased in generating revenue for last ten years as per the graph shown and tables we may conclude that total revenue had been increased by 139.8% and export revenue had been increased by 124%. No negative data or information had received till now in this graph.

**Figure no.03.** STP-wise software exports from STPI during the last five years according to the state wise.

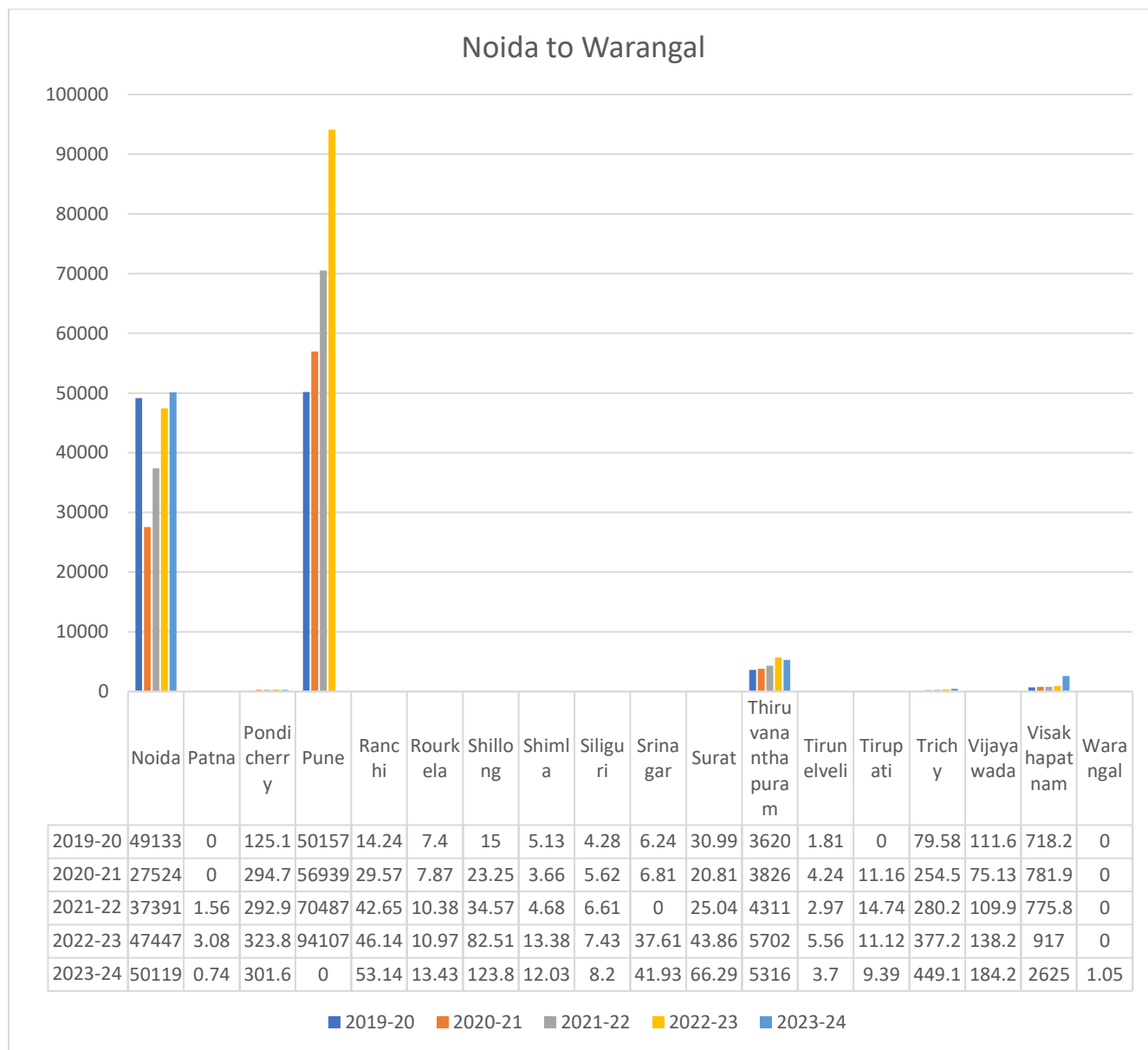
**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 3, we can find out the STP-wise software exports from STPI from last five as per record given by Govt. of India, Ministry of Electronics and Information Technology.

**Figure no.03.** STP-wise software exports from STPI during the last five years according to the state wise.

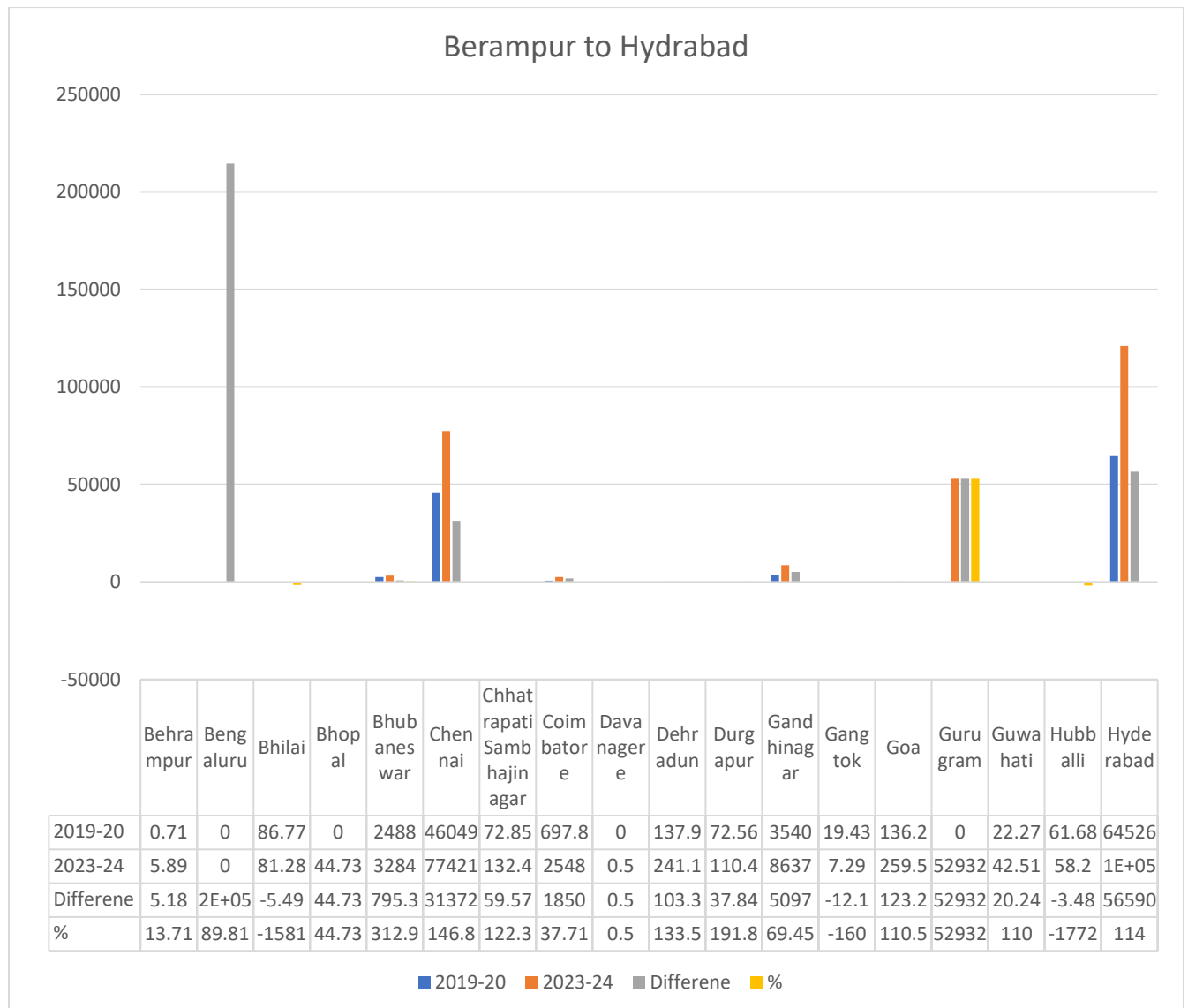
**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 3, we can find out the STP-wise software exports from STPI from last five as per record given by Govt. of India, Ministry of Electronics and Information Technology.

**Figure no.03.** STP-wise software exports from STPI during the last five years according to the State wise.

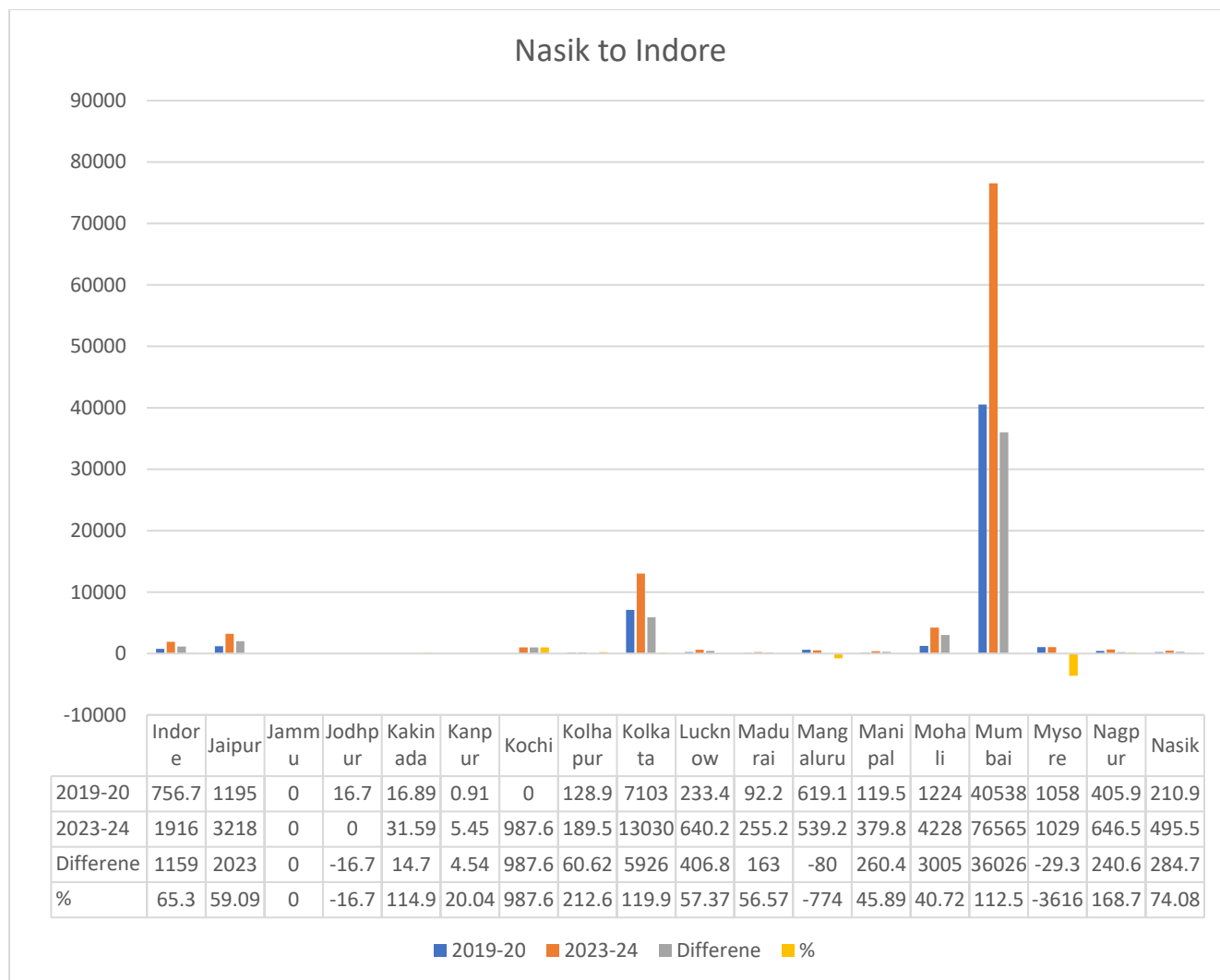
**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 3, we can find out the STP-wise software exports from STPI from last fives as per record given by Govt. of India, Ministry of Electronics and Information Technology.

**Figure no. 04.** The figure showing change of percentage and growth rate of STP software by different states.

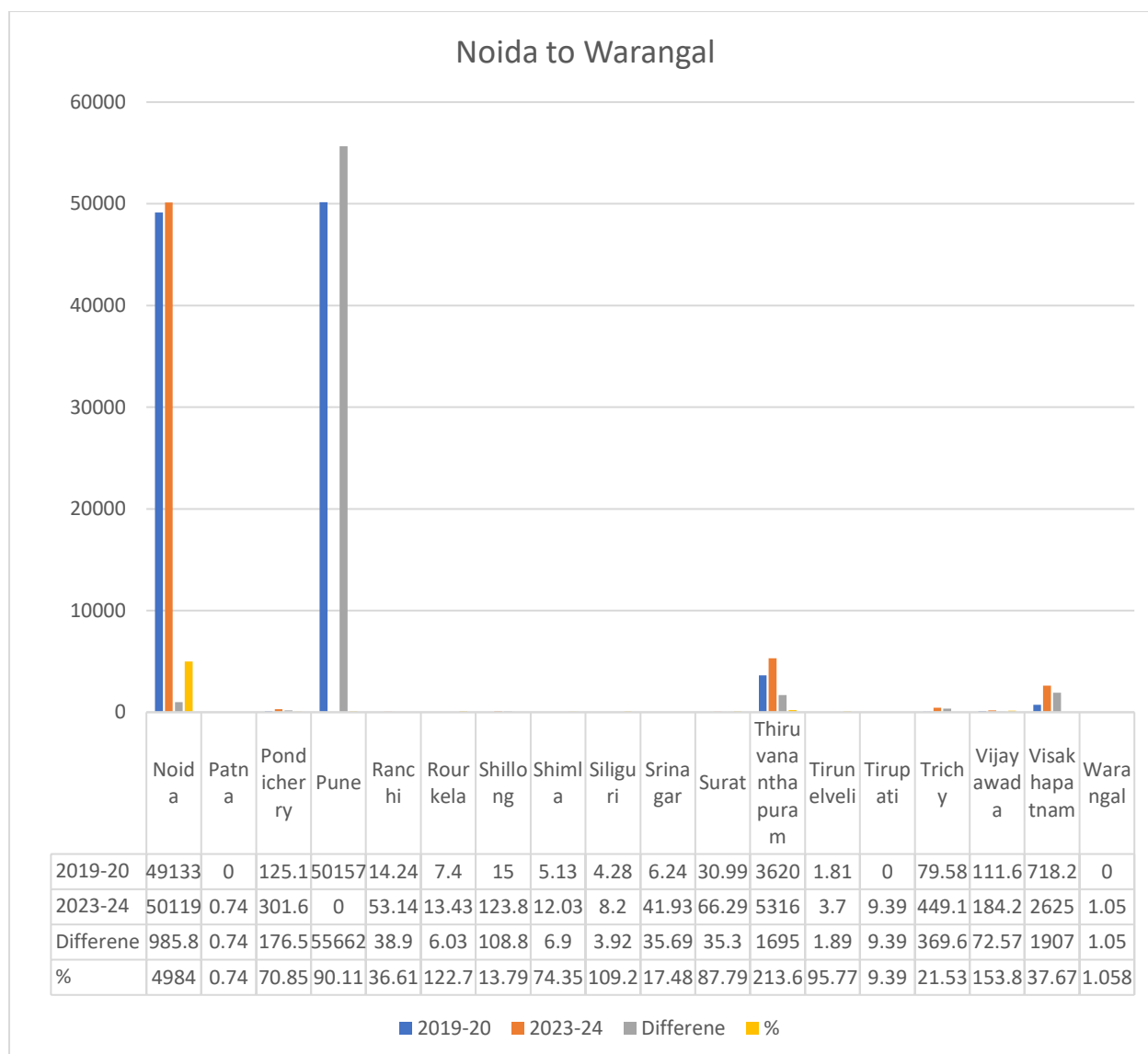
**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 4, we calculated and analysis the difference from the year 2019-2020 to 2023-2024 and change of percentage during last five years which is shown in the graph.

**Figure no. 04.** The figure showing change of percentage and growth rate of STP software by different states.

**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 4, we calculated and analysis the difference from the year 2019-2020 to 2023-2024 and change of percentage during last five years which is shown in the graph.

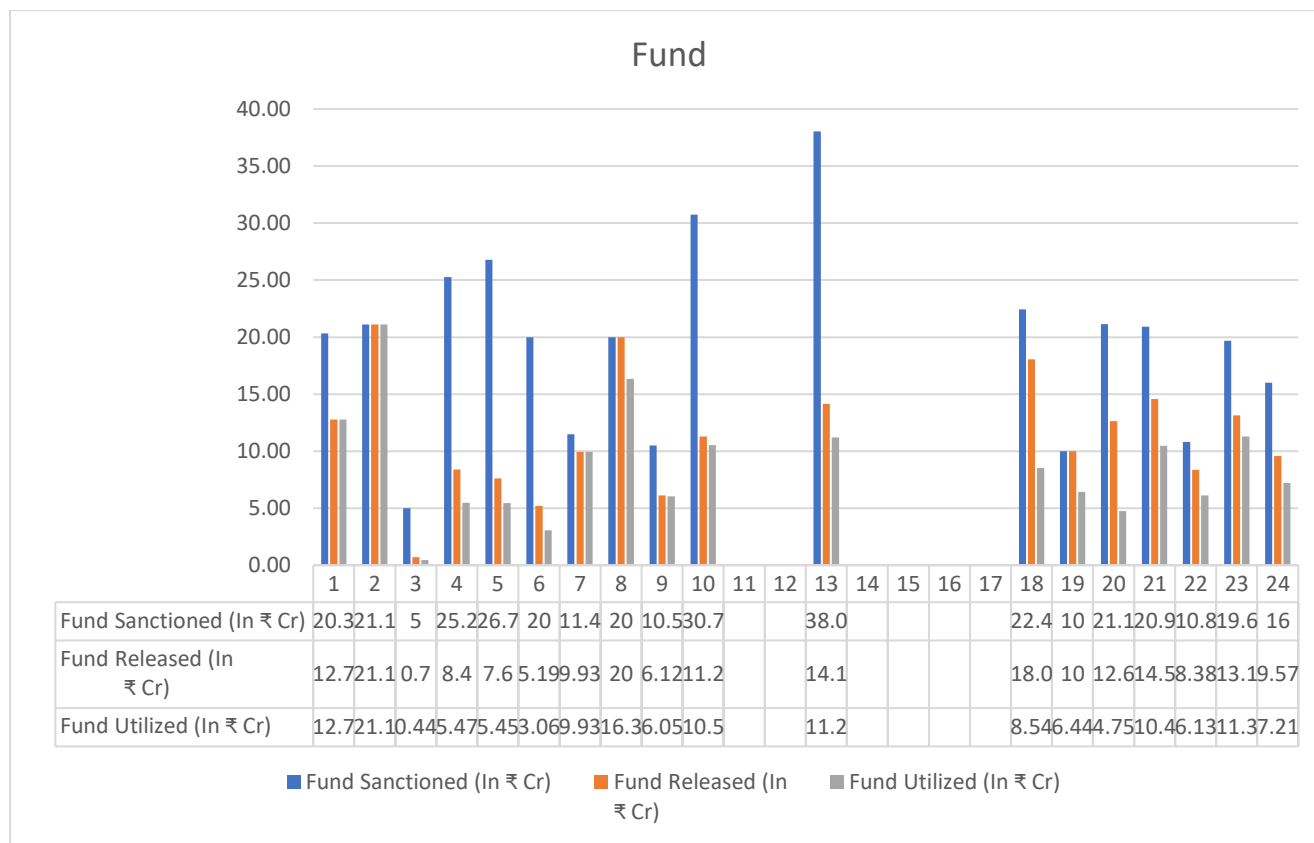
**Figure no. 04.** The figure showing change of percentage and growth rate of STP software by different states.

**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 4, we calculated and analysis the difference from the year 2019-2020 to 2023-2024 and change of percentage during last five years which is shown in the graph.



**Figure no. 05.** The figure showing the Fund received and utilised by each and every States of India from last five years and either all funds had been utilized or few state save some money



**Source: GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY.**

In the above table no. 5, we calculated and analysis the difference from the last year how much fund received and utilization of fund Punjab, Odisha, Arunachal Pradesh, Haryana and Uttar Pradesh minimum utilized their fund and most of the state utilized full amount which was received by them.

## Conclusion

The role of IT in India's economic development is crucial. Future belongs to India with a great share of work from different parts of the world and the placement of Indian experts across the world. The central government has started a transformation process in the education sector. In the next few years, the last year of a degree course will be considered as an R & D year and the syllabus is being developed based on the latest technological advancements, knowledge, and skills. This will certainly add value to our graduates not just as job seekers but will be as job creators.

Findings in the project or articles are given below:

As per the above table shown the differences as well as how much percentage had been increased or decreased in each and every states of India for creating or establishing new I.T. unit. So we can say that all above states had increased by huge percentage except Bihar which record is gone in negative (93.04) and the most lowest sates is Sikkim i.e., 7.29. Total revenue had been increased by 139.8% and export revenue had been increased by 124%. No negative data or information got till now. In the above table no. 4, we calculated and analysis the difference from the year 2019-2020 to 2023-2024 and change of percentage during last five years that all the above mentioned states increased by huge number as per record. we calculated and analysis the difference from the last year how much fund received and utilization of fund Punjab, Odisha, Arunachal Pradesh, Haryana and Uttar Pradesh minimum utilized their fund and most of the state utilized full amount which was received by them.

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