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Use of Business and Analytical tools in local businesses at Bandgora, Bolpur, Birbhum

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ABSTRACT

Business and analytical tools refers to skills, technologies, and practices for iterative exploration and investigation of past business performance to gain insight and drive business planning and strategies. Business and analytical tools enable organizations to collect, visualize, and interpret data for informed decision-making. Business analytics focuses on developing new insights and understanding of business performance based on past data and statistical methods. Business analytics makes use of analytical models and numerical analysis, includes predictive models and fact-based management to drive decision making processes. Therefore, it is closely related to management science. Analytics may be used as input for human to make decisions. Essential tools include Python and SQL (Structured Query Language) for data manipulation, and Excel for spreadsheets. Key business analysis techniques include PESTLE and SWOT for strategies.

Introduction

In the modern business world, data has become a crucial asset, transforming how decisions are made and strategies are developed. The field of business and data analytical tools plays a pivotal role in this

transformation, helping businesses convert raw data into actionable insights that drive growth, improve efficiency, and enhance competitive advantage. As businesses face increasing competition, the ability to analyze and interpret data effectively has never been more important.

Business and data analytics refers to the process of examining large datasets to uncover trends, patterns, and correlations that can inform business decisions. This process involves various techniques, ranging from simple descriptive analysis to more advanced predictive and prescriptive models. Descriptive analytics focuses on summarizing past data to understand historical performance. Predictive analytics uses statistical models and machine learning algorithms to forecast future outcomes, while prescriptive analytics goes a step further by suggesting actions to achieve optimal results. Traditional business decision-making often relied on intuition or limited datasets, but with the advent of advanced analytics tools, organizations now have access to vast amounts of information, from customer behavior and purchasing patterns to market trends and operational performance. By leveraging this data, businesses can make informed decisions that reduce risks, enhance customer satisfaction, and drive innovation.

The primary benefits of business and data analytics is its ability to provide a deep understanding of customer behavior. By analyzing customer data—such as purchasing history, preferences, and interactions with a brand—businesses can personalize their offerings, improve customer experience, and tailor marketing strategies to specific target audiences. Critical application of data analytics is in financial analysis. By analyzing financial data, businesses can gain insights into profitability, liquidity, and financial health, enabling better forecasting and budgeting. Analytical tools also help to detect infringements, such as fraud or misreporting, which can be crucial for risk management and compliance.

The emergence of artificial intelligence (AI) and machine learning (ML) has expanded the possibilities for business and data analytics. These technologies enable organizations to process and analyze data at unprecedented speeds, identify complex patterns, and make real-time predictions. AI and ML algorithms are increasingly being used to automate decision-making processes, enabling businesses to adapt quickly to changing market conditions and customer demands.

In conclusion, business and data analytical tools have become indispensable for businesses striving to stay competitive in a data-driven world. By unlocking the potential of data, businesses can make more informed decisions, improve operational efficiency, and ultimately deliver greater value to customers and stakeholders. As technology continues to evolve, the role of data analytics will only become more integral to the success of businesses across industries.

Objectives

Objectives of preparing this Report on "*Business and Data Analytics*" are as follows:

1. To document and reflect upon the practical exposure gained during the internship, linking theoretical knowledge with real-world business and data analytics practices.

2. To analyze and present the key responsibilities handled as a Business and Data Analytics Intern, highlighting the skills developed and tools used.

3. To evaluate the organizational structure, processes, and culture of the host company to understand its approach to data-driven decision-making.

4. To identify and discuss challenges encountered during the internship period, along with strategies adopted to overcome them.

Methodology

This paper explains with both quantitative and qualitative nature. It is based on primary data collected through survey method and studies from secondary sources from journal articles, research papers etc.

Data Analysis and Interpretation

Data collected through questionnaire by using survey method at Bandgora, Bolpur, Birbhum. Total sample size 50, selected at random. Mentioning below the questionnaire and the responses which is driven from the survey:

Questionnaire

Business and Data Analytics Survey

Name: **Designation:**

1. How familiar are you with Business and Data Analytics **Responses**

A. Not familiar at all …… 11

B. Slightly familiar ……..…….. 16

C. Moderately familiar ……..……..…… 18

D. Very familiar ……..…… 05

2. What is the primary use of data analytics in your organization

A. Decision-maki ……..…….….. 11

B. Performance tracking …….……. 24

C. Risk management ……. 05

D. We don't use data analytics …….……. 10

3. Which tools or platforms do you use most often for data analysis?

A. Microsoft Excel …….. 33

B. Python / R ……...……. 09

C. None of the above ……..…….. 02

D. We do not use any tools …….…….. 06

4. How often does your organization use data analytics to support business strategy?

A. Never ……..…..…… 11

B. Rarely ……. 09

C. Frequently …….. 21

D. Always …… 09

5. What is the biggest challenge you face with data analytics?

A. Poor data quality …… 13

B. Inadequate tools ……. 08

C. Difficulty interpreting results ……. 07

D. Budget constraints ……..……. 22

6. How do you assess your organization's data-driven decision-making capability?

A. Non-existent ……..…….. 10

B. Basic ……. 12

C. Intermediate …….……...…….. 21

D. Advanced …….……...…….. 07

7. Which business area benefits most from data analytics in your experience?

A. Marketing and Sales ……..……..... 21

B. Operations and Supply Chain …….. 12

C. Human Resources …… 08

D. Customer Service …….. 09

8. Do you believe data analytics gives a competitive advantage?

A. Disagree ……..…….. 02

B. Agree ……. 31

C. Neutral ……...17

9. How is data collected and managed in your organization?

A. Partially automated, basic structure ……..…… 17

B. Manual and Unstructured ……...…… 06

C. Fully automated and integrated system …….……. 13

D. Not sure …….……. 14

10. Are you interested in further training or certification in data analytics?

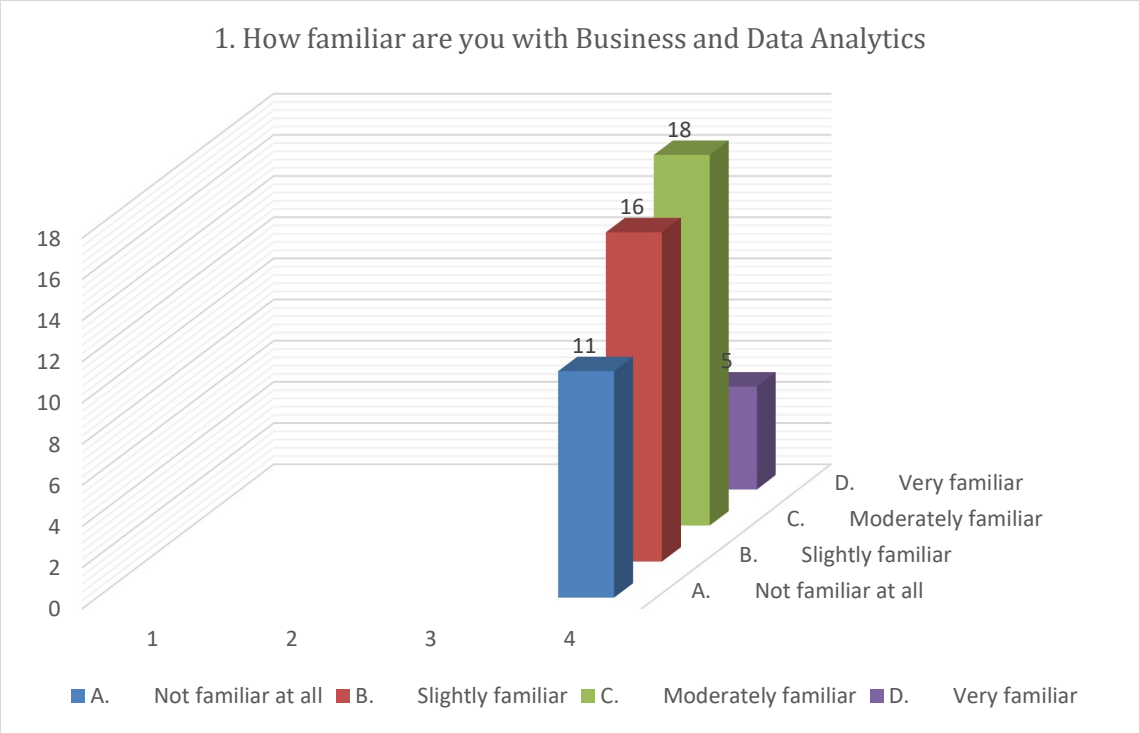
A. Not interested …….……. 14

B. Interested …….. 25

C. Moderately interested …….…….. 11

Graphical Representation of Data:

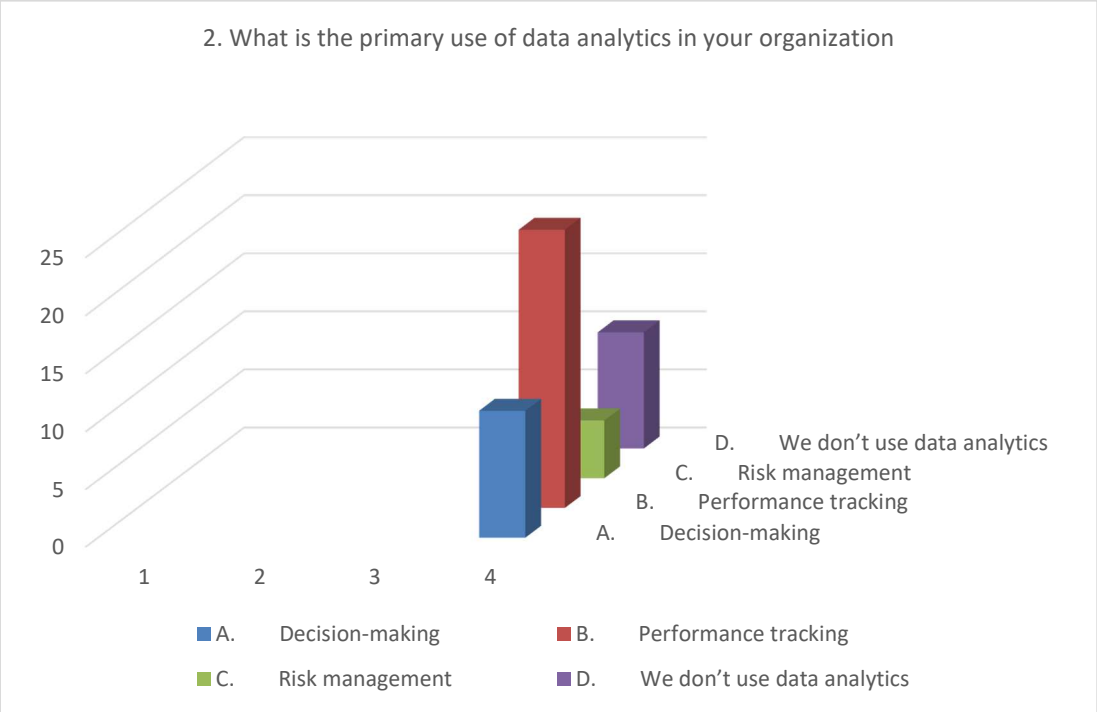
1. How familiar are you with Business and Data Analytics?		
A.	Not familiar at all	11
B.	Slightly familiar	16
C.	Moderately familiar	18
D.	Very familiar	5



Finding:

A. 22% of sample did not familiar about Business and Data Analytics.
B. 32% were slightly familiar about Business and Data Analytics.
C. 36% were much familiar about Business and Data Analytics.
D. 10% were well known about business and Data Analytics.

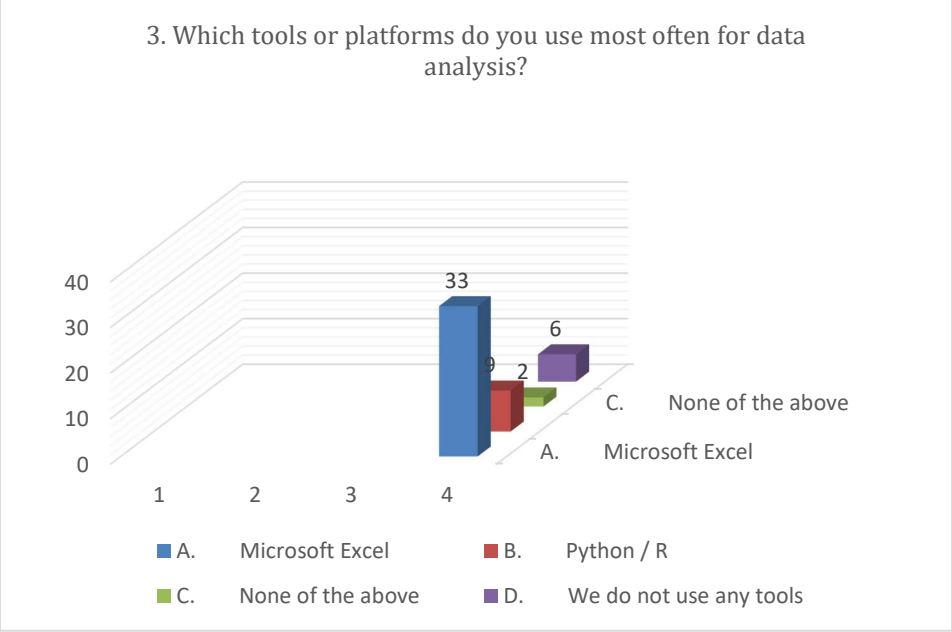
2. What is the primary use of data analytics in your organization?		
A.	Decision-making	11
B.	Performance tracking	24
C.	Risk management	5
D.	We don't use data analytics	10



Finding:

A. 22% of sample did not familiar about Business and Data Analytics.
B. 32% were slightly familiar about Business and Data Analytics.
C. 36% were much familiar about Business and Data Analytics.
D. 10% were well known about business and Data Analytics.

3. Which tools or platforms do you use most often for data analysis?		
A.	Microsoft Excel	33
B.	Python / R	9
C.	None of the above	2
D.	We do not use any tools	6



Finding:

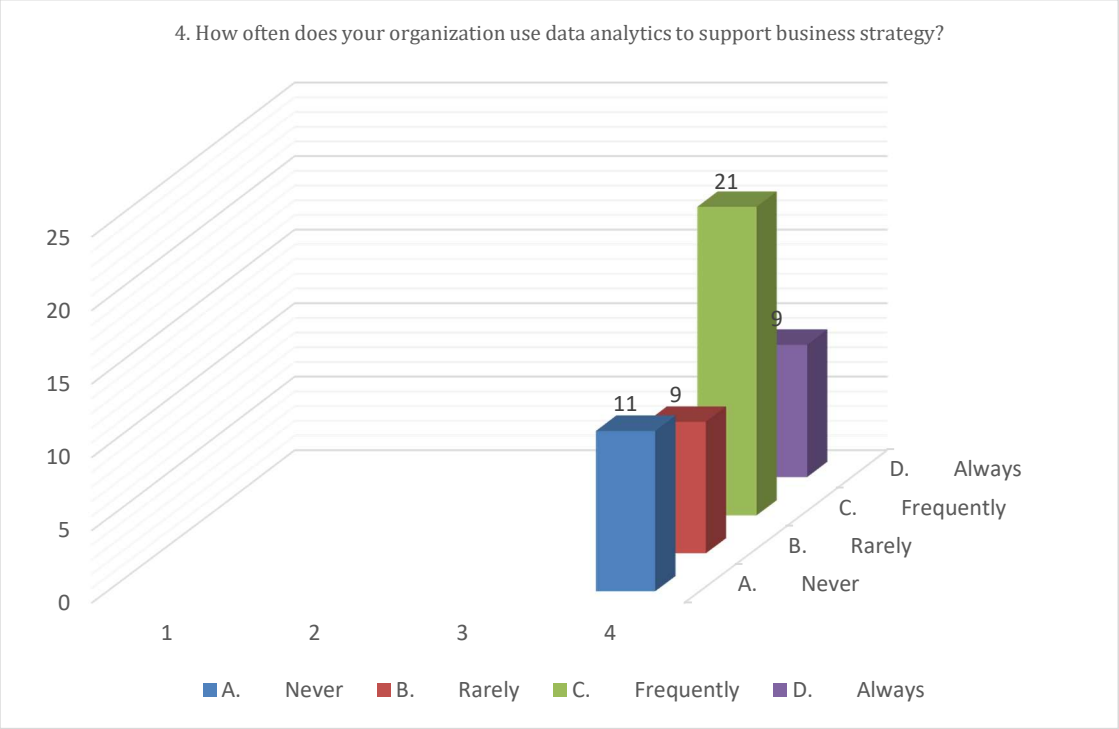
A. 66% of the sample were used Microsoft Excel.

B. 18% of the sample use Python language for Data analysis.

C. 4% of them used another platform.

D. 12% of them did not use Data-analysis.

4. How often does your organization use data analytics to support business strategy?		
A.	Never	11
B.	Rarely	9
C.	Frequently	21
D.	Always	9



Finding:

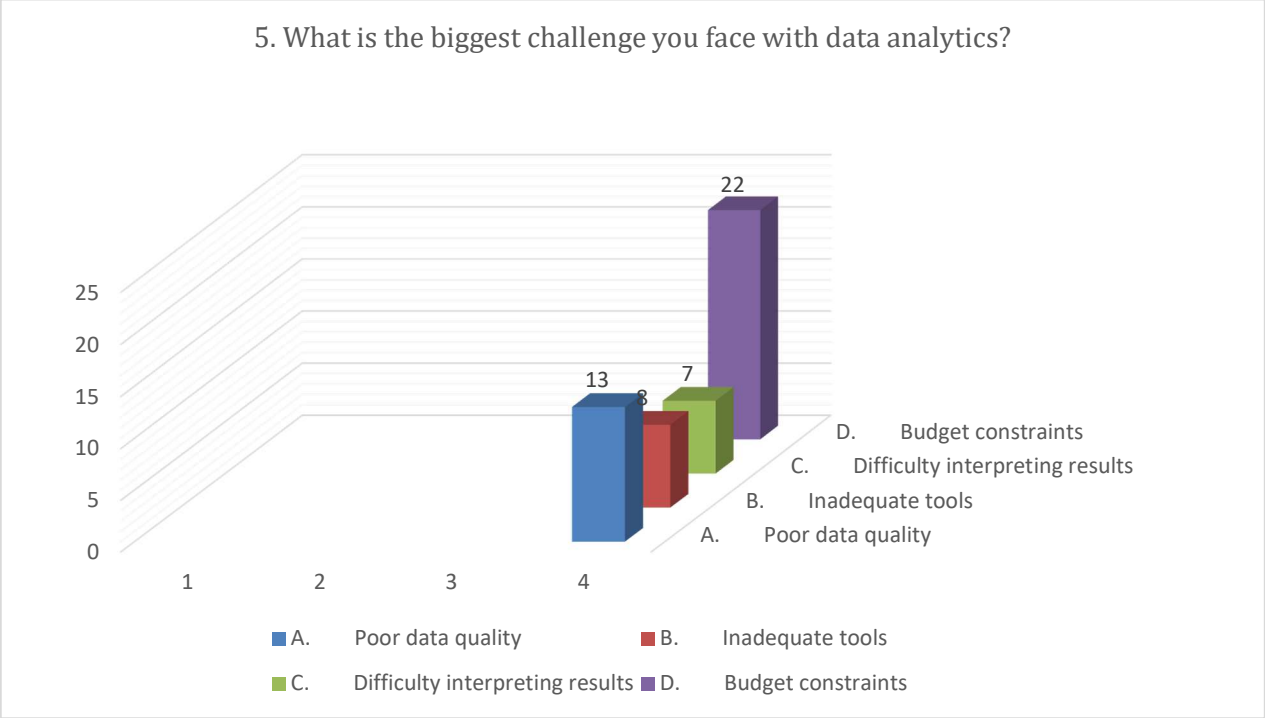
A. 22% of them never used data analysis to foster business strategies.

B. 18% of the sample rarely used data analysis to foster business strategies.

C. 42% of them frequently used data analysis to foster business strategies.

D. 18% of the sample heavily used data analysis to foster business strategies.

5. What is the biggest challenge you face with data analytics?		
A.	Poor data quality	13
B.	Inadequate tools	8
C.	Difficulty interpreting results	7
D.	Budget constraints	22



Finding:

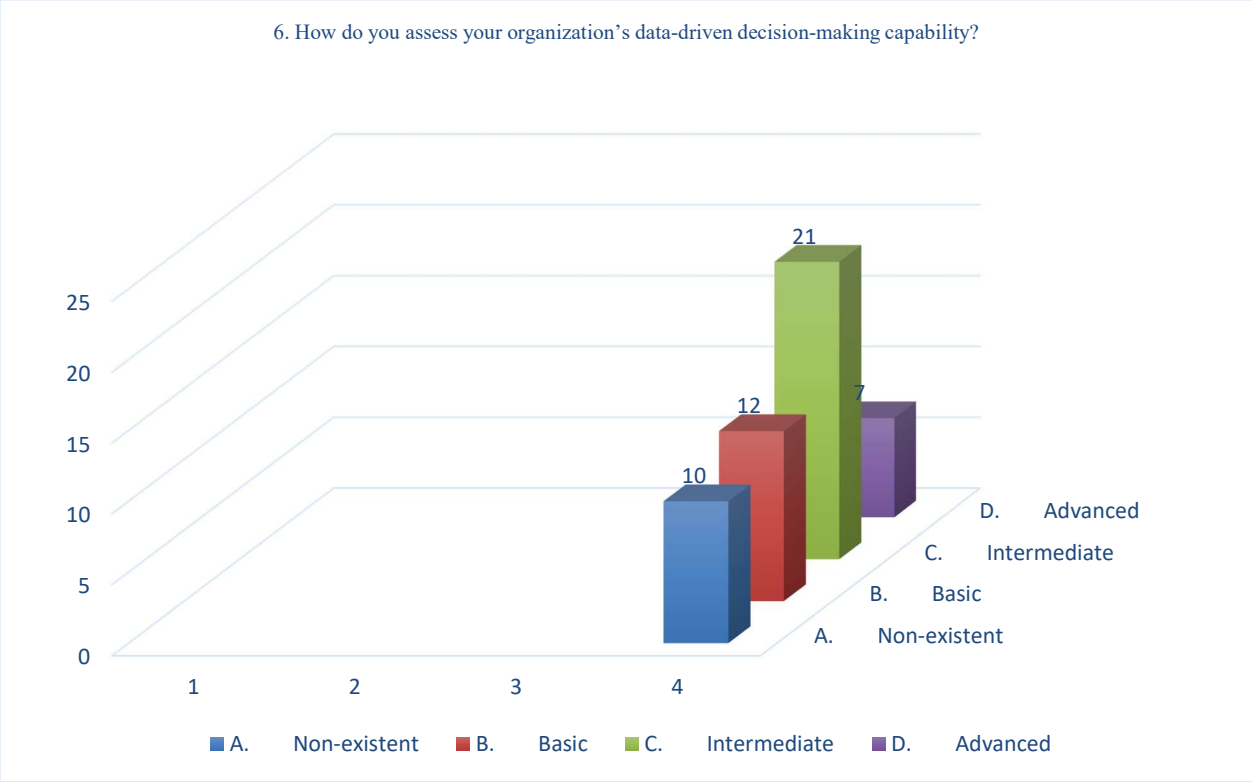
A. 26 % of the sample face poor data quality to analysis data to make business decision.

B. 16% of them faced inadequate tool for data analysis.

C. 14% of them faced difficulties to interpreting data.

D. 44% of them faced Budget constraints with data analysis.

6. How do you assess your organization's data-driven decision-making capability?		
A.	Non-existent	10
B.	Basic	12
C.	Intermediate	21
D.	Advanced	7



Finding:

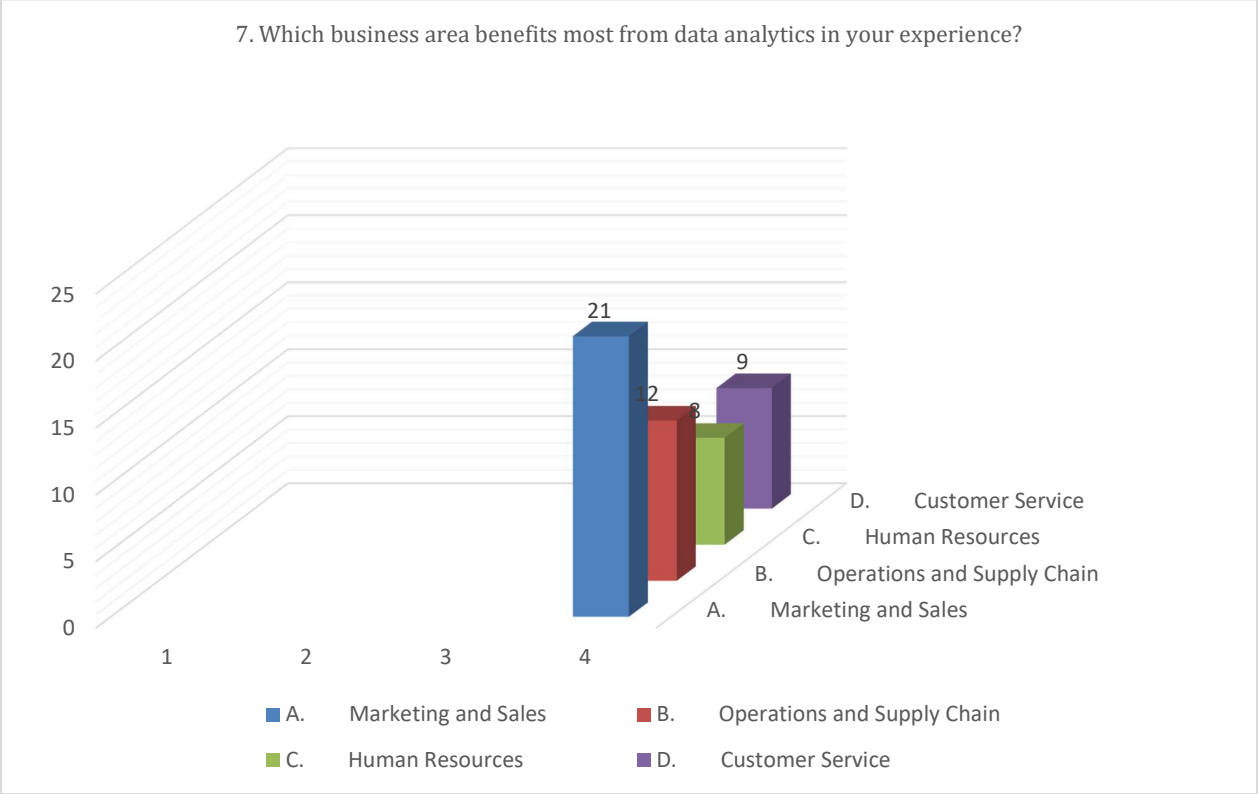
A. Out of the sample 20% did not used data-driven decision-making capabilities.

B. 24% of them use as basic decision-making with data analysis.

C. 42% of them use as intermediate decision -making with data analysis.

D. 14% of the sample use at advance level decision-making with data analysis.

7. Which business area benefits most from data analytics in your experience?		
A.	Marketing and Sales	21
B.	Operations and Supply Chain	12
C.	Human Resources	8
D.	Customer Service	9



Finding:

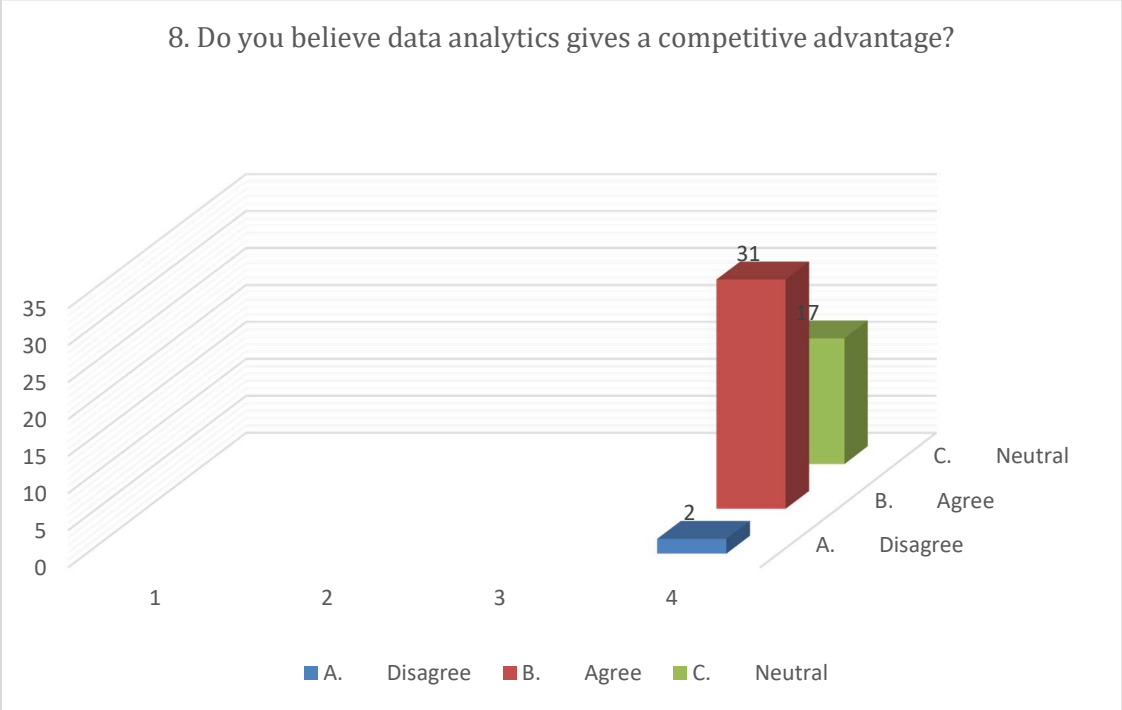
A. 42% of the sample use data-analysis to make decision in Marketing and Sales.

B. 24% of them use data-analysis to make decision in Operations and Supply Chain.

C. 16% of them use to make decision in Human Resources.

D. 18% of them use to make decision in Customer Services.

8. Do you believe data analytics gives a competitive advantage?		
A.	Disagree	2
B.	Agree	31
C.	Neutral	17



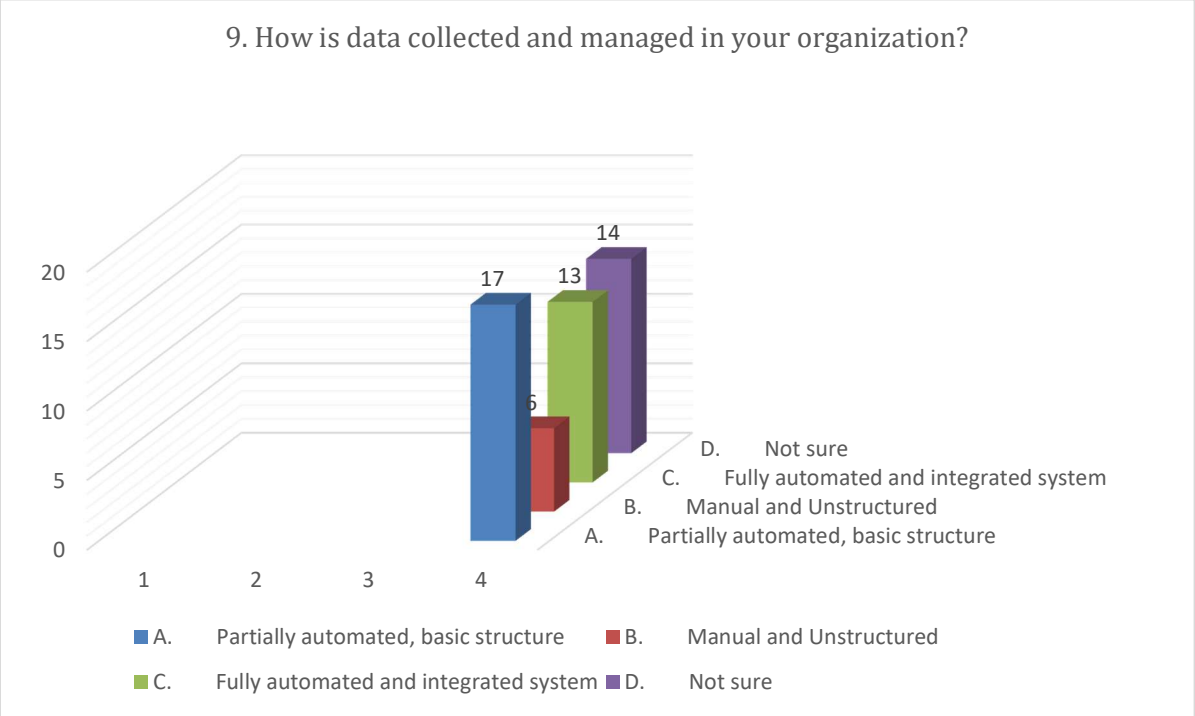
Finding:

A. 4% of the sample disagree about the advantages of data analysis.

B. 62% of them are agree with the advantages of data analysis.

C. 34% of them are neutral about the advantages of data-analysis.

9. How is data collected and managed in your organization?		
A.	Partially automated, basic structure	17
B.	Manual and Unstructured	6
C.	Fully automated and integrated system	13
D.	Not sure	14



Finding:

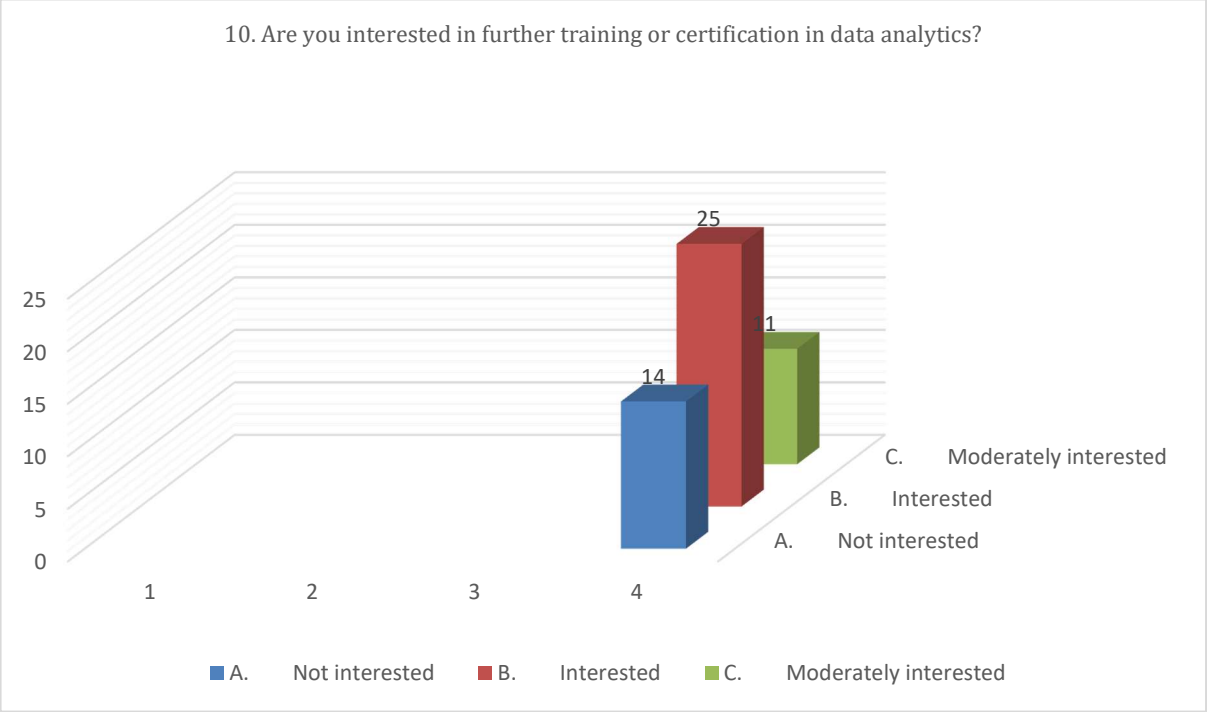
A. 34% of the sample collected and managed data in partially automated and in basic way.

B. 12% are collect and managed data in manual and unstructured form.

C. 26% are use in fully automated and integrated system to managed and to collect data.

D. 28% are not sure about the matter.

10. Are you interested in further training or certification in data analytics?		
A.	Not interested	14
B.	Interested	25
C.	Moderately interested	11



Finding:

A. 28% of the sample not interested in further training or certification in data analysis.
B. 50% of them are interested in further training or certification in data analysis.
C. 22% are moderately interested in further training or certification in data analysis.

Suggestion:

To make the most of business and data analytics, begin by linking analytics projects directly to your business goals and how you measure success (Key Performance Indicators or KPIs). Make sure the data is high quality by having clear rules and standards to acquire the data and checking it regularly. Small and micro businesses also have to invest in up-to-date analytical tools and storage systems that can grow with business needs, so it can process and see and use the data easily.

To build a data-focused culture, employees must have training, education, and knowledge how to use data and encourage them to make decisions based on what the data shows. Make data easier to get to by using easy-to-use dashboards and a central place where all data is stored. For deeper understanding and to predict what might happen, use advanced analytical tools like predicting future trends and machine learning. Regularly check and improve your data models to make sure they are correct and still useful. Also, use data responsibly by addressing any biases and following privacy rules.

Conclusion:

Business and Data Analytics has become an essential driver of organizational success in today's digital and competitive landscape. So, to survive and becoming successful in this competitive market, every business whether it is micro, small or big, must adapt technology as soon as possible. When effectively applied, analytics empowers organizations to make informed, data-driven decisions, uncover new opportunities, and optimize operations. It transforms raw data into actionable insights that support strategic planning, customer engagement, risk management, and overall performance improvement.

However, realizing the full potential of analytics requires more than just technology. It demands a solid foundation of data governance, quality, and accessibility, along with the right tools and skilled personnel. Organizations must align analytics initiatives with clear business goals and foster a culture where data is trusted and used consistently at all levels. This means investing in modern infrastructure, training staffs. Incorporating advanced techniques such as machine learning, predictive modeling, and real-time analysis can provide deeper insights and competitive advantages. At the same time, ethical considerations such as data privacy, bias, and transparency must remain top priorities.

In summary, effective use of Business and Data Analytical tools in micro and small businesses is not just a technical upgrade—it's a strategic transformation. Businesses that prioritize and mature their analytics capabilities are better equipped to adapt, innovate, and thrive in a rapidly changing world, although it is quite difficult for small businesses to adapt high costly technology and analytical tools.

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ANNEXURE

Questionnaire for doing survey on Business and Data Analytics

Business and Data Analytics Survey

Name: **Designation:**

1. How familiar are you with Business and Data Analytics

   A. Not familiar at all
   B. Slightly familiar
   C. Moderately familiar
   D. Very familiar

2. What is the primary use of data analytics in your organization

   A. Decision-making
   B. Performance tracking
   C. Risk management
   D. We don't use data analytics

3. Which tools or platforms do you use most often for data analysis?

   A. Microsoft Excel
   B. Python / R
   C. None of the above
   D. We do not use any tools

4. How often does your organization use data analytics to support business strategy?

   A. Never
   B. Rarely
   C. Frequently
   D. Always

5. What is the biggest challenge you face with data analytics?

   A. Poor data quality

B. Inadequate tools
C. Difficulty interpreting results
D. Budget constraints

6. How do you assess your organization's data-driven decision-making capability?

A. Non-existent
B. Basic
C. Intermediate
D. Advanced

7. Which business area benefits most from data analytics in your experience?

A. Marketing and Sales
B. Operations and Supply Chain
C. Human Resources
D. Customer Service

8. Do you believe data analytics gives a competitive advantage?

A. Disagree
B. Agree
C. Neutral

9. How is data collected and managed in your organization?

A. Partially automated, basic structure
B. Manual and Unstructured
C. Fully automated and integrated system
D. Not sure

10. Are you interested in further training or certification in data analytics?

A. Not interested
B. Interested
C. Moderately interested