Chapter 03

Research Methodology

3.1 Introduction to Research Methodology

Research methodology refers to the systematic and scientific approach employed by researchers to investigate a research problem, answer research questions, or test hypotheses. It involves the selection of appropriate methods, tools, and techniques to gather, analyze, and interpret data in order to generate reliable and valid findings.

The choice of research methodology depends on various factors such as the nature of the research problem, the research objectives, the availability of resources, and the disciplinary context. Different fields of study may employ different research methodologies, each with its own set of principles and techniques.

The purpose of this research methodology is to provide a clear and structured framework for conducting research, ensuring that the research process is rigorous, systematic, and credible. It helps researchers to formulate research questions, design research studies, collect and analyze data, and draw meaningful conclusions.

3.1.1 Meaning of Research:

Research methodology is the foundation of any research study, providing a structured and organized approach to the research process. It involves a series of steps and decisions that researchers make to ensure that their study is conducted effectively and produces reliable and valid results.

One of the key aspects of research methodology is the formulation of research questions or hypotheses. Researchers define the objectives of their study and develop specific questions or hypotheses that they seek to answer or test. These research questions serve as the guiding principles for the entire research process, shaping the design, data collection, and analysis stages.

Various authors have defined research as follows:

1) Redman and Mory define research as a "Systematized effort to gain new knowledge."[1]

2) D. Slesinger and M. Stephenson defines research as "The manipulation of things, concepts or symbols for the purpose of generalising to extend, correct or verify

knowledge, whether that knowledge aids in construction of theory or in the practice of an art."[2]

3) The Advanced Learner's Dictionary of Current English: "A careful investigation or inquiry especially through search for new facts in any branch of knowledge."[3]

3.2 Research can be divided into two broad categories

1. **Basic research:** This type of research is aimed at expanding our fundamental knowledge of the world and understanding how things work. Basic research is typically conducted in academic settings, and its findings are often published in academic journals. Basic research does not necessarily have immediate practical applications, but it may lead to discoveries that can be applied in the future.

2. **Applied research:** This type of research is focused on solving practical problems or answering specific questions in a particular field. Applied research is often conducted in industry, government, or non-profit organizations and its findings are used to inform policy, develop new technologies, or improve processes.

The research process typically involves several key steps, including:

1. **Identifying the research question:** The first step in the research process is to identify the question or problem that the research will address.

2. **Reviewing the literature:** The researcher conducts a review of the existing literature to determine what is already known about the topic and identify gaps in knowledge that the research can address.

3. **Designing the study:** The researcher designs a study to collect the data needed to answer the research question. The study design may involve selecting a sample, developing research instruments, and planning the data analysis.

4. **Collecting data:** The researcher collects data through a variety of methods, such as surveys, experiments, observations, or interviews.

5. **Analyzing data:** The data collected is analyzed using statistical methods, qualitative analysis, or a combination of both.

6. **Drawing conclusions:** The researcher draws conclusions based on the data analysis and determines whether the research question has been answered.

7. **Communicating results:** The findings of the research are communicated through a research report, academic paper, or presentation.

Research is a process of collecting, analyzing, and interpreting information to answer a specific question or to solve a problem. It is an essential tool for advancing human knowledge and understanding, and for developing practical solutions to a wide range of problems.

3.3 Objectives of Research

The primary objective of research is to gain new knowledge or to deepen our understanding of a particular phenomenon or problem. Research seeks to answer questions, test hypotheses, and discover new facts, concepts, and theories that can help us to better understand the world around us.

The specific objectives of a research study may vary depending on the discipline, the research topic, and the research question. However, some common objectives of research include:

- To identify and describe a particular problem or phenomenon
- To develop and test new theories or concepts
- To evaluate the effectiveness of a particular intervention or treatment
- To explore the relationships between different variables
- To provide data to support evidence-based decision-making
- To develop new research methods or techniques
- To contribute to the advancement of knowledge in a particular field.

The primary objective of research is to generate new knowledge or to deepen our understanding of a particular topic or problem. The specific objectives of a research study are determined by the research question and the desired outcomes of the research.

3.4 Types of Research

3.4.1 Qualitative research

Qualitative research is a type of research that aims to understand people's experiences, perceptions, and behaviors in-depth, rather than simply measuring and analyzing numerical data. Qualitative research is often used in social sciences, psychology, education, and other fields where understanding human behavior and social phenomena is important. Qualitative research methods typically involve collecting and analyzing data through methods such as interviews, focus groups, observations, and document analysis. The data collected from these methods are typically non-numerical and often in the form of text or images. The researcher then analyzes and interprets the data to identify themes and patterns, and to develop theories and understandings of the social phenomena being studied.

One of the key characteristics of qualitative research is the use of open-ended questions that allow participants to express their thoughts and experiences in their own words. This approach allows the researcher to gain a deeper understanding of the participant's perspective, rather than imposing preconceived ideas or assumptions on the research.

Overall, qualitative research is useful for exploring complex social phenomena and understanding the subjective experiences of individuals. It can provide valuable insights and understandings of the lived experiences of people, which can inform policy and practice in a range of fields.

Here are some key features of a qualitative survey:

1. **Open-ended questions:** Qualitative surveys often use open-ended questions that allow participants to express their opinions and experiences in their own words. This can help researchers gain a more nuanced understanding of the topic being studied.

2. **Small sample size:** Qualitative surveys typically use a small sample size of participants, usually around 10-30 people. This allows researchers to spend more time with each participant and get a more detailed understanding of their experiences.

3. **Sampling strategy:** Qualitative surveys often use purposive sampling, which means that participants are selected based on specific criteria, such as their demographic characteristics or their experience with a particular issue.

4. **Data analysis:** Qualitative surveys often use a process of thematic analysis, where the researcher identifies recurring themes or patterns in the data. This involves a more interpretive and subjective approach to analyzing the data than in quantitative research.

5. **Focus on context:** Qualitative surveys often seek to understand the broader social, cultural, and historical context in which participants' experiences occur. This can help researchers gain a more nuanced understanding of the factors that shape people's beliefs, attitudes, and behaviors.

Overall, qualitative surveys are a valuable tool for exploring complex issues and gaining a deeper understanding of people's experiences and perspectives.

3.4.2 Quantitative Research:

A quantitative survey is a research methodology that involves the collection of numerical data through the administration of a pre-designed set of questions to a sample of individuals or groups. This type of survey is used to gather data about opinions, attitudes, beliefs, behaviors, and other variables that can be measured and analyzed using statistical techniques.

The key features of a quantitative survey include:

1. **Standardized questionnaire:** A quantitative survey typically uses a standardized questionnaire that contains a fixed set of questions that are administered to all participants. The questions are carefully designed to elicit the specific information the researcher is interested in and are often structured in a way that allows for easy coding and statistical analysis.

2. **Large sample size:** A quantitative survey usually involves a relatively large sample size to ensure that the findings are representative of the population being studied. The sample size is determined by statistical calculations that take into account factors such as the level of precision desired and the degree of variability in the population.

3. **Random sampling:** The participants in a quantitative survey are typically selected through a process of random sampling, which ensures that each member of the population has an equal chance of being selected for the study. This helps to ensure that the sample is representative of the population and reduces the risk of bias.

4. **Statistical analysis:** Once the data has been collected, it is typically analyzed using statistical techniques such as regression analysis, correlation analysis, and descriptive statistics. This helps the researcher to identify patterns, trends, and relationships in the data and to draw conclusions about the population being studied.

Quantitative surveys can be used in a wide range of fields, including marketing, social sciences, public health, and many others. They are particularly useful for testing hypotheses, measuring the effectiveness of interventions, and making predictions about future outcomes.

3.5 Statement Problem

After an extensive review of the existing literature, the researcher has determined that an intriguing area within the field of intrapreneurship is the study of intrapreneurial attributes across different industries. This study aims to identify both common and uncommon attributes exhibited by intrapreneurs in various industrial sectors, considering their diverse socio-economic and cultural backgrounds. While it is anticipated that certain attributes may be commonly found within specific industries, there is also a possibility of discovering shared attributes across different sectors. Surprisingly, the literature review has revealed that no such survey has been conducted in the Saurashtra region of Gujarat state. Hence, the researcher is motivated to undertake a survey specifically focused on intrapreneurs within the Saurashtra region.

The statement of problem will be as follows:

"A Study of Characteristics of Intraprenuers of selected industries of Saurashtra Region."

The main goal of this research is to examine the attributes demonstrated by intrapreneurs in a wide range of industries. The study aims to investigate how these intrapreneurial attributes relate to factors such as economic background, educational background, family circumstances, industrial background, and social status. Through analyzing these connections, we aim to develop a comprehensive understanding of the attributes displayed by intrapreneurs and how they interact with various influential factors.

3.6 Geographical Area

This study will specifically focus on intrapreneurs within the Saurashtra region of Gujarat state, encompassing districts such as Amreli, Bhavnagar, Dwarka, Gir Somnath, Jamnagar, Junagadh, Morbi, Rajkot, Porbandar and Surendranagar. The industries under investigation are likely to be located within these areas of the Saurashtra region.

(Source: https://dgfasli.gov.in/en/book-page/industrial-development-state-gujarat)

3.6.1 About Amreli

Amreli, located in the Saurashtra region of Gujarat, India, is an important industrial town with a diverse range of industries contributing to its economic development. The city and surrounding region have seen significant industrial growth in recent years.

Some of the key industrial sectors in Amreli include:

- Cotton Ginning and Pressing
- Oil Mills
- Agricultural Machinery and Implements
- Kitchenware and Home Appliances
- Electrical and Electronics
- Foundry and Casting
- Jewelry and Ornaments
- Wood-based Industries
- Automobile Components
- Plastic Products

The industrial sector in Amreli is a significant contributor to the region's economic growth and provides employment opportunities for the local population. The city's industrial landscape reflects a mix of traditional industries and emerging sectors, contributing to its industrial diversity. As Amreli continues to grow and develop, its industrial sector plays a crucial role in shaping its economic future.

3.6.2 About Bhavnagar

Bhavnagar, located in the Saurashtra region of Gujarat, India, is a significant industrial center with a diverse range of industries contributing to its economic growth. The city has been an important hub for trade and commerce, and its industrial sector plays a crucial role in shaping its economy.

Some of the key industrial sectors in Bhavnagar include:

- Ship Breaking
- Chemicals and Pharmaceuticals
- Metal and Steel Products
- Agricultural Machinery and Implements
- Electrical and Electronics
- Foundry and Casting
- Wood-based Industries
- Jewelry and Ornaments
- Automobile Components
- Food Processing

3.6.3 About Dwarka

Dwarka is a holy city and a significant pilgrimage site located in the state of Gujarat, India. While Dwarka is primarily known for its religious and cultural significance, its industrial sector is relatively small compared to other major industrial cities in the state. The industrial development in Dwarka is limited due to its focus on preserving its religious heritage and attracting tourism.

However, there are some small-scale industries and economic activities in and around Dwarka that cater to the needs of the local population and tourists.

Some of the key industrial sectors in Dwarka include:

- Handicrafts and Artifacts
- Small-Scale Manufacturing
- Tourism and Hospitality
- Agriculture and Fisheries

It's important to note that Dwarka's economy is primarily centered around its religious and tourism-related activities, which drive the city's growth and development. The industrial sector in Dwarka is relatively limited to support the needs of the local population and tourists.

3.6.4 About Gir Somnath

Gir Somnath, located in the state of Gujarat, India, is an important district with a diverse range of economic activities. While the district is known for its cultural and historical significance, its industrial sector has been gradually growing and contributing to its economic development.

Some of the key industrial sectors in Gir Somnath include:

- Agriculture and Agro-processing
- Metal and Steel Fabrication
- Fishing and Seafood Processing
- Salt Production
- Handicrafts
- Tourism and Hospitality

3.6.5 About Jamnagar

Jamnagar, located in the state of Gujarat, India, is a significant industrial hub with a diverse range of industries contributing to its economic growth. The city is known for its vibrant industrial sector, and it plays a crucial role in driving the economy of both the city and the region.

Some of the key industrial sectors in Jamnagar include:

- Oil Refining

- Petrochemicals
- Metal and Steel
- Machine Tools and Engineering
- Handicrafts
- Plastic Products
- Electrical and Electronics
- Automobile Components
- Chemicals

The industrial sector in Jamnagar is a significant contributor to the city's economy and provides employment opportunities for the local population. The presence of the world-renowned oil refinery and petrochemical complex has further enhanced Jamnagar's position as an industrial powerhouse in India.

3.6.6 About Junagadh

Junagadh, located in the state of Gujarat, India, has a diverse economy with various industrial sectors contributing to its growth. While Junagadh is known for its historical and cultural significance, its industrial sector plays a crucial role in shaping the city's economy.

Some of the key industrial sectors in Junagadh include:

- Agriculture and Agro-processing
- Mining and Minerals
- Ceramics and Tiles
- Metal and Steel Fabrication
- Textiles and Garments
- Wood-based Industries
- Fishing and Seafood Processing
- Handicrafts and Artifacts
- Tourism and Hospitality

3.6.7 About Morbi

Morbi, located in the state of Gujarat, India, is a rapidly growing industrial city with a thriving industrial sector. Over the years, Morbi has transformed into a major hub for various industries, contributing significantly to the state's economy.

Some of the key industrial sectors in Morbi include:

- Ceramics and Tiles
- Clock and Watch Manufacturing
- Power and Energy
- Construction Materials
- Packaging Materials

The industrial growth of Morbi has been fueled by factors such as favorable government policies, availability of skilled labor, strategic location, and access to raw materials. The city's industrial sector has played a crucial role in generating employment opportunities and attracting investments to the region.

3.6.8 About Rajkot

Rajkot, located in the state of Gujarat, India, is a prominent industrial city with a diverse range of industries driving its economy. Known as the "Rangilu Rajkot" (Colorful Rajkot) due to its vibrant and dynamic business environment, the city has experienced significant industrial growth over the years.

Some of the key industrial sectors in Rajkot include:

- Machine Tools and Engineering
- Auto Parts and Automotive Engineering
- Foundries and Metal Casting
- Jewelry and Ornaments
- Plastic Products
- Agricultural Implements
- Textiles and Garments
- Food Processing

The industrial growth of Rajkot can be attributed to its entrepreneurial spirit, skilled workforce, supportive business environment, and strategic location. The city's industrial sector has contributed significantly to its economic development and prosperity.

3.6.9 About Porbandar

Porbandar, located in the state of Gujarat, India, is primarily known for its maritime activities and fishing industry. Being a coastal city situated on the Arabian Sea, Porbandar has a strong connection to the sea, and its economy is influenced by various marine-related industries.

Some of the key industrial sectors in Porbandar include:

- Fishing and Seafood Processing
- Marine Services and Ship Repair
- Marine Engineering
- Chemicals
- Cement
- Salt Production

While the fishing and marine-related industries dominate Porbandar's economy, the city is also witnessing diversification into other industrial sectors. The growth of the industrial sector in Porbandar is supported by its coastal location, skilled workforce, and entrepreneurial spirit.

3.6.10 About Surendranagar

Surendranagar, located in the state of Gujarat, India, is known for its diverse industrial sector. The city's strategic location and well-connected infrastructure have contributed to the development of various industries in the region.
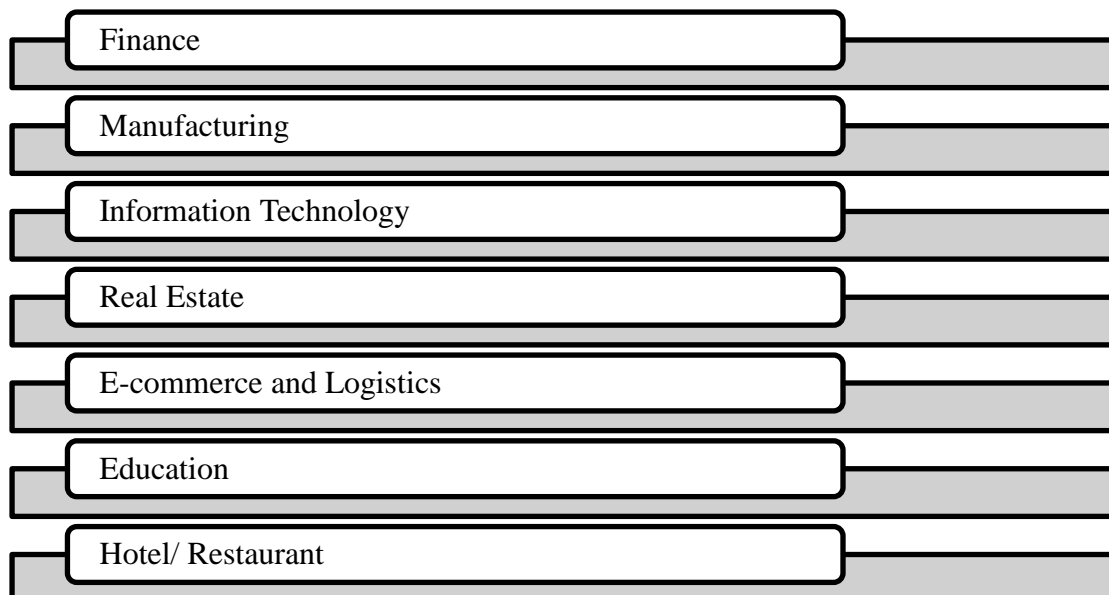
Some of the key industrial sectors in Surendranagar include:

- Ceramics and Tiles
- Chemicals
- Foundries and Metal Casting

- Plastic Products
- Cotton Ginning and Pressing
- Packaging Materials

The industrial growth of Surendranagar has been supported by its proximity to major markets, availability of skilled labor, and supportive business environment. The city's industrial sector has played a crucial role in generating employment opportunities and contributing to the economic development of the region.

3.7 Sample of Industries under study

Finance
Manufacturing
Information Technology
Real Estate
E-commerce and Logistics
Education
Hotel/ Restaurant

(Figure 3.1 – Sample of Industries under study)

The Saurashtra region of Gujarat state has witnessed significant development across various industries. For the purpose of this study, the researcher has chosen seven specific industries to focus on. These industries include manufacturing, finance, information technology, real estate, e-commerce and logistics, education, and hotel/restaurant.

Importance of each industry sector in the development of India

1. Finance:

As of January 2023, the assets under management (AUM) managed by India's mutual funds industry reached an impressive Rs. 39.62 trillion (US$ 478.08 billion). The inflow into mutual fund schemes through systematic investment plans (SIP) amounted

to Rs. 1.5 lakh crore (US$ 18.09 billion), indicating the growing popularity of this investment method among Indian investors. Equity mutual funds also experienced significant net inflows, reaching Rs. 22.16 trillion (US$ 294.15 billion) by the end of December 2021. In December 2022, the net inflow stood at US$ 888 million (Rs. 7,303.39 crore), rebounding from a 21-month low of US$ 274.8 million (Rs. 2,258.35 crore) in November 2022.

Another vital segment of India's financial industry is the insurance sector, which has been expanding rapidly. The total first-year premium collected by life insurance companies in FY23 amounted to US$ 32.04 billion, demonstrating the increasing importance of insurance products among the Indian population. In the same period (until December 2022), the non-life insurance sector recorded premiums of Rs. 1.87 lakh crore (US$ 22.5 billion), reflecting the sector's steady growth.

To strengthen the insurance distribution network in India, the country's leading bourse, Bombay Stock Exchange (BSE), is joining forces with Ebix Inc to establish a new distribution exchange platform. This strategic collaboration aims to enhance insurance services and accessibility for Indian consumers, further bolstering the insurance industry's growth.

The Indian stock market has also seen substantial activity, with a total of US$ 7.17 billion raised through 40 initial public offerings (IPOs) in FY23. The National Stock Exchange of India Ltd. (NSE), one of the prominent stock exchanges in India, has witnessed remarkable progress, with the number of listed companies increasing from 135 in 1995 to 2,113 by FY23 (till December 2022). In the derivatives segment, the NSE emerged as the world's largest derivatives exchange in 2020 in terms of the number of contracts traded, according to the Futures Industry Association (FIA) statistics. Additionally, as per data maintained by the World Federation of Exchanges (WFE) for CY2020, the NSE was ranked 4th worldwide in cash equities by the number of trades.

Overall, the financial industry in India is experiencing robust growth and diversification, with mutual funds, insurance, and stock markets witnessing substantial inflows and advancements. These positive trends reflect the confidence of investors and stakeholders in the Indian market and highlight the country's position as

a major player in the global financial landscape. As India continues to foster a conducive environment for financial services and investments, its significance in the international financial arena is expected to further strengthen in the coming years.

Leading AMCs in India (as of June 2021)

Top 5 AMCs in India	AUM (US$ billion)
SBI Mutual Fund	70.23
HDFC Mutual Fund	55.97
ICICI Prudential Mutual Fund	55.93
Aditya Birla Sun Life Mutual Fund	36.97
Kotak Mahindra Mutual Fund	33.10

(Figure 3.2 Leading AMCs in India)

2. Manufacturing:

India's manufacturing sector has achieved remarkable growth in recent years. In the fiscal year 2022, manufacturing exports reached an unprecedented US$ 418 billion, showing a remarkable increase of over 40% compared to the previous year's US$ 290 billion. This surge in exports highlights the sector's robust performance and its increasing competitiveness on the global stage.

Furthermore, India's middle class is set to play a pivotal role in the global consumption landscape. By the year 2030, it is projected to have the second-largest share in global consumption, accounting for 17%. This indicates the rising purchasing power and economic influence of India's middle-class population, creating new opportunities for businesses across various sectors.

The country's gross domestic product (GDP) also reflects the upward trajectory of its economy. In the first quarter of FY22, India's GDP at current prices stood at an impressive Rs. 51.23 lakh crore (US$ 694.93 billion). This reflects a positive growth trend and signifies the country's potential as a major player in the global economic landscape.

The manufacturing sector continues to be a significant contributor to India's economic growth. In the third quarter of FY22, the manufacturing Gross Value Added (GVA) at

current prices was estimated to be US$ 77.47 billion. Over the past decade, the manufacturing sector has consistently contributed around 16.3% to the nominal GVA, showcasing its stability and importance to the overall economy.

India's potential to become a global manufacturing hub is increasingly evident. By 2030, it is expected to contribute more than US$ 500 billion annually to the global economy. This projection highlights the country's position as a key player in the international manufacturing landscape and its ability to attract investments and foster economic growth.

In terms of employment, the manufacturing sector has also shown promising growth. As per the economic survey reports, employment in the manufacturing sector in India was 5.7 crore in 2017-18, which increased to 6.12 crore in 2018-19 and further to 6.24 crore in 2019-20. This demonstrates the sector's role as a significant job creator and its potential to further boost employment opportunities in the future.

A specific area of growth within the manufacturing sector is India's display panel market. The market is estimated to expand from approximately US$ 7 billion in 2021 to US$ 15 billion in 2025, indicating strong demand and potential for innovation and technological advancements in this segment.

Moreover, the recent survey conducted by the Federation of Indian Chambers of Commerce and Industry (FICCI) indicates a notable recovery in the manufacturing sector. The capacity utilization in India's manufacturing sector stood at 72.0% in the second quarter of FY22. This increase in capacity utilization signals the sector's resilience and adaptability in the face of challenges, further supporting the belief in India's potential as a global manufacturing powerhouse.
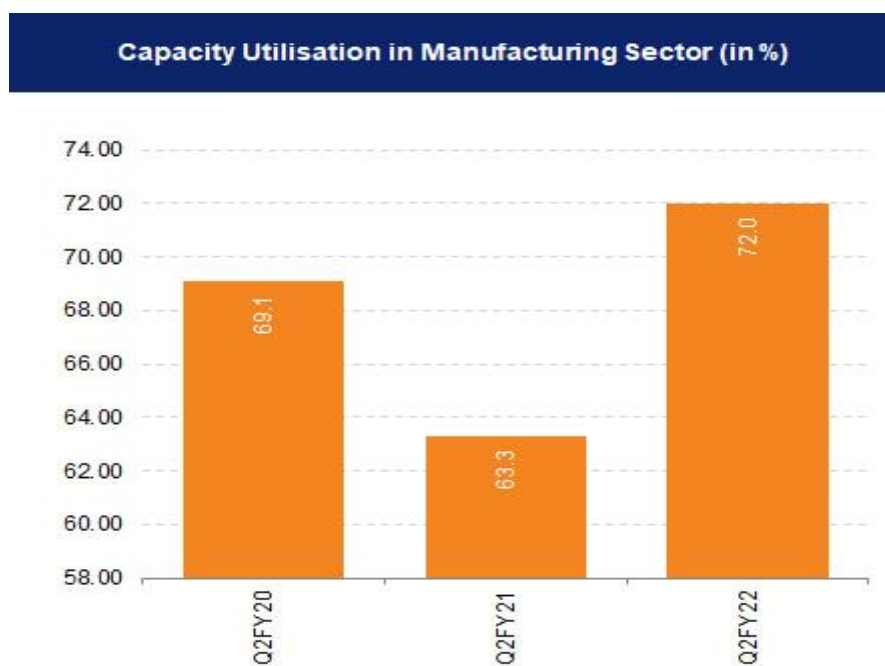
(Figure 3.3 Capacity utilization in Manufacturing Sector)

3. Information Technology

As per the National Association of Software and Service Companies (Nasscom) report, the Indian IT industry's revenue witnessed remarkable growth, reaching US$ 227 billion in FY22, representing a significant YoY growth rate of 15.5%.

Furthermore, according to estimates by Gartner, IT spending in India is projected to experience a substantial increase, reaching US$ 101.8 billion in 2022, compared to an estimated US$ 81.89 billion in the preceding year.

The Indian software product industry is also set to soar, with expectations of reaching a significant milestone of US$ 100 billion by 2025. To achieve this, Indian companies are actively focusing on international investments to expand their global presence and enhance their global delivery centers.

The data annotation market in India has been thriving, amounting to US$ 250 million in FY20, with the US market contributing 60% of the overall value. With a rapidly growing domestic demand for AI-related services, this market is predicted to skyrocket to an impressive US$ 7 billion by 2030.

As for exports from the Indian IT industry, they amounted to US$ 149 billion in FY21. The export of IT services has been the primary driving force, accounting for

over 51% of the total IT export, which also includes hardware. Both Business Process Management (BPM) and Engineering and R&D (ER&D) along with software products export, each contributed 20.78% to the overall IT exports during FY21. The ER&D market is expected to continue its growth trajectory and expand to a remarkable US$ 42 billion by 2022.

In terms of employment, the IT industry created significant opportunities by adding 4.45 lakh new employees in FY22, resulting in a total employment base of 50 lakh professionals in the sector.

Overall, the Indian IT industry is witnessing tremendous growth, backed by substantial revenues, increased investments, growing exports, and a strong focus on innovation and expanding capabilities. As the industry continues to evolve and embrace emerging technologies, it is poised to play an even more crucial role in shaping India's economy and making significant contributions to the global tech landscape.
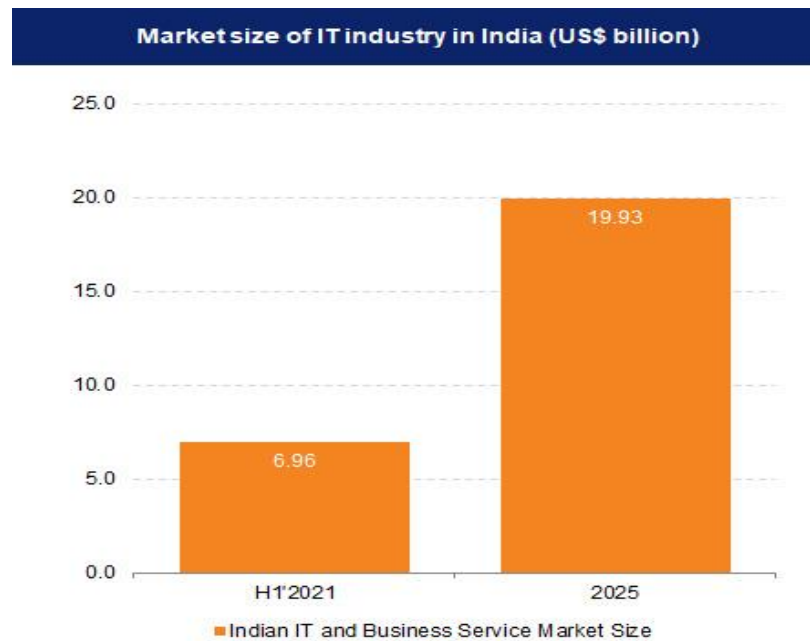
(Figure 3.4 Market size of I.T industry in India)

4. Real Estate

By the year 2040, the real estate market in India is expected to witness remarkable growth, reaching a staggering Rs. 65,000 crore (equivalent to US$ 9.30 billion), a substantial increase from Rs. 12,000 crore (approximately US$ 1.72 billion) in 2019.

This growth projection signifies the tremendous potential and opportunities that lie ahead for the real estate sector in the country.

The Indian real estate industry is on a robust trajectory, with expectations of reaching a market size of US$ 1 trillion by 2030, a significant surge from US$ 200 billion in 2021. By 2025, this sector is anticipated to contribute around 13% to the country's GDP, showcasing its pivotal role in the nation's economic development. The growth is further propelled by flourishing segments such as retail, hospitality, and commercial real estate, which are providing essential infrastructure to cater to India's ever-increasing demands.

In the first nine months of FY22, the real estate sector in the top eight cities witnessed over 1,700 acres of land deals. Foreign investments in the commercial real estate sector have been substantial, amounting to US$ 10.3 billion between 2017 and 2021, highlighting the confidence of global investors in the Indian market.

Moreover, office spaces in Special Economic Zones (SEZs) are expected to witness a surge in demand following the replacement of the existing SEZs act. Indian firms are also anticipated to raise a significant sum of over Rs. 3.5 trillion (equivalent to US$ 48 billion) through infrastructure and real estate investment trusts in 2022, marking a substantial increase compared to the funds raised to date, which amounted to US$ 29 billion.

In terms of office space transactions, the Information Technology (IT/ITeS) sector dominated with a 41% share in the second half of 2020, followed by the Banking, Financial Services, and Insurance (BSFI) and Manufacturing sectors, each holding a 16% share. Other Services and Co-working sectors accounted for 17% and 10%, respectively.

Furthermore, India is witnessing significant progress in the construction of data centers, with a projected increase of 15-18 million sq. ft. in demand by 2025.

The real estate market's resilience is also evident from the surge in new housing supply, recording a 228% YoY increase with around 65,211 units launched in the third quarter of 2021 across the top eight cities.

However, despite these promising trends, there is still a housing shortage in urban areas, estimated to be approximately 10 million units, emphasizing the need for more affordable housing. It is projected that an additional 25 million units of affordable housing will be required by 2030 to meet the growing urban population's needs.
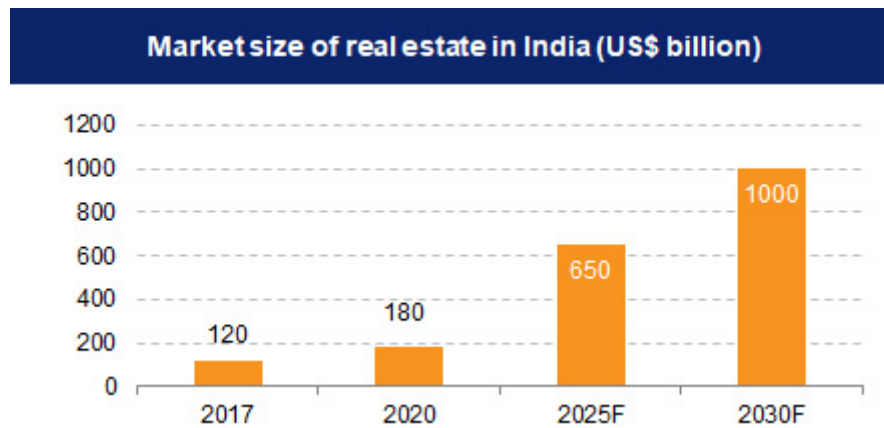
(Figure 3.5 Market size of Real estate in India)

5. E-Commerce and Logistics

The Indian online grocery market is experiencing a phenomenal growth trajectory, with estimations indicating it will reach a remarkable US$ 26.93 billion by 2027, a substantial increase from US$ 3.95 billion recorded in FY21. This expansion is being driven by a remarkable Compound Annual Growth Rate (CAGR) of 33%. The surge in the online grocery market is just a part of the broader consumer digital economy in India, which is anticipated to become a massive US$ 1 trillion market by 2030. This significant growth is a result of the widespread adoption of online services, including e-commerce and edtech, across the country. In 2020, the consumer digital economy was already valued at US$ 537.5 billion, and it is poised to further accelerate its expansion in the coming years.

As per Grant Thornton's projections, the e-commerce sector in India is expected to grow to an impressive US$ 188 billion by 2025, further consolidating its position as a major player in the global e-commerce landscape.

The Indian e-commerce market has witnessed remarkable progress and has emerged as the eighth-largest market globally, boasting a turnover of US$ 50 billion in 2020. Driven by factors such as increasing smartphone penetration, the rollout of 4G

networks, and rising consumer wealth, the e-commerce market in India is projected to soar to a massive US$ 200 billion by 2026 from US$ 38.5 billion in 2017.

India's rapidly growing online shopper base is a testament to the nation's digital transformation. In FY21, it held the third-largest online shopper base globally, with 150 million users, a number that is predicted to reach 350 million by FY26.

The adoption of 5G smartphones is also witnessing significant traction among Indian consumers, even before the full rollout of 5G technology in the country. In 2021, smartphone shipments reached an impressive 169 million units, with 5G shipments soaring by a remarkable 555% YoY. This trend had already begun in 2020, with 150 million smartphone shipments and over 4 million 5G smartphones sold, reflecting the high consumer demand in the post-lockdown period.

The burgeoning digital landscape is also supported by a steady rise in internet users. By 2025, India's internet user base is predicted to reach an astounding 900 million, compared to approximately 622 million users in 2020, growing at an impressive CAGR of 45% until 2025.

The festive season in 2021 witnessed Indian e-commerce platforms generating impressive sales with a Gross Merchandise Value (GMV) of US$ 9.2 billion, marking a 23% increase from the previous year's US$ 7.4 billion. This surge in festive season sales further underscores the growing popularity and trust in online platforms among Indian consumers.

India's digital economy, spearheaded by the thriving e-commerce sector and the adoption of cutting-edge technologies like 5G, is witnessing unprecedented growth. The evolving digital landscape presents vast opportunities for businesses and investors, and its potential to revolutionize the way Indians shop, learn, and access information is undoubtedly driving the nation's journey towards a digitally empowered future.
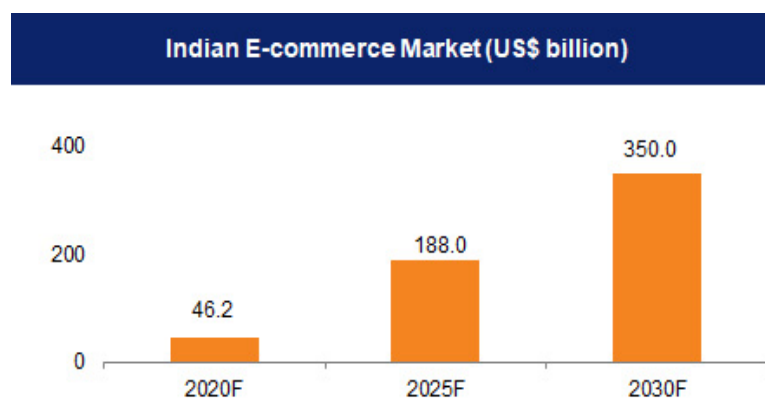
(Figure 3.6 Indian E-commerce Market)

6. Education

In FY20, the education sector in India was valued at an estimated US$ 117 billion, and it is projected to experience remarkable growth, reaching a substantial US$ 225 billion by FY25.

India takes pride in having the largest number of school-going students in the world, boasting a staggering figure of over 250 million. In 2019-20, the higher education segment enrolled 38.5 million students, with 19.6 million being male and 18.9 million female students.

As per UNESCO's 'State of the Education Report for India 2021', the Pupil Teacher Ratio (PTR) at senior secondary schools stood at 47:1, which is higher than the overall school system's PTR of 26:1.

The number of educational institutions in India is extensive, with 43,796 colleges recorded in FY21. As of November 25, 2022, the country boasts a total of 1,072 universities. Additionally, there are 8,902 institutes approved by the All India Council for Technical Education (AICTE) for the academic year 2022-23. Among these, there are 3,577 undergraduate institutes, 4,786 postgraduate institutes, and 3,957 diploma institutes.

The Indian edtech market is poised for phenomenal growth, with predictions indicating it will soar to a massive US$ 30 billion by 2031, a substantial increase from the range of US$ 700-800 million recorded in 2021. Notably, India has now become

the second-largest market for E-learning globally, following the United States, as highlighted by KPMG.

The online education sector in India is also witnessing a remarkable surge, with projections indicating a growth of US$ 2.28 billion during the period of 2021-2025, translating to an impressive CAGR of nearly 20%. In 2021 alone, the online education market in India experienced a substantial growth rate of 19.02%.

The thriving education sector in India signifies the nation's commitment to providing quality education to its vast population and sets the stage for continuous advancements in the realm of edtech. As the sector continues to evolve and embrace digital innovations, it is poised to transform the learning landscape, making education more accessible, engaging, and inclusive for millions of learners across the country.
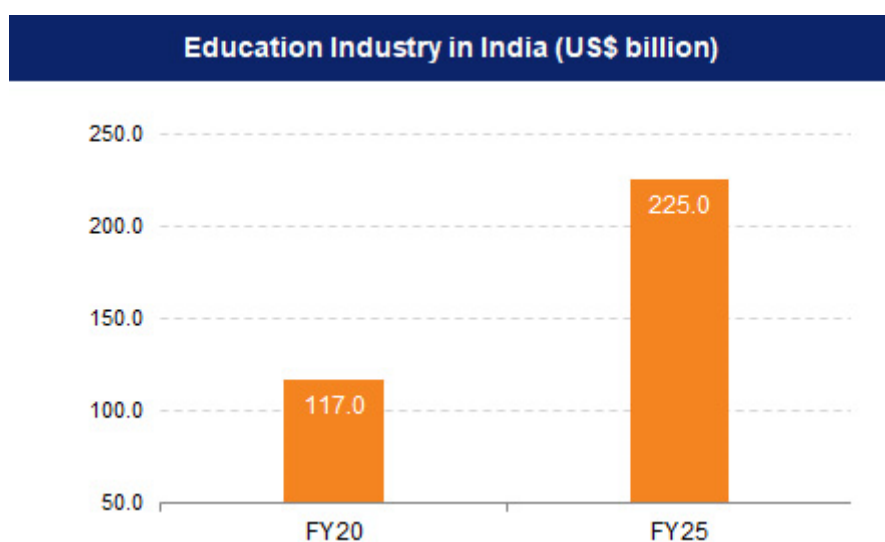
(Figure 3.7 Education industry in India)

7. Hotel/ Restaurant

As per the World Travel and Tourism Council (WTTC), India secured the 10th position among 185 countries in terms of travel and tourism's overall contribution to GDP in 2019. During that year, the travel and tourism sector contributed 6.8% to the total economy, amounting to Rs. 1,368,100 crore (US$ 194.30 billion). Notably, in 2020, the Indian tourism sector played a crucial role, providing employment to 39 million people, which accounted for 8% of the country's total workforce.

In 2021, the travel and tourism industry's contribution to the GDP stood at US$ 178 billion, and this figure is expected to soar to US$ 512 billion by the year 2028. Specifically, in India, the direct contribution of this industry to the GDP is anticipated to witness an annual growth rate of 7-9% between 2019 and 2030. In the year 2020, the travel and tourism industry's GDP contribution reached US$ 121.9 billion.

Looking ahead, the travel market in India is projected to grow substantially, with estimates suggesting it will reach US$ 125 billion by FY27, an increase from the approximate US$ 75 billion recorded in FY20. Within this market, the Indian airline travel segment was valued at approximately US$ 20 billion and is expected to double in size by FY27, driven by improvements in airport infrastructure and increased accessibility to passports. The Indian hotel market, encompassing domestic, inbound, and outbound segments, was valued at around US$ 32 billion in FY20 and is predicted to reach approximately US$ 52 billion by FY27. This growth is fueled by rising demand from travelers and concerted efforts of travel agents to boost the market.

By 2028, international tourist arrivals are projected to reach a significant 30.5 billion, generating revenue of over US$ 59 billion. However, it is expected that the growth will be predominantly driven by domestic tourists in the post-pandemic era. International hotel chains are actively expanding their presence in India, and it is estimated that they will hold about a 47% share in the country's tourism and hospitality sector by 2020, which is likely to increase to 50% by 2022.

Looking at recent trends, Foreign Tourist Arrivals (FTAs) in August 2022 saw a remarkable positive growth rate of 437.3% compared to the same period in August 2021, with Bangladesh, USA, and the UK being the top source countries for international tourists visiting India during that month. The number of FTAs from January to August 2022 reached 3,263,219, a substantial increase compared to the same period in 2021.

Overall, the future of India's travel and tourism industry looks promising, with concerted efforts from both domestic and international players to foster its growth and contribute significantly to the country's economic prosperity.

Total Contribution of Travel and Tourism to GDP at Real 2019 Prices (US$ billion)

(Figure 3.8 Total contribution of Travel and Tourism to GDP)

(Source: https://www.ibef.org/industry)

3.8 Attributes of Intrapreneurs

The title of this study pertains to study of the distinctive traits exhibited by intrapreneur. Intrapreneur possesses a unique combination of qualities that differentiates them from other components in productivity. Extensive exploration in existing literature reveals that numerous studies have investigated the characteristics of intrapreneurs, highlighting certain common attributes such as professionalism, ambition, freedom, decision-making, confidence, and courage. These attributes are typically found among entrepreneurs, regardless of the industry they operate in. However, it has been observed that limited research has been conducted on these specific attributes within the context of the Saurashtra region in the state of Gujarat. Consequently, the researcher has chosen to undertake a study focusing on these attributes, aiming to bridge the gap in knowledge regarding intrapreneurial characteristics within this particular geographic area.

The characteristics are as under:

- **Professionalism:**

Professionalism refers to an individual's skills, expertise, and conduct within their chosen profession. It strives for elevated standards, exceptional performance, and improved relationships with clients and colleagues. In the realm of business, professionalism involves fulfilling commitments, delivering outstanding results, and projecting oneself as an expert. The objective is to cultivate a respectful demeanor when engaging with others in the workplace. This demeanor is characterized by composure, self-discipline, objectivity, and a willingness to be generous and accommodating. True professionalism encompasses a range of qualities beyond academic proficiency or politeness. A professional must also possess specialized knowledge in their field of expertise.[4]

- **Ambition:**

Ambition characteristics in Intrapreneurship encompass a distinct set of qualities and a particular mindset that are often found in individuals who possess intrapreneurial traits while operating within the confines of an organizational setting. Ambition, in the context of Intrapreneurship, embodies a fervent yearning and unwavering determination to attain substantial objectives, leave a lasting imprint, and actively pursue personal and professional advancement within the organization.[5]

- **Freedom**

In the workplace, employees often perceive freedom through three fundamental elements: freedom of thought, freedom of action, and freedom of expression. These aspects hold significant importance as employees assess their current organizations and potential future ones. The evaluation of these elements plays a crucial role in their decision to either stay with their current employer or seek opportunities elsewhere.[6]

- **Decision-making**

The meaning of decision-making characteristics in Intrapreneurship refers to the specific qualities and abilities that individual's exhibit when making informed and strategic decisions within an organizational setting. Intrapreneurs possess decision-making skills that enable them to evaluate options, assess risks and benefits, and make choices that drive innovation, growth, and positive change within the organization.

These decision-making characteristics in Intrapreneurship empower individuals to make effective, strategic, and innovative choices within the organizational context. By leveraging their analytical skills, assessing risks, aligning decisions with organizational objectives, and fostering a learning-oriented approach, intrapreneurs contribute to the organization's success by driving informed and impactful decision-making processes.

- **Confidence**

The meaning of confidence characteristics in Intrapreneurship refers to the specific qualities and mindset that individual's exhibit when they possess a strong belief in their abilities, ideas, and potential for success within an organizational setting. Confidence in Intrapreneurship plays a crucial role in empowering individuals to take risks, drive innovation, and effectively lead change within the organization.[7]

- **Courage**

The meaning of courage characteristics in Intrapreneurship refers to the specific qualities and mindset that individual's exhibit when they possess the bravery and resilience to take bold actions, overcome challenges, and drive innovation within an organizational setting. Courage in Intrapreneurship is essential for intrapreneurs to navigate uncertainty, challenge the status quo, and pursue transformative ideas that have the potential to create significant positive change within the organization.[7]

3.9 Objectives of the study

The objectives of the research are as under:

1. To study the characteristics of intrapreneurs of various industries.
2. To study the relationship between intrapreneurial characteristics and economic background of the same industry.
3. To study the relationship between intrapreneurial characteristics and family occupation background of the same industry.
4. To study the relationship between intrapreneurial characteristics and social status of the same industry.
5. To study the relationship between intrapreneurial characteristics and educational background of the same industry.

3.10 Significance

1. **To study the characteristics of intrapreneurs of various industries:** By studying the characteristics of intrapreneurs across different industries, this objective can contribute to the knowledge base by identifying common traits, skills, and mindsets that are essential for intrapreneurial success. This understanding can help in developing comprehensive frameworks and guidelines for nurturing Intrapreneurship within different sectors, leading to increased innovation, growth, and competitiveness in those industries. It can also provide insights into the specific characteristics that are transferable across industries and those that may be industry-specific.

2. **To study the relationship between intrapreneurial characteristics and economic background of the same industry:** This objective can contribute to the understanding of how an individual's economic background influences their intrapreneurial characteristics within a specific industry. By exploring this relationship, the study can provide valuable insights into the barriers and opportunities faced by individuals from different economic backgrounds in pursuing intrapreneurial endeavors. This knowledge can help in designing policies, support programs, and interventions aimed at promoting inclusivity, reducing disparities, and fostering a more diverse and dynamic intrapreneurial ecosystem within the industry.

3. **To study the relationship between intrapreneurial characteristics and family occupation background of the same industry:** By examining the relationship between intrapreneurial characteristics and family occupation background within the same industry, this objective can shed light on the influence of family dynamics and entrepreneurial heritage on an individual's intrapreneurial journey. This understanding can contribute to knowledge by highlighting the intergenerational transmission of entrepreneurial traits and the role of family support systems in fostering intrapreneurial mindset and behavior. Such insights can inform entrepreneurship education, mentorship programs, and policy initiatives aimed at leveraging familial influences to promote intrapreneurship within the industry.

4. **To study the relationship between intrapreneurial characteristics and social status of the same industry:** This objective can contribute to knowledge by exploring how social status and related factors impact intrapreneurial characteristics within a specific industry. Understanding the relationship between intrapreneurship and social status can help identify barriers and inequalities that individuals from different social backgrounds may face in accessing resources, networks, and opportunities for intrapreneurial endeavors. This knowledge can inform strategies to promote inclusivity, diversity, and social mobility within the industry, fostering a more equitable intrapreneurial ecosystem.

5. **To study the relationship between intrapreneurial characteristics and educational background of the same industry:** Examining the relationship between intrapreneurial characteristics and educational background within a specific industry can contribute to knowledge by uncovering how formal education and specialized training influence intrapreneurial behavior. This objective can provide insights into the role of educational institutions, curricula, and skill development programs in nurturing intrapreneurial qualities in individuals. The findings can inform educational policies and initiatives aimed at enhancing entrepreneurship education and fostering a culture of intrapreneurship within the industry, leading to a more entrepreneurial workforce and enhanced industry innovation.

3.11 Type of study

This study aims to examine the characteristics of intrapreneurs and analyze their correlation with various factors. The primary objective of this research is to provide a detailed description of the current state of affairs regarding intrapreneurship. Therefore, the study will adopt a Descriptive-Analytical approach, focusing on analyzing and interpreting the collected data to gain insights into the subject matter.

3.12 Area and Scope of the Study

1. The scope of study will be centered on the Saurashtra region within the state of Gujarat.
2. This research will specifically target small and medium scale industries, excluding larger enterprises.
3. The research will encompass a diverse range of industries to ensure a comprehensive analysis.
4. The primary focus in this study will be on exploring and examining the characteristics of intrapreneurs. Other aspects and dimensions of intrapreneurship will not be focus of this research.

3.13 Hypothesis

1. **H01:** There is no significant difference in the characteristics of Intrapreneurs belonging to various Industries.

2. **H02:** There is no significant difference in the characteristics of Intrapreneurs belonging to various economic background.

3. **H03:** There is no significant difference in the characteristics of Intrapreneurs belonging to various family occupation background.

4. **H04:** There is no significant difference in the characteristics of Intrapreneurs belonging to various social status.

5. **H05:** There is no significant difference in the characteristics of Intrapreneurs belonging to various educational background.

3.14 Limitations

1. The main weight of this research is placed on exploring the characteristics of intrapreneurs, while other aspects of intrapreneurship are not the primary focus.
2. The research findings will specifically apply to the Saurashtra region of Gujarat, as this is the area under examination.

3. As individuals, human beings may possess or lack certain characteristics, and it is important to acknowledge the potential variations among individuals.

3.15 Data collections

Data collection for this study will be conducted using both primary and secondary sources. The primary data will be collected through a survey method, employing a simple random sampling technique. This will involve gathering information directly from the participants.

In addition to primary data, secondary data will also be utilized. Various sources such as publications, journals, magazines, surveys, government documents, and newspapers will be consulted to gather relevant information. These secondary sources will provide additional insights and support the findings of the study.

3.16 Tools & techniques

1. The primary method in use for collecting data will be through the use of a questionnaire. Participants will be asked to respond to a series of questions to provide the necessary primary data for the study.
2. The data analysis technique used for this research will be analytical in nature. The collected data will be analyzed using the ANOVA technique. If the data does not exhibit multivariate characteristics, an alternative approach such as a t-test may be applied. For post hoc analysis, the Tukey HSD test will be used to compare multiple group means and identify significant differences between them.

3.16.1 One-way ANOVA

Data analysis involves the use of various techniques, each chosen based on the type of data collected and the research objectives. When comparing two sample means, researchers have the option of employing either the z-test or t-test. These tests are useful for evaluating the statistical significance of differences between the means of two samples, taking into account factors such as sample size and variability.

On the other hand, when dealing with data comprising more than two sample means, the ANOVA (Analysis of Variance) technique becomes relevant. ANOVA allows researchers to assess whether there are any significant differences among the means of multiple samples. By analyzing the variability both within and between the groups, ANOVA provides insights into the presence or absence of significant differences.

The ANOVA technique provides a robust statistical framework for studying multiple sample means simultaneously. It takes into account the overall variability in the data, separating it into different components to evaluate the influence of group differences on the outcome variable. Through the calculation of F-statistics, ANOVA quantifies the extent of variability between groups relative to the variability within groups.

By applying ANOVA, researchers can draw conclusions regarding the presence or absence of significant differences among the means. When the calculated F-value exceeds a critical value, indicating a significant result, post hoc tests (such as the Tukey HSD test) can be employed to identify specific group differences.

ANOVA is widely used in various fields, including social sciences, medicine, business, and engineering. Its application allows for a comprehensive examination of group differences and provides valuable insights into the relationships and patterns present in the data.

The process of applying ANOVA can be explained as follows:

1. Find the means of every sample i.e. $X1, X2, X3 ...... Xk$

2. Based on means of every sample, find out the mean of sample means

$$\overline{\overline{X}} = \frac{X1 + X2 + X3 + ... + Xk}{No\ of\ Samples}$$

3. Now compare every mean of sample with mean of sample means and find the deviations. These deviations should be multiplied with the respective sample size and all deviations should be totaled. This is known as sum of squares for variances between the samples i.e. SS between. This can be done in following manner.

SS between = $n1(X1 - \overline{\overline{X}})2 + n2(X2 - \overline{\overline{X}})2 + ... + nk(Xk - \overline{\overline{X}})2$

4. Now the mean square will be found. For this purpose SS between will be divided by degrees of freedom. It can be written as follow.

$$MS\ between = \frac{SS\ between}{}$$

$$k - 1$$

5. Now SS within will be found. It is sum of squares for variance within samples. Square of deviation from the mean will be taken from every observation. This will be totaled. This will be done for every sample. Then the grand total for every sample deviations will be made. It can be presented as follows.

SS within = $\Sigma(X1 - X1)2 + \Sigma(X1 - X1)2 + ... + \Sigma(Xk - Xk)2$

6. Now the mean square within sample will be found. For this purpose SS within will be divided by degrees of freedom. It can be written as follow.

$MS\ within = \underline{SS\ within}$

$$n - k$$

Here n-k is the degrees of freedom within the samples, n is total no of items in all the samples and k is the no of samples.

7. At the end F-ratio will be finding out by following formula:

$F\ ratio = \underline{MS\ between}$

$$MS\ within$$

To conclude the ANOVA analysis this ratio is important. It will make it clear that the difference among various sample means is significant or just sampling fluctuations. In the present research the level of significance is 5%. Means if the f value is less than 5%, the Null hypothesis is rejected and the alternative hypothesis is accepted.

3.16.2 Tukey's HSD Post hoc test

There is a need to test the post, especially after completing ANOVA in order to identify any Groups differ from each other. Post hoc test is not required, if Null Hypothesis accepted from ANOVA test. It is only required if the Null hypothesis is rejected. No differences to find, if you fail to reject the null hypothesis.

To undertake this test first find out the differences between the means of all the groups under study. Now the critical value is to be calculated which is known as HSD=Honestly Significant Difference. Now compare this difference score to a critical value to see if the difference is significant.

The formula to find HSD is as follows:

$HSD = q\sqrt{MS\ within/n}$

Where MS within is the value found to calculate ANOVA

q is the relevant critical value of the studentized range statistic.

n is n is the number of values we are dealing with in each group

After finding HSD one should compare differences already found with HSD value. If the difference value is larger than the HSD then it is significant.

3.17 Chapter plan

The research on the aforementioned topic is structured into five chapters to provide a comprehensive understanding of the subject matter. The breakdown of these chapters is as follows:

1) Chapter -1 Introduction

2) Chapter -2 Review of Literature

3) Chapter -3 Research Methodology

4) Chapter -4 Data Analysis

5) Chapter -5 Findings, Conclusions and Suggestions.

3.18 Comparison between One way ANOVA, T test and Chi- square test

The following are the reasons why the analysis of variance is taken into consideration for the study and no other test such as T Test and Chi-square test is taken into consideration. The following is the comparison between the 03 tests for the better clarification of my study which will help to explore the reason of choosing the particular test.

One-way ANOVA (Analysis of Variance), T-test, and Chi-square test are statistical methods used to analyze different types of data and answer different research questions.

1. **One-way ANOVA:**
- **Purpose:** One-way ANOVA is used to compare the means of three or more groups to determine if there are any statistically significant differences between them.

- **Data type:** It is used when the dependent variable is continuous (interval or ratio) and the independent variable has three or more categorical groups.

- **Hypothesis:** The null hypothesis states that there is no significant difference between the means of the groups, while the alternative hypothesis suggests that at least one group mean differs significantly from the others.

- **Assumptions:** ANOVA assumes that the data is normally distributed and that the variances across groups are equal.

2. **T-test:**

- **Purpose:** T-tests are used to compare the means of two groups and determine if there is a statistically significant difference between them.

- **Data type:** It is used when the dependent variable is continuous (interval or ratio) and the independent variable has two categorical groups.

- **Hypothesis:** The null hypothesis states that there is no significant difference between the means of the two groups, while the alternative hypothesis suggests that there is a significant difference.

- **Assumptions:** T-tests assume that the data is normally distributed and that the variances in both groups are equal.

3. **Chi-square test:**

- **Purpose:** The Chi-square test is used to determine if there is an association or dependency between two categorical variables.

- **Data type:** It is used when both variables are categorical (nominal or ordinal) and are organized into a contingency table.

- **Hypothesis:** The null hypothesis states that there is no association between the two variables, while the alternative hypothesis suggests that there is a significant association.

- **Assumptions:** The Chi-square test assumes that the observations are independent and that the expected frequency count in each cell of the contingency table is at least 5.[8]

Nevertheless, considering the data presented in the research and taking into account the inherent characteristics of the study, it becomes evident that numerous additional tests remain viable for exploration in subsequent research endeavors. Moreover, it is reasonable to infer that the tests elucidated within this research not

only align with but also fulfill the stipulated criteria outlined in the research objectives.

As we contemplate the future scope of this study, it is prudent to introduce the chi-square test into the analytical framework. By doing so, we anticipate that the incorporation of the chi-square test will yield noteworthy insights and outcomes that surpass the implications of the current test employed within the researcher's investigative work. The introduction of the chi-square test has the potential to enrich the overall findings and contribute significantly to the breadth and depth of our research outcomes.

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